UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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MOTIF FOODWORKS, INC.,
Petitioner,

v.

IMPOSSIBLE FOODS INC.,
Patent Owner.

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Case No.: IPR2023-00207
U.S. Patent No. 11,224,241

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DECLARATION OF SYLVIA D. HALL-ELLIS, Ph.D., IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NOS. 9,943,096, 10,039,306, 11,013,250, 11,224,241

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I, Sylvia D. Hall-Ellis, Ph.D., declare as follows:

I. INTRODUCTION

1. I have been retained by Motif FoodWorks, Inc. ("Motif" or "Petitioner") as an expert in this proceeding before the United States Patent and Trademark Office ("PTO") Patent Trial and Appeal Board ("Board") regarding U.S. Patent Nos. 9,943,096; 10,039,306; 11,013,250; and 11,224,241 (the "Challenged Patents").

2. I have written this Declaration at the request of Petitioner to provide my expert opinion regarding the authenticity and public availability of several publications. This Declaration sets forth my opinions in detail and provides the bases for my opinions.

3. I reserve the right to supplement or amend my opinions, and bases for them, in response any additional evidence, testimony, discovery, argument, and/or other additional information that may be provided to or obtained by me after the date of this Declaration.

4. I am being compensated for my time spent working on this matter at my normal consulting rate of $325 per hour, plus reimbursement for any additional reasonable expenses. My compensation is not in any way tied to the content of this Declaration, the substance of my opinions, or the outcome of this dispute. I have no other interests in this proceeding or with any of the parties.

5. All of the materials that I considered are discussed explicitly in this Declaration.

II. PROFESSIONAL BACKGROUND AND QUALIFICATIONS

6. I am currently an Adjunct Professor in the School of Information at San José State University. I obtained a Master of Library Science from the University of North Texas in 1972 and a Ph.D. in Library and Information Science from the University of Pittsburgh in 1985. Over the last fifty years, I have held various positions in the field of library and information resources. I was first employed as a librarian in 1966 and have been involved in the field of library sciences since, holding numerous positions.

7. I am a member of the American Library Association ("ALA") and its Association for Library Collections & Technical Services ("ALCTS") Division, and I served on the Committee on Cataloging: Resource and Description (which wrote the new cataloging rules) and as the founding chair of the Committee for Education and Training of Catalogers and the Competencies and Education for a Career in Cataloging Interest Group. I also served as the Founding Chair of the ALCTS Division's Task Force on Competencies and Education for a Career in Cataloging. Additionally, I served as the Chair for the ALA Office of Diversity's Committee on Diversity, a member of the REFORMA National Board of Directors, a member of the Editorial Board for the ALCTS premier cataloging journal, *Library Resources*

and Technical Services, and as a Co-Chair of the Membership Committee for the Library Research Round Table (LRRT) of the American Library Association. Currently I serve as a member of the LRRT Nominating Committee.

8. I have also given over one-hundred presentations in the field, including several on library cataloging systems and Machine-Readable Cataloging ("MARC") standards. My current research interests include library cataloging systems, metadata, and organization of electronic resources.

9. I have been deposed twenty-six times: (1) *Symantec Corp. v. Finjan, Inc.,* Petition for *Inter Partes Review* of U.S. Patent No. 7,613,926, IPR 2015-01892, May 26, 2016, on behalf of Symantec Corp.; (2) *Symantec Corp. v. Finjan, Inc.,* 14-cv-299-HSG (N.D. Cal.), on behalf of Symantec Corp., September 14, 2017; (3) one deposition for ten matters: *Intellectual Ventures I LLC v. AT&T Mobility LLC*; AT&T Mobility II LLC, New Cingular Wireless Services, Inc., SBC Internet Services, Inc., Wayport, Inc., and Cricket Wireless LLC, C.A. No. 12-193 (LPS); *Intellectual Ventures II LLC v. AT&T Mobility LLC*; AT&T Mobility II LLC, New Cingular Wireless Services, Inc., SBC Internet Services, Inc., Wayport, Inc., and Cricket Wireless LLC, C.A. No. 13-1631 (LPS); *Intellectual Ventures I LLC v. T-Mobile USA, Inc. and T-Mobile US, Inc.,* C.A. No. 13-1632 (LPS); *Intellectual Ventures II LLC v. T-Mobile USA, Inc. and T-Mobile US, Inc.,* C.A. No. 13-1633 (LPS); *Intellectual Ventures I LLC, v. Nextel Operations,*

Inc., Sprint Spectrum L.P., Boost Mobile, LLC and Virgin Mobile USA, L.P., C.A. No. 13-1634 (LPS); *Intellectual Ventures II LLC v. Nextel Operations, Inc., Sprint Spectrum L.P., Boost Mobile, LLC and Virgin Mobile USA, L.P.,* C.A. No. 13-1635 (LPS); *Intellectual Ventures I LLC, v. United States Cellular Corporation*, C.A. No. 13-1636 (LPS); *Intellectual Ventures I LLC v. United States Cellular Corporation*, C.A. No. 13-1637 (LPS); *Intellectual Ventures II LLC v. AT&T Mobility LLC, AT&T Mobility II LLC, New Cingular Wireless Services, Inc.,* C.A. No. 15-799 (LPS); *Intellectual Ventures I LLC v. T-Mobile USA, Inc. and T-Mobile US, Inc.*, C.A. No. 15-800 (LPS), on behalf of AT&T Mobility LLC; AT&T Mobility II LLC, Boost Mobile, LLC Cricket Wireless LLC, Nextel Operations, Inc., New Cingular Wireless Services, Inc., SBC Internet Services, Inc., Sprint Spectrum L.P., T-Mobile USA, Inc., T-Mobile US, Inc., United States Cellular Corporation Virgin Mobile USA, L.P., and Wayport, Inc., November 15, 2016; (4) *Hitachi Maxell, LTD., v. Top Victory Electronics (Taiwan) Co. Ltd., et al.,* 2:14-cv-1121 JRG-RSP (E.D. Texas), on behalf of Top Victory Electronics (Taiwan) Co. LTD, *et. al.,* January 20, 2016; (5) *Sprint Spectrum, L.P. v. General Access Solutions, Ltd*., Petition for *Inter Partes Review* of U.S. Patent No. 7,173,916, IPR 2017-01885, on behalf of Sprint Spectrum L.P., July 13, 2018; (6) *Nichia Corporation v. Vizio, Inc*., 8:16-cv-00545; on behalf of Vizio, Inc., October 12, 2018; (7) *Intellectual Ventures I LLC, v. T-Mobile USA, Inc., T-Mobile US, Inc., Ericsson Inc., and*

Telefonaktiebolaget LM Ericsson, 2:17-cv-00557 (JRG), on behalf of T-Mobile USA, Inc., T-Mobile US, Inc., Ericsson Inc., and Telefonaktiebolaget LM Ericsson, October 19, 2018; (8) *Pfizer, Inc. v. Biogen, Inc.*, Petition for *Inter Partes Review* of U.S. Patent No. 8,821,873, IPR 2017-01168, on behalf of Pfizer, November 3, 2018; (9) *Finjan, Inc. v. ESET, LLC and ESET SPOL. S.R.O.*, 3:17-cv-00183-CAB-BGS, on behalf of ESET, January 15, 2019; (10) *Finjan, Inc. v. Cisco Systems, Inc.*, 5:17-cv-00072-BLF-SVK, on behalf of Cisco Systems, Inc., September 6, 2019; (11) *Facebook, Inc., Instagram, LLC and Whatsapp Inc. v. Blackberry Limited* for *Inter Partes Review* of U.S. Patent No. 9,349,120 B2, on behalf of Facebook, Inc., Instagram, LLC and Whatsapp Inc., December 20, 2019; (12) *3Shape A/S and 3Shape Inc. v. Align Technology, Inc.,* Petition for *Inter Partes Review* of U.S. Patent No. 7,156,661, IPR 2020-00222 and IPR 2020-00223, August 10, 2020, on behalf of 3Shape A/S and 3Shape Inc.; (13) *Finjan Inc. v. Rapid7, Inc. and Rapid7 LLC*, District of Delaware, 1:18-cv-01519-MN, September 15, 2020, on behalf of Rapid7 Inc. and Rapid7 LLC; (14) *VLSI Technology LLC v. Intel Corporation*, Western District of Texas, 6:19-cv-00254, 6:19-cv-00255, 6:19-cv-00256, September 23, 2020, on behalf of the Intel Corporation; (15) *Finjan Inc. v. Sonicwall, Inc.*, Northern District of California, 5:17-cv-04467-BLF-HRL, October 27, 2020, on behalf of Sonicwall, Inc.; (16) *VLSI Technology, LLC v. Intel Corporation*, District of Delaware, 1:18-cv-00966-CFC-

CJB, February 5, 2021, on behalf of the Intel Corporation; (17) *Unified Patents, LLC v. 3BCOM, LLC*, Petition for *Inter Partes Review* of U.S. Patent 7,127,210, February 11, 2021, on behalf of Unified Patents; (18) *Finjan, Inc. v. Qualsys, Inc.*, Northern District of California, 4:18-cv-07229-YGR, March 1, 2021, on behalf of Qualsys, Inc.; (19) *Qualcomm, Inc. v. Monterey Research LLC*, Petition for *Inter Partes Review* of U.S. Patent 6,534,805, May 6, 2021, on behalf of Qualcomm, Inc.; (20) *Hulu, LLC v. Sound View Innovations, LLC*, Petition for *Inter Partes Review* of U.S. Patent 5,806,062, May 14, 2021, on behalf of Hulu, LLC; and, (21) *VLSI Technology LLC v. Intel Corporation*, Western District of Texas, 6:19-cv-00254, 6:19-cv-00255 and 6:19-cv-00256, August 3, 2021, on behalf of Intel Corporation; (22) *Liquidia Technologies, Inc. v. United Therapeutics Corporation*, Petition for *Inter Partes Review* of U.S. Patent 10,716,793 B2, October 20, 2021, on behalf of Liquidia Technologies, Inc.; (23) *EcoFactor, Inc. v. Google, Inc.*, Western District of Texas, 6:20-cv-00075 (ADA), 6:20-0078-ADA, and 6:20-cv-00080 ADA, October 27, 2021, on behalf of Google, Inc.; (24) *Liquidia Technologies, Inc. v. United Therapeutics Corporation*, Petition for *Inter Partes Review* of U.S. Patent 10,716,793 B2, March 11, 2022, on behalf of Liquidia Technologies, Inc.; (25) *Juniper Networks, Inc. v. Swarm Technology LLC*, Petition for *Inter Partes Review* of U.S. Patent 9,852,004, May 5, 2022, on behalf of Juniper Networks, Inc.; and, (26) *ParkerVision, Inc. v.*

Intel Corporation, Western District of Texas, 6:20-cv-108 (ADA), October 26, 2022, on behalf of the Intel Corporation.

10. My full *curriculum vitae* is attached hereto as Appendix A.

III. PRELIMINARIES

A. Scope of this Declaration

11. I am not an attorney and will not offer opinions on the law. I am, however, rendering my expert opinion on the authenticity of the documents referenced herein and on when and how each of these documents was disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, could have located the documents before January 11, 2013.

12. I am informed by counsel that an item is considered authentic if there is sufficient evidence to support a finding that the item is what it is claimed to be. I am also informed that authenticity can be established based on the contents of the documents themselves, such as the appearance, contents, substance, internal patterns, or other distinctive characteristics of the item, taken together with all of the circumstances. I am further informed that an item is considered authentic if it is at least 20 years old, in a condition that creates no suspicion of its authenticity, and in a place where, if authentic, it would likely be. Lastly, I have been informed that a

document's authenticity can be established by comparison with an authentic specimen.

13. I am informed by counsel that a printed publication qualifies as publicly accessible as of the date it was disseminated or otherwise made available such that a person interested in and ordinarily skilled in the relevant subject matter could locate it through the exercise of ordinary diligence.

14. While I understand that the determination of public accessibility under the foregoing standard rests on a case-by-case analysis of the facts particular to an individual publication, I also understand that a printed publication is rendered "publicly accessible" if it is cataloged and indexed by a library such that a person interested in the relevant subject matter could locate it. That is, I understand that cataloging and indexing by a library is sufficient, although there are other ways that a printed publication may qualify as publicly accessible. One manner of sufficient indexing is indexing according to subject matter category. I understand that the cataloging and indexing by a single library of a single instance of a particular printed publication is sufficient, even if the single library is in a foreign country. I understand that, even if access to a library is restricted, a printed publication that has been cataloged and indexed therein is publicly accessible so long as a presumption is raised that the portion of the public concerned with the relevant subject matter would know of the printed publication. I also understand that the cataloging and

indexing of information that would guide a person interested in the relevant subject matter to the printed publication, such as the cataloging and indexing of an abstract for the printed publication, is sufficient to render the printed publication publicly accessible.

15. I understand that routine business practices, such as general library cataloging and indexing practices, can be used to establish an approximate date on which a printed publication became publicly accessible. I also understand that the indicia on the face of a reference, such as printed dates and stamps, are considered as part of the totality of the evidence.

B. Person of Ordinary Skill in the Art

16. I am told by counsel that the subject matter of this proceeding relates generally to food sciences and recombinant protein expression.

17. I have been informed by counsel that a "person of ordinary skill in the art at the time of the invention" is a hypothetical person who is presumed to be familiar with the relevant field and its literature at the time of the inventions. This hypothetical person is also a person of ordinary creativity, capable of understanding the scientific principles applicable to the pertinent field.

18. I am told by counsel that with respect to the Challenged Patents, a person of ordinary skill in the art would have (i) a Bachelor of Science degree in food science, biology, chemistry, microbiology, or a related discipline, and (ii) a

Master of Science degree or Ph.D. in food science or at least three years of experience working as a food scientist. A POSITA could also be part of a team of food scientists, including flavor chemists.

19. It is my opinion that such a person would have been engaged in research, learning through study, and practice in the field and possibly through formal instruction the bibliographic resources relevant to his or her research. By not later than the January 11, 2013, such a person would have had access to a vast array of long-established print resources in the field, as well as to a rich set of online resources providing indexing information, abstracts, and full text services for publications relevant to the field of this dispute.

C. Authoritative Databases

20. In preparing this report, I used authoritative databases, such as the OCLC *WorldCat*, the Library of Congress Online Catalog, the U.S. Copyright Office database, the Internet Archive and its WayBack Machine, *ResearchGate*, and *Semantic Scholar*, to confirm citation details of the various publications discussed.

21. ***OCLC WorldCat Database***. The OCLC was created "to establish, maintain and operate a computerized library network and to promote the evolution of library use, of libraries themselves, and of librarianship, and to provide processes and products for the benefit of library users and libraries, including such objectives as increasing availability of library resources to individual library patrons and

reducing the rate of rise of library per-unit costs, all for the fundamental public purpose of furthering ease of access to and use of the ever-expanding body of worldwide scientific, literary and educational knowledge and information." [1] Among other services, OCLC and its members are responsible for maintaining the *WorldCat* database,[2] used by independent and institutional libraries throughout the world.

22. ***U.S. Copyright Office***. Created by Congress in 1897, the Copyright Office is responsible for administering a complex and dynamic set of laws, which include registration, the recordation of title and licenses, a number of statutory licensing provisions, and other aspects of the *1976 Copyright Act* and the *1998 Digital Millennium Copyright Act*. The public catalog in the Copyright Office includes information filed since 1978.[3] Individuals can search by title, personal or corporate name, key word, registration number, and document number. Works filed before 1978 can be located through the Copyright Public Records Reading Room.[4]

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[1] Third Article, Amended Articles of Incorporation of OCLC Online Computer Library Center, Incorporated (*available at* https://www.oclc.org/content/dam/oclc/membership/articles-of-incorporation.pdf).

[2] http://www.worldcat.org/

[3] https://cocatalog.loc.gov/cgi-bin/Pwebrecon.cgi?DB=local&PAGE=First

[4] https://www.copyright.gov/circs/circ23.pdf

A researcher can find the date on which an item was published and deposited for copyright.

23. ***Internet Archive***.[5] The Internet Archive, a 501(c)(3) non-profit, is an online digital archive of Internet web sites and web pages and other cultural artifacts in digital form. Like a paper library, the Internet Archive provides free access to researchers, historians, scholars, the print disabled, and the general public. The organization's mission is to provide Universal Access to All Knowledge.

24. The Internet Archive maintains an archive of webpages collected from the Internet using software called a crawler. Crawlers automatically create a snapshot of webpages as they existed at a certain point in time. The WayBack Machine is an application using a crawler created by the Internet Archive to search its archive of web page URLs and to represent, graphically, the date of each crawler capture. The Internet Archive captures data that is openly available to users of the Internet. Some sites are "not archived because they were password protected, blocked by robots.txt, or otherwise inaccessible to our automated systems. Site owners might have also requested that their sites be excluded from the WayBack

[5] https://archive.org/

Machine."[6] Many Internet Archive captures made by the WayBack Machine have a banner at the top with the capture date prominently displayed. Other dates when captures of the same URL have been made are indicated to the right and left of the date provided in the banner. Some captures may lack this banner. In any case, the URL for the capture begins with the identification of the Internet Archive page (e.g., http://web.archive.org/web/) followed by information that dates and time stamps the capture as follows: year in yyyy, month in mm, day in dd, time code in hh:mm:ss (e.g., 20071120082013, or November 20, 2007 at 8:20:13 a.m.). These elements are then followed by the URL of the original capture site. When links are active, the WayBack Machine is programed to produce the archived file with the closest available date (not the closest available prior date) to the page upon which the link appeared and was clicked. I and other professionals in the field of library and information resources are familiar with the Internet Archive and the Wayback Machine. As previously noted, the Internet Archive and the Wayback Machine are among the types of information reasonably relied upon by experts in my field for the purposes of forming opinions or inferences on matters that are the subject of their work.

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6 https://help.archive.org/hc/en-us/articles/360004716091-Wayback-Machine-General-Information

25. ***ResearchGate***.[7] A European-based social networking site for scientists and researchers to share papers, ask and answer questions, and find collaborators, *ResearchGate* is the largest academic social network in terms of active users, although other services have more registered users. As of 2021, *ResearchGate* had more than 20 million scientists, with its largest user-bases coming from Europe and North America. Most of *ResearchGate's* users are involved in medicine, biology, engineering, computer science, agricultural sciences, and psychology.

26. Features available to *ResearchGate* members include following a research interest and the work of other individual participants, a blogging feature for users to write short reviews on peer-reviewed articles, private chat rooms for sharing data, editing documents, or discussing confidential topics, and a research-focused job board. *ResearchGate* indexes self-published information on user profiles and suggests members to connect with others who have similar interests. Member questions are fielded to others who have identified relevant expertise on their profiles.

27. ***Semantic Scholar***.[8] A project developed at the Allen Institute for Artificial Intelligence and publicly released in November 2015, *Semantic Scholar* is

[7] https://www.researchgate.net/

[8] https://www.semanticscholar.org.

designed to be an AI-backed search engine for scientific journal articles which uses a combination of machine learning, natural language processing, and machine vision to add a layer of semantic analysis to the traditional methods of citation analysis, and to extract relevant figures, entities, and venues from papers. *Semantic Scholar* is designed to highlight important, influential papers, and to identify the connections between them.

28. As of January 2018, following a 2017 project that added biomedical papers and topic summaries, the *Semantic Scholar* corpus included more than 40 million papers from computer science and biomedicine. In March 2018, Doug Raymond, who developed machine learning initiatives for the Amazon Alexa platform, was hired to lead the *Semantic Scholar* project. As of August 2019, the number of included papers had grown to more than 173 million after the addition of the Microsoft Academic Graph records, already used by Lens.org.

D. Indexing

29. A researcher may discover material relevant to his or her topic in a variety of ways. One common means of discovery is to search for relevant information in an index of periodical and other publications. Having found relevant material, the researcher will then normally obtain it online, look for it in libraries, or purchase it from the publisher, a bookstore, a document delivery service, or other provider. Sometimes, the date of a document's public accessibility will involve both

indexing and library date information. However, date information for indexing entries is often unavailable. This is especially true for online indices.

30. Indexing services use a wide variety of controlled vocabularies to provide subject access and other means of discovering the content of documents. The formats in which these access terms are presented vary from service to service.

31. Before the widespread development of online databases to index articles in journals, magazines, conference papers, and technical reports, libraries purchased printed volumes of indices. Graduate library school education mandated that students learn about the bibliographic control of disciplines, the prominent indexing volumes, and searching strategies required to use them effectively and efficiently. Half of the courses that I studied in library school were focused on the bibliography and resources in academic disciplines.

32. Librarians consulted with information seekers to verify citations, check availability in union catalogs, printed books catalogs, and the OCLC database, and make formal requests for materials, *e.g.*, books, conference proceedings, journal articles. Requests were transmitted using Telex machines, rudimentary email systems, and the United States Postal Service. During my career, I have performed and supervised staff who handled these resource sharing tasks.

33. Online indexing services commonly provide bibliographic information, abstracts, and full-text copies of the indexed publications, along with a list of the

documents cited in the indexed publication. These services also often provide lists of publications that cite a given document. A citation of a document is evidence that the document was publicly available and in use no later than the publication date of the citing document.

IV. LIBRARY CATALOGING PRACTICES

A. Machine-Readable Cataloging (MARC) Standard

34. I am fully familiar with the library cataloging standard known as the MARC standard, which is an industry-wide standard method of storing and organizing library catalog information.[9] MARC was first developed in the 1960s by the Library of Congress. A MARC-compatible library is one that has a catalog consisting of individual MARC records for each of its items. Today, MARC is the primary communications protocol for the transfer and storage of bibliographic metadata in libraries.[10]

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[9] The full text of the standard is available from the Library of Congress at http://www.loc.gov/marc/bibliographic/.

[10] Almost every major library in the world is MARC-compatible. *See, e.g., MARC Frequently Asked Questions (FAQ)*, Library of Congress, https://www.loc.gov/marc/faq.html (last visited September 29, 2022) ("MARC is the acronym for Machine-Readable Cataloging. It defines a data format that emerged from a Library of Congress-led initiative that began nearly fifty years ago.

> Since at least the early 1970s and continuing to the present day, MARC has been the primary communications protocol for the transfer and storage of bibliographic metadata in libraries.[11] As explained by the Library of Congress: You could devise your own method of organizing the bibliographic information, but you would be isolating your library, limiting its options, and creating much more work for yourself. Using the MARC standard prevents duplication of work and allows libraries to better share bibliographic resources. Choosing to use MARC enables libraries to acquire cataloging data that is predictable and reliable. If a library were to develop a "home-grown" system that did not use MARC records, it would not be taking advantage of an industry-wide standard whose primary purpose is to foster communication of information.

It provides the mechanism by which computers exchange, use, and interpret bibliographic information, and its data elements make up the foundation of most library catalogs used today."). MARC is the ANSI/NISO Z39.2-1994 (reaffirmed 2016) standard for Information Interchange Format.

[11] A complete history of the development of MARC can be found in *MARC: Its History and Implications* by Henrietta D. Avram (Washington, DC: Library of

> Using the MARC standard also enables libraries to make use of commercially available library automation systems to manage library operations. Many systems are available for libraries of all sizes and are designed to work with the MARC format. Systems are maintained and improved by the vendor so that libraries can benefit from the latest advances in computer technology. The MARC standard also allows libraries to replace one system with another with the assurance that their data will still be compatible.

Why Is a MARC Record Necessary? LIBRARY OF CONGRESS, http://www.loc.gov/marc/umb/um01to06.html#part2 (last visited September 29, 2022).

35. Thus, almost every major library in the world is MARC-compatible. *See, e.g.*, *MARC Frequently Asked Questions (FAQ)*, LIBRARY OF CONGRESS, https://www.loc.gov/marc/faq.html (last visited September 29, 2022) ("MARC is the acronym for MAchine-Readable Cataloging. It defines a data format that emerged from a Library of Congress-led initiative that began nearly fifty years ago.

Congress, 1975) and available online from the Hathi Trust (https://babel.hathitrust.org/cgi/pt?id=mdp.39015034388556;view=1up;seq=1; last visited September 29, 2022).

It provides the mechanism by which computers exchange, use, and interpret bibliographic information, and its data elements make up the foundation of most library catalogs used today."). MARC is the ANSI/NISO Z39.2-1994 standard (reaffirmed in 2016) for Information Interchange Format. The full text of the standard is available from the Library of Congress.[12]

36. A MARC record comprises several fields, each of which contains specific data about the work. Each field is identified by a standardized, unique, three-digit code corresponding to the type of data that follow. For example, a work's title is recorded in field 245, the primary author or creator of the work is recorded in field 100, an item's International Standard Book Number ("ISBN") is recorded in field 020, an item's International Standard Serial Number ("ISSN") is recorded in field 022, an item's Library of Congress call number is recorded in field 050, and the publication date is recorded in field 260 under the subfield "c." *Id.*[13] If a work

[12] http://www.loc.gov/marc/bibliographic/.

[13] In some MARC records, field 264 is used rather than field 260 to record publication information. *See* http://www.loc.gov/marc/bibliographic/bd264.html (last visited September 29, 2022) ("Information in field 264 is similar to information in field 260 (Publication, Distribution, etc. (Imprint)). Field 264 is useful for cases where the content standard or institutional policies make a distinction between functions").

is a periodical, then its publication frequency is recorded in field 310, alternate publication frequency is recorded in field 321, and the publication dates (*e.g.*, the first and last publication) are recorded in field 362, which is also referred to as the enumeration/chronology field.[14]

37. MARC records also include several fields that include subject matter classification information. An overview of MARC record fields is available through the Library of Congress website.[15] For example, 6XX fields are termed "Subject Access Fields."[16] Among these, for example, is the 650 field; this is the "Subject Added Entry – Topical Term" field.[17] The 650 field is a "[s]ubject added entry in which the entry element is a topical term."[18] These authenticated subject entries "are assigned to a bibliographic record to provide access according to generally accepted thesaurus-building rules (*e.g., Library of Congress Subject Headings* (LCSH), *Medical Subject Headings* (MeSH))."[19]

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[14] http://www.loc.gov/marc/bibliographic/bd3xx.html.

[15] http://www.loc.gov/marc/bibliographic/.

[16] http://www.loc.gov/marc/bibliographic/bd6xx.html.

[17] http://www.loc.gov/marc/bibliographic/bd650.html.

[18] *Id.*

[19] *Id.*

38. Further, MARC records include call numbers, which themselves indicate a subject and physical location within the library collections. For example, the 050 field is the "Library of Congress Call Number."[20] A defined portion of the Library of Congress Call Number is the classification number, and "source of the classification number is *Library of Congress Classification* and the *LC Classification-Additions and Changes*."[21] Thus, included in the 050 field is a subject matter classification. Each item in a library has a single classification number. A library selects a classification scheme (*e.g.*, the Library of Congress Classification scheme just described or a similar scheme such as the Dewey Decimal Classification scheme or the National Library of Medicine Classification scheme) and uses it consistently. When the Library of Congress assigns the classification number, it appears as part of the 050 field. If a local library assigns the classification number, it appears in a 090 field. In either scenario, the MARC record includes a classification number that represents a subject matter classification.

[20] http://www.loc.gov/marc/bibliographic/bd050.html.

[21] *Id.*

39. For MARC records created by libraries other than the Library of Congress (*e.g.*, a university library or a local public library), the classification number may appear in a 09X (*e.g.*, 090) field.[22]

40. OCLC provides its members online access to MARC records through its OCLC bibliographic database. When an OCLC member institution acquires a work, it creates a MARC record for this work in its computer catalog system in the ordinary course of its business. MARC records created at the Library of Congress were initially tape-loaded into the OCLC database through a subscription to MARC Distribution Services daily or weekly. Once the MARC record is created by a cataloger at an OCLC member institution or tape-loaded from the Library of Congress, the MARC record is then made available to any other OCLC members online, and therefore made available to the public. Accordingly, once the MARC record is created by a cataloger at an OCLC member institution or is tape-loaded from the Library of Congress or another library anywhere in the world, any publication corresponding to the MARC record has been cataloged and indexed according to its subject matter such that a person interested in that subject matter could, with reasonable diligence, locate and access the publication through any

[22] http://www.loc.gov/marc/bibliographic/bd09x.html.

library with access to the OCLC bibliographic database or through the Library of Congress.

41. When an OCLC member institution creates a new MARC record, OCLC automatically supplies the date of creation for that record. The date of creation for the MARC record appears in the fixed field (008), characters 00 through 05. The MARC record creation date reflects the date on which, or shortly after which, the item was first acquired or cataloged. Initially, field 005 of the MARC record is automatically populated with the date the MARC record was created in year, month, day format (YYYYMMDD) (some of the newer library catalog systems also include hour, minute, second (HHMMSS)). Thereafter, the library's computer system may automatically update the date in field 005 every time the library updates the MARC record (*e.g.*, to reflect that an item has been moved to a different shelving location within the library). Field 005 is visible when viewing a MARC record via an appropriate computerized interface, but when a MARC record is printed to hardcopy, no "005" label appears. The initial field 005 date (*i.e.*, the date the MARC record was created) does appear, however, next to the label "Entered."[23] The date

[23] In this report, I sometimes refer to the "Entered" entry as field 008, characters 00-05. Field 005 is visible when viewing a MARC record via an appropriate computerized interface. But when a MARC record is printed directly to hardcopy

upon which the most recent update to field 005 occurred also appears, next to the label "Replaced." Thus, when an item's MARC record has been printed to hardcopy—as is the case with the exhibits to this report—the date reflected next to the label "Entered" is necessarily on or after the date the library first cataloged and indexed the underlying item.

42. Once one library has cataloged and indexed a publication by creating a MARC record for that publication, other libraries that receive the publication do not create additional MARC records—the other libraries instead rely on the original MARC record. They may update or revise the MARC record to ensure accuracy, but they do not replace or duplicate it. This practice does more than save libraries from duplicating labor, it also enhances the accuracy of MARC records. It also allows librarians around the world to know that a particular MARC record is authoritative. In contrast, a hypothetical system wherein duplicative records were created would result in confusion as to which record is authoritative.

43. The date of creation of the MARC record by a cataloger at an OCLC member institution reflects when the underlying item is accessible to the public. Upwards of two-thirds to three-quarters of book sales to libraries come from a jobber

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from the OCLC database, the "005" label is not shown. The date in the 005 field instead appears next to the label "Replaced."

or wholesaler for online and print resources. These resellers make it their business to provide books to their customers as fast as possible, often providing turnaround times of only a single day after publication. Libraries purchase a significant portion of the balance of their books directly from publishers themselves, which provide delivery on a similarly expedited schedule. In general, libraries make these purchases throughout the year as the books are published and shelve the books as soon thereafter as possible in order to make the books available to their patrons. Thus, books are generally available at libraries across the country within just a few days of publication.

44. In addition to creating records for books, OCLC also hosts records for serial publications. Serial publications have the same collective title but are intended to continue indefinitely with enumeration such as a volume or issue number (*e.g.*, magazines, journals, etc.). In the OCLC bibliographic database, the first issue of the serial publication is typically cataloged, but the date is left open-ended with the use of a punctuation mark such as a dash. Individual issues are not cataloged according to the current national cataloging rules outlined in *RDA: Resource and Access*.

45. MARC records for serial publication in OCLC represent the entire run of the serial title. With knowledge of the first issue published, future issues can be predicted. In my extensive professional experience, is it highly unusual for a

library to stop collecting and shelving a serial publication prior to the end of its publication run. If a subscription to a serial publication ends its run or is cancelled before the end of its run, the library will denote that it has stopped receiving new volumes by filling in the end date in the local MARC record.

46. The handling of printed journal subscriptions is shown on the cover or the first few pages of individual issues. As was the best practice among libraries, issues arrived at a central facility and were immediately received, verified as part of a subscription, checked in, and stamped or labeled with the institution's name and date. Determining that the issue was part of the library subscription ensured that the entire set of publications for the year had been received so that they could be professionally bound and retained. This process also verified that all of the published issues arrived so that the library staff did not have to request or claim an issue that did not arrive as expected. In large public libraries with branches and multi-campus libraries within academic institutions, the journals were sorted and delivered to the subscribing unit. The new issue was placed in the public area; the older issue was stored so that it remained available.

47. The foregoing process has been standard library practice longer than I have been working in the profession. I first learned the steps in the process in the late 1970s and later supervised it. Although the checking in process has become automated and now links electronically to holdings records for the MARC record

for each serial title, the manual placement of a stamp or label and placing the issue in a public area has not changed for 50 years. Unless I note otherwise below in reference to a specific serial publication, it is my expert opinion that this standard protocol was followed for the serial publications discussed below.

V. PUBLICATIONS

A. Boye article [Exhibit 1016]

48. Attached hereto as Exhibit 1016 is a copy of the journal article, "Pulse Proteins: Processing, Characterization, Functional Properties and Applications in Food and Feed" by Joyce Boye, Fatemeh Zare, and Alison Pletch (hereafter "Boye"). The Boye article was published in Volume 43, Issue 2 of the journal *Food Research International*. The Boye article appears beginning on page 414 of this issue dated March 2010.

49. I obtained Exhibit 1016 from the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). Exhibit 1016 is a true and correct copy of the Boye article (pages 414-431). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Boye article is also available from the publisher, Elsevier.[24] Exhibit

[24] https://www.sciencedirect.com/science/article/abs/pii/S0963996909002683.

1016 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Exhibit 1016 is a true and correct copy in a condition that creates no suspicion about its authenticity.

50. Attached hereto as Attachment 1a is a true and correct copy of the MARC record for the journal *Food Research International* at the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). The library ownership is indicated by the presence of the library's code (LHL) in field 049. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 1a occurred on October 28, 2019, as shown in field 005 field ("20191028"). I personally identified and retrieved the MARC record that is Attachment 1a.

51. Based on finding a copy of Exhibit 1016 in the Linda Hall Library of Science, Engineering & Technology and MARC record in its online library catalog attached as Attachment 1a, it is my opinion that the Boye article published in the journal *Food Research International* was publicly available on or shortly after March 2, 2010, as indicated on shown by the date stamp on page four of Exhibit 1016. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 1a also shows that Exhibit 1016 was catalogued with a

descriptor term reading "Food industry and trade $v Periodicals" (see Attachment 5b, Library of Congress subject heading sh2008103991) in the 650 field.

52. As noted in the holdings information (362 field), the Linda Hall Library of Science, Engineering & Technology has received the journal *Food Research International* since 1992 and continues to receive the publication.[25] In view of the MARC record for Exhibit 1016, the Boye article was publicly available on or shortly after March 2, 2010, because the serial title had been received, cataloged, and indexed in the Linda Hall Library of Science, Engineering & Technology and made part of its online catalog database.

53. Attached hereto as Attachment 1b is a true and correct copy of the MARC record for the journal *Food Research International* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 1b, that library code is "NYG," which means that the MARC record for this serial was cataloged at the New York State Library (Albany, New York). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the New York

[25] The publication was originally titled *Canadian Institute of Food Technology Journal* (January 1968-October 1971), changed the title to the *Canadian Institute of Food Science and Technology Journal* (January 1972-December 1991), and then adopted the current title, *Food Research International*, in January 1972.

State Library created OCLC record number 25848747 on May 20, 1992, as shown in the "Entered" field ("19920520"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 1b occurred on July 16, 2022, as shown in the "Replaced" field ("20220716"). I personally identified and retrieved the MARC record that is Attachment 1b. The "BLvl" entry in Attachment 1b is "s," which indicates that the journal *Food Research International* is a serial publication. Field 310 of Attachment 1b reads "Six issues per year." Accordingly, the MARC record for Exhibit 1016 corresponds to the journal *Food Research International* from the time the serial title began publication and includes the date of the Boye article.

54. Attachment 1b includes an entry in field 050 ("TP368 $b .C3")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b FO482C")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("664/.005")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 1b further includes three descriptor terms reading "Food industry and trade $v Periodicals" (see Attachment 5b, Library of Congress subject heading sh2008103991), "Food industry

and trade $z Canada $v Periodicals" (see Attachment 20d, Library of Congress subject heading sh85050282, Attachment 1c, Library of Congress name authority record n79007233, and Attachment 2d, Library of Congress subject heading sh85099890), and "Food" (see Attachment 5e, Library of Congress subject heading sh85050184) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 1b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of May 20, 1992, the MARC record attached hereto as Attachment 1b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

55. Attachment 1b indicates that the journal *Food Research International* as cataloged at the New York State Library is currently available from 142 libraries. In view of the above, this issue of the journal *Food Research International* was publicly available on or shortly after March 2, 2010, because by that date it had been cataloged and indexed at the New York State Library, made part of the OCLC bibliographic database, and received at the Linda Hall Library of Science,

Engineering & Technology. For these reasons, it is my opinion that Exhibit 1016 was published and accessible to the public on or shortly after March 2, 2010.

B. Mottram Article [Exhibit 1017]

56. Attached hereto as Exhibit 1017 is a copy of the journal article, "Flavour Formation in Meat and Meat Products: A Review" by Donald S. Mottram (hereafter "Mottram"). The Mottram article was published in Volume 62, Number 4 of the journal *Food Chemistry*. The Mottram article appears beginning on page 415 of this issue dated August 1998.

57. I obtained Exhibit 1017 from the University of Wisconsin – Madison Libraries. Exhibit 1017 is a true and correct copy of the Mottram article (pages 415-424). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Mottram article is also available from the publisher, Elsevier[26] and the digital repository *Semantic Scholar*.[27] Exhibit 1017 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1017 is in a condition that creates no suspicion about its authenticity.

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[26] https://www.sciencedirect.com/science/article/abs/pii/S0308814698000764.

[27] https://www.semanticscholar.org/paper/Flavour-formation-in-meat-and-meat-products%3A-a-Mottram/e5173f007a4109b5c613aeec234aa3d33bef054a.

58. Attached hereto as Attachment 2a is a true and correct copy of the MARC record for the journal *Food Chemistry* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's code (uwmadisondb) in the fourth field 035. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 2a occurred on April 20, 2015, as shown in field 005 field ("20150420"). I personally identified and retrieved the MARC record that is Attachment 2a.

59. Based on finding a print copy of Exhibit 1017 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 2a, it is my opinion that the Mottram article published in the journal *Food Chemistry* was publicly available on or shortly after August 17, 1998, as shown by the date stamp on the second page of Exhibit 1017. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 2a also shows that Exhibit 1017 was catalogued with two descriptor terms reading "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973) and "Food $x Composition $v Periodicals" (see Attachment 2c, Library of Congress subject heading sh85050191 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

60. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the journal *Food Chemistry* since July 1976 and continues to receive the publication. In view of the MARC record for Exhibit 1017, the Mottram article was publicly available on or shortly after August 17, 1998, because the serial title had been received, cataloged, and indexed in the University of Wisconsin–Madison Libraries and made part of its online catalog database.

61. Attached hereto as Attachment 2e is a true and correct copy of the MARC record for the journal *Food Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 2e, that library code is "AGL," which means that the MARC record for this serial was cataloged at the National Agricultural Library (Beltsville, Maryland). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the National Agricultural Library created OCLC record number 2728297 on February 9, 1977, as shown in the "Entered" field ("19770209"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 2e occurred on September 13, 2021, as shown in the "Replaced" field ("20210913"). I personally identified and retrieved the MARC record that is Attachment 2e. The "BLvl" entry

in Attachment 2e is "s," which indicates that the journal *Food Chemistry* is a serial publication. Field 310 of Attachment 2e reads "Thirty-two no. a year, $b <2018-." Accordingly, the MARC record for Exhibit 1017 corresponds to the journal *Food Chemistry* from the time the serial title began publication and includes the date of the Mottram article.

62. Attachment 2e includes an entry in field 050 ("TX501 $b .F66")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b FO4455"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), and an entry in field 082 ("664/.001/54"), a subject matter consistent with the Dewey Decimal classification system. Attachment 2e further includes two descriptor terms reading "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973) and "Food $x Composition $v Periodicals" (see Attachment 2c, Library of Congress subject heading sh85050191 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 2e was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of February 9, 1977,

the MARC record attached hereto as Attachment 2e was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

63. Attachment 2e indicates that the journal *Food Chemistry* as cataloged at the National Agricultural Library is currently available from 186 libraries. In view of the above, this issue of the journal *Food Chemistry* was publicly available on or shortly after August 17, 1998, because by that date it had been cataloged and indexed at the National Agricultural Library, made part of the OCLC bibliographic database, and received at the University of Wisconsin–Madison Libraries. For these reasons, it is my opinion that Exhibit 1017 was published and accessible to the public on or shortly after August 17, 1998.

C. Proulx Article [Exhibit 1019]

64. Exhibit 1019 is a printout of a journal article titled *Iron Bioavailability of Hemoglobin from Soy Root Nodules Using a Caco-2 Cell Culture Model* by Amy K. Proulx and Manju B. Reddy (hereafter "Proulx"). I obtained Exhibit 1019 from the Iowa State University digital repository. A printout of the digital repository webpage for the Proulx article is attached as Attachment 4a. The webpage indicates that the Proulx article is a permitted reprint of the article originally published on

January 31, 2006 in Volume 54, Issue 4 of the *Journal of Agricultural and Food Chemistry* beginning on page 1518. The Proulx article is also available from the publisher, ACS Publications. A printout of the publisher's webpage for the Proulx article is attached as Attachment 4b. The Proulx article is also available in the digital repositories *ResearchGate*[28] and *Semantic Scholar*.[29] The *Journal of Agricultural and Food Chemistry* is also available through the National Library of Medicine (Attachment 4c, MARC record from NLM) and the National Agricultural Library (Attachment 4d, MARC record from AGL).

65. Exhibit 1019 is a true and correct copy of the Proulx article (pages 1518-1522). Specifically, the text of Exhibit 1019 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1019 was found within the custody of a university's digital repository – a place where, if authentic, a copy of this document would likely be. Additionally, Exhibit 1019 is in a condition that creates no suspicion about its authenticity. Based on the date recorded in Exhibit 1019, it is my opinion that the Proulx article was available to the public on January

[28] https://www.researchgate.net/publication/7299318_Iron_Bioavailability_of_Hemoglobin_from_Soy_Root_Nodules_Using_a_Caco-2_Cell_Culture_Model.

[29] https://www.semanticscholar.org/paper/Iron-bioavailability-of-hemoglobin-from-soy-root-a-Proulx-Reddy/cc78c3b50d53a0603de1eaee1ebde30c2450432b.

31, 2006, or shortly thereafter. This date is also supported by the publication date indicated on the publisher's website (see Attachment 4b).

D. MacLeod article [Exhibit 1024]

66. Attached hereto as Exhibit 1024 is a copy of the journal article, "Natural and Simulated Meat Flavors (With Particular Reference to Beef)" by Glesni MacLeod, M. Seyyedain-Ardebili, and Stephen S. Chang (hereafter "MacLeod"). The MacLeod article was published in Volume 14, Issue 4 of the journal *Critical Reviews in Food Science and Nutrition*. The MacLeod article appears beginning on page 309 of this issue dated August 1981.

67. I obtained Exhibit 1024 from the University of Wisconsin – Madison Libraries. Exhibit 1024 is a true and correct copy of the MacLeod article (pages 309-437). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The MacLeod article is also available from the publisher, Taylor and Francis,[30] through the National Library of Medicine,[31] and the Food and Agriculture Organization of the United Nations (AGRIS).[32] Exhibit 1024 was found within the custody of a library – a place where

[30] https://www.tandfonline.com/doi/abs/10.1080/10408398109527309.

[31] https://pubmed.ncbi.nlm.nih.gov/7023846/.

[32] https://agris.fao.org/agris-search/search.do?recordID=US19820838305.

an authentic copy of this journal would likely be. Additionally, Exhibit 1024 is in a condition that creates no suspicion about its authenticity.

68. Attached hereto as Attachment 5a is a true and correct copy of the MARC record for the journal *Critical Reviews in Food Science and Nutrition* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's code (uwmadisondb) in the fourth field 035. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 5a occurred on April 9, 2015, as shown in field 005 field ("20150409"). I personally identified and retrieved the MARC record that is Attachment 5a.

69. Based on finding a print copy of Exhibit 1024 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 5a, it is my opinion that the MacLeod article published in the journal *Critical Reviews in Food Science and Nutrition* was publicly available on or shortly after August 31, 1981.[33] The cover contains a stamp with the library's

[33] The journal *Critical Reviews in Food Science and Nutrition* was published bimonthly and, therefore, new issues were available approximately 60 days. Based on the frequency of publication (see Attachment 5a, field 310) and my years of experience working with serials, it is my opinion that issues would be published by

name, but the date cannot be deciphered. Attachment 5a also shows that Exhibit 1024 was catalogued with two descriptor terms reading "Food industry and trade $v Periodicals" (see Attachment 5b, Library of Congress subject heading sh2008103991) and "Nutrition $v Periodicals" (see Attachment 5c, Library of Congress subject heading sh2008108541) in the 650 fields.

70. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the journal *Critical Reviews in Food Science and Nutrition* since June 1980 and continues to receive the publication.[34] In view of the MARC record for Exhibit 1024, the MacLeod article was publicly available on or shortly after August 31, 1981, because the serial title had been received, cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

71. Attached hereto as Attachment 5d is a true and correct copy of the MARC record for the journal *Critical Reviews in Food Science and Nutrition*

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the end of the month. Therefore, a public availability date of August 31, 1981, is reasonable.

[34] The publication was originally titled *CRC Critical Reviews in Food Technology* (February 1970-April 1975, then changed the title to *CRC Critical Reviews in Food Science and Nutrition* (June 1975-December 1979), and adopted the current title, *Trends in Food Science & Technology*, in January 1980.

obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 5d, that library code is "DLC," which means that the MARC record for this serial was cataloged at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 12330732 on July 31, 1985, as shown in the "Entered" field ("19850731"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 5d occurred on August 10, 2022, as shown in the "Replaced" field ("20220810"). I personally identified and retrieved the MARC record that is Attachment 5d. The "BLvl" entry in Attachment 5d is "s," which indicates that the journal *Critical Reviews in Food Science and Nutrition* is a serial publication. Field 310 of Attachment 5d reads "Twenty-two issues a year, $b <2019- ." Accordingly, the MARC record for Exhibit 1024 corresponds to the journal *Critical Reviews in Food Science and Nutrition* from the time the serial title adopted the current title and includes the date of the MacLeod article.

72. Attachment 5d includes an entry in field 050 ("TP368 $b .C46")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b C555F"), a subject matter consistent with the

National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("664/.005"), a subject matter consistent with the Dewey Decimal classification system. Attachment 5d further includes four descriptor terms reading "Food industry and trade $v Periodicals" (see Attachment 5b, Library of Congress subject heading sh2008103991), "Nutrition $v Periodicals" (see Attachment 5c, Library of Congress subject heading sh2008108541), "Food $v Periodicals" (see Attachment 5e, Library of Congress subject heading sh85050184), and "Nutrition" (see Attachment 5f, Library of Congress subject heading sh85093451) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 5d was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of July 31, 1985, the MARC record attached hereto as Attachment 5d was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

73. Attachment 5d indicates that the journal *Critical Reviews in Food Science and Nutrition* as cataloged at the Library of Congress is currently available

from 237 libraries. In view of the above, this issue of the journal *Critical Reviews in Food Science and Nutrition* was publicly available on or shortly after August 31, 1981, because by that date it had been cataloged and indexed at the Library of Congress, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1024 was published and accessible to the public on or shortly after August 31, 1981.

E. Dwivedi article [Exhibit 1026]

74. Attached hereto as Exhibit 1026 is a copy of the journal article, "Meat Flavor," by Basant K. Dwivedi and Maxwell C. Brockmann (hereafter "Dwivedi"). The Dwivedi article was published in Volume 5, Issue 4 of the journal *CRC Critical Reviews in Food Technology*. The Dwivedi article appears beginning on page 47 of this issue dated April 1975.

75. I obtained Exhibit 1026 from the University of Wisconsin – Madison Libraries. Exhibit 1026 is a true and correct copy of the Dwivedi article (pages 487-535). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Dwivedi article is also available

from the publisher, Taylor and Francis.[35] Exhibit 1026 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Exhibit 1026 is in a condition that creates no suspicion about its authenticity.

76. Attached hereto as Attachment 6a is a true and correct copy of the MARC record for the journal *CRC Critical Reviews in Food Technology* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's code (uwmadisondb) in the fourth field 035. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 6a occurred on August 29, 2007, as shown in field 005 ("20070829"). I personally identified and retrieved the MARC record that is Attachment 6a.

77. Based on finding a print copy of Exhibit 1026 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 6a, it is my opinion that the Dwivedi article published in the journal *CRC Critical Reviews in Food Technology* was publicly available on or shortly after May 19, 1975, as shown by the date stamp on the first page of Exhibit 1026. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and

[35] https://www.tandfonline.com/doi/abs/10.1080/10408397509527183.

checked. Attachment 6a also shows that Exhibit 1026 was catalogued with a descriptor term reading "Food industry and trade $v Periodicals" (see Attachment 5b, Library of Congress subject heading sh2008103991) in the 650 field.

78. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the journal *CRC Critical Reviews in Food Technology* since the publication began and continues to receive the publication.[36] In view of the MARC record for Exhibit 1026, the Dwivedi article was publicly available on or shortly after May 19, 1975, because the serial title had been received, cataloged, and indexed at the University of Wisconsin – Madison Libraries and made part of its online catalog database.

79. Attached hereto as Attachment 6b is a true and correct copy of the MARC record for the journal *CRC Critical Reviews in Food Technology* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 6b, that library code is "MUL," which means that the MARC record for this serial was cataloged as part of the Minnesota Union List of Serials at the University of

[36] The publication was originally titled *CRC Critical Reviews in Food Technology* (February 1970-April 1975), changed the title to *CRC Critical Reviews in Food Science and Nutrition* (June 1975-December 1979) and adopted the current title, *Critical Reviews in Food Science and Nutrition*, in June 1980.

Minnesota Libraries (Minneapolis, Minnesota). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of Minnesota Libraries created OCLC record number 1553990 on August 17, 1975, as shown in the "Entered" field ("19750817"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 6b occurred on August 10, 2022, as shown in the "Replaced" field ("20220810"). I personally identified and retrieved the MARC record that is Attachment 6b. The "BLvl" entry in Attachment 6b is "s," which indicates that the journal *CRC Critical Reviews in Food Technology* is a serial publication. Accordingly, the MARC record for Exhibit 1026 corresponds to the journal *CRC Critical Reviews in Food Technology* from the time the serial title began publication and includes the date of the Dwivedi article.

80. Attachment 6b includes an entry in field 050 ("TP368 $b .C46")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b C555G")—as described above, a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("664/.005")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system.

Attachment 6b further includes a descriptor term reading "Food industry and trade $v Periodicals" (see Attachment 5b, Library of Congress subject heading sh2008103991) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 6b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entry. As of August 17, 1975, the MARC record attached hereto as Attachment 6b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

81. Attachment 6b indicates that the journal *CRC Critical Reviews in Food Technology* as cataloged at the University of Minnesota Libraries is currently available from 175 libraries. In view of the above, this issue of the journal *CRC Critical Reviews in Food Technology* was publicly available on or shortly after May 19, 1975, because by that date it had been cataloged and indexed at the University of Minnesota Libraries, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my

opinion that Exhibit 1026 was published and accessible to the public on or shortly after May 19, 1975.

F. Pearson book [Exhibit 1027]

82. Attached hereto as Exhibit 1027 is a copy of Chapter 3 of the book, *Processed Meats*, 3rd edition, by A. M. Pearson and T. A. Gillett (hereafter "Pearson") and issued by Chapman & Hall in 1996. Exhibit 1027 is a true and correct copy of the title page, copyright page, table of contents, and Chapter 3 (pages 53-78), which I obtained from the University of Wisconsin – Madison Libraries. The text in Exhibit 1027 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1027 is in a condition that creates no suspicion about its authenticity.

83. Attached hereto as Attachment 7a is a true and correct copy of the MARC record for this monograph from the University of Wisconsin – Madison Libraries online catalog. The library ownership is indicated by the presence of the library's code (GZM) in the 049 field. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on March 22, 2018, as shown in the "Replaced" field ("20180322"). I personally identified and retrieved the library catalog record which is Attachment 7a.

84. Based on finding a print copy of the Pearson book in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 7a, it is my opinion that the book *Processed Meats*, 3rd edition, was publicly available on or shortly after May 4, 1995, as shown in field 008 ("950504"). The International Standard Book Number (ISBN) on Exhibit 1027 (0-834-21304-4) matches the ISBN in field 020 of Attachment 7a. Therefore, Exhibit 1027 is the same book as the one that the cataloger at the Library of Congress used to create the MARC record that is Attachment 7a.

85. Attached hereto as Attachment 7b is a true and correct copy of the MARC record for the book *Processed Meats*, 3rd edition obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 7b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 7b, that library code is "DLC," which means that the MARC record for this book was created at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 463356391 on June 10, 1997, as shown in the "Entered" field ("19970610") and as part of the Cataloging in Publication Program.[37] The library continues to update and

[37] https://www.loc.gov/publish/cip/.

enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 7b occurred on December 20, 2021, as shown in the "Replaced" field ("20211220"). I personally identified and retrieved the MARC record that is Attachment 7b.

86. Attachment 7b further includes an entry in field 050 ("TS1970 $b .P43 1990")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("664.9")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 7b further includes two descriptor terms reading "Packing-houses" (see Attachment 7c, Library of Congress subject heading sh85096532) and "Packing-house products" (see Attachment 7d, Library of Congress subject heading sh85096529) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 7b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entries. Further, as of June 10, 1997, the MARC record attached hereto as Attachment 7b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that added this book to its collection, which means that the corresponding publication was publicly available

on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

87. Further supporting my opinion that Exhibit 1027 was publicly accessible to ordinarily skilled and interested researchers in the field is the fact that the book *Processed Meats*, 3rd edition, was registered with the U.S. Copyright Office as item TX0004188034 on February 13, 1996, and indicated a publication date of January 2, 1996 (see Attachment 7e, U.S. Copyright Office Public Catalog). As noted above, this would have provided a POSITA with keyword searching capabilities and other tools to locate this book.

88. Attachment 7b indicates that the book *Processed Meats*, 3rd edition, as cataloged at the Library of Congress is currently available from 12 libraries. In view of above, the book *Processed Meats*, 3rd edition, was publicly available on or shortly after January 2, 1996, because by that date it had been received, cataloged, and indexed at the Library of Congress and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1027 was published and accessible to the public on or shortly after January 2, 1996, the publication date entered in the records of the U.S. Copyright Office.

G. Calkins article [Exhibit 1028]

89. Attached hereto as Exhibit 1028 is a copy of the journal article, "A fresh look at meat flavor," by C. R. Calkins and J. M. Hodgen (hereafter "Calkins"). The

Calkins article was published in Volume 77, Issue 1 of the journal *Meat Science*. The Calkins article appears beginning on page 63 of this issue dated September 2007.

90. I obtained Exhibit 1028 from the Merrill-Cazier Library at Utah State University (Logan, Utah). Exhibit 1028 is a true and correct copy of the Calkins article (pages 63-80). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Calkins article is also available from the publisher, Elsevier,[38] through the National Library of Medicine,[39] and in the digital repositories *ResearchGate*[40] and *Semantic Scholar*.[41] Exhibit 1028 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Exhibit 1028 is in a condition that creates no suspicion about its authenticity.

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[38] https://www.sciencedirect.com/science/article/abs/pii/S0309174007001374.

[39] https://pubmed.ncbi.nlm.nih.gov/22061397/.

[40] https://www.researchgate.net/publication/51775884_A_fresh_look_at_meat_flavor.

[41] https://www.semanticscholar.org/paper/A-fresh-look-at-meat-flavor.-Calkins-Hodgen/e2e9ec3a19a49b068053b8d84129b092e62d87c6.

91. Page three of Exhibit 1028 has a date stamp affixed by or on behalf of the Merrill-Cazier Library at Utah State University, which shows that it was received, verified, and checked in on July 31, 2007. Therefore, in my experience, this issue of the journal *Meat Science* would have been available to users in the Merrill-Cazier Library at Utah State University on or shortly after that date.

92. Attached hereto as Attachment 8a is a true and correct copy of the MARC record for the journal *Meat Science* in the Merrill-Cazier Library at Utah State University. The library ownership is indicated by the presence of the library's code (USU) at the bottom of the screen. I personally identified and retrieved the MARC record that is Attachment 8a. Attachment 8a also shows that Exhibit 1028 was catalogued with two descriptor terms reading "Meat $v Periodicals" (see Attachment 3c, Library of Congress sh20082715 and Attachment 2d, Library of Congress subject heading sh85099890) and "Meat industry and trade $v Periodicals" (see Attachment 3d, Library of Congress subject heading sh20082738 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

93. Based on finding a print copy of Exhibit 1028 in the Merrill-Cazier Library at Utah State University and MARC record in its online library catalog attached as Attachment 8a, it is my opinion that the Calkins article published in the journal *Meat Science* was available in the Merrill-Cazier Library at Utah State University on or shortly after July 31, 2007.

94. As noted in the holdings information (field 362), the Merrill-Cazier Library at Utah State University has received the journal *Meat Science* since January 1977 and continues to receive the publication. In view of the MARC record for Exhibit 1028, the Calkins article was publicly available on or shortly after July 31, 2007, because the serial title had been cataloged and indexed in the Merrill-Cazier Library at Utah State University and made part of its online catalog database.

95. Attached hereto as Attachment 8b is a true and correct copy of the MARC record for the journal *Meat Science* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 8b, that library code is "AGL," which means that the MARC record for this serial was cataloged at the National Agricultural Library (Beltsville, Maryland). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the National Agricultural Library created OCLC record number 2954367 on May 11, 1977, as shown in the "Entered" field ("19770511"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 8b occurred on July 12, 2022, as shown in the "Replaced" field ("20220712"). I personally identified and retrieved the MARC record that is Attachment 8b. The "BLvl" entry in Attachment 8b is "s," which indicates that the journal *Meat Science* is a serial publication. Field 310 of

Attachment 8b reads "Monthly, $b <1996-." Accordingly, the MARC record for Exhibit 1028 corresponds to the journal *Meat Science* from the time the serial title began and includes the date of the Calkins article.

96. Attachment 8b includes an entry in field 050 ("TX556.M4 $b M45")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 060 ("W1 $b ME105C"), a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system). Attachment 8b further includes four descriptor terms reading "Meat $v Periodicals" (see Attachment 3c, Library of Congress sh20082715 and Attachment 2d, Library of Congress subject heading sh85099890), "Meat industry and trade $v Periodicals" (see Attachment 3d, Library of Congress subject heading sh20082738 and Attachment 2d, Library of Congress subject heading sh85099890), "Meat" (see Attachment 3c, Library of Congress sh20082715), and "Meat industry and trade" (see Attachment 3d, Library of Congress subject heading sh20082738) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 8b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 060 entry, and the field 650 entries. As of May 11, 1977, the MARC record

attached hereto as Attachment 8b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

97. Attachment 8b indicates that the journal *Meat Science* as cataloged at the National Agricultural Library is currently available from 152 libraries. In view of the above, this issue of the journal *Meat Science* was publicly available on or shortly after July 31, 2007, because by that date it had been cataloged and indexed at the National Agricultural Library, made part of the OCLC bibliographic database, and received in the Merrill-Cazier Library at Utah State University. For these reasons, it is my opinion that Exhibit 1028 was published and accessible to the public on or shortly after July 31, 2007.

H. Williamson journal article [Exhibit 1029]

98. Exhibit 1029 is a copy of the article "Red Meat in the Diet" by C. S. Williamson, R. K. Foster, S. A. Stanner, and J.L. Buttriss (hereafter "Williamson"). The Williamson article was published in Volume 30, Issue 4 of the journal *Nutrition Bulletin*. The Williamson article appears beginning on page 323 of this issue dated December 2005.

99. I obtained Exhibit 1029 from the King Library at San José State University. Exhibit 1029 is a true and correct copy of the Williamson article (pages 323-355). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1029 was found within the custody of a library – a place where, if authentic, a copy of this online open access journal would likely be. Additionally, Exhibit 1029 is in a condition that creates no suspicion about its authenticity. The Williamson article is also available from the publisher's website. A printout the publisher's webpage for the Williamson article is attached as Attachment 9a.

100. Attached hereto as Attachment 9b is a true and correct copy of the MARC record for the journal *Nutrition Bulletin* from the King Library at San José State University.[42] I personally identified and retrieved the MARC record that is Attachment 9b. As noted in the holdings information (field 362), the King Library at San José State University has received the journal *Nutrition Bulletin* since 2000 and continues to receive the publication. In view of the MARC record for Exhibit

[42] https://csu-sjsu.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991067596690702901&context=L&vid=01CALS_SJO:01CALS_SJO&lang=en&search_scope=MyInst_and_CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,nutrition%20bulletin&offset=0.

1029, the Williamson article was publicly available on November 25, 2005, as indicated on the publisher's website (see Attachment 9a).

101. The entry in field 008, character 7 of Attachment 9b is "c," which indicates that the journal *Nutrition Bulletin* is a serial publication. Accordingly, the MARC record for Exhibit 1029 corresponds to those issues of the journal *Nutrition Bulletin* from the time of the serial began publication to the present day.

102. Attachment 9b further includes an entry in field 050 ("QP141.A1 $b N88")— includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b NU873M")— includes a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("612.3")— includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 9b further includes a descriptor term reading "Nutrition $v Periodicals" (see Attachment 9c, Library of Congress subject heading sh2008108541) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 9b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entry. Further, as of October 9, 2000, the MARC record attached

hereto as Attachment 9b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

103. Attachment 9b indicates that the MARC record for the journal *Nutrition Bulletin* obtained from *WorldCat*, the public view of the OCLC bibliographic database, is available in 21 editions.[43] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 9b indicates that a cataloger at the Library of Congress (CONSER, fifth field 035) created OCLC record number 45142827 field (third field 035) on October 9, 2000 (field 008).

104. The *WorldCat* database indicates that the journal *Nutrition Bulletin* as cataloged in *WorldCat* is currently available from 1,491 libraries. Based on finding a copy of Exhibit 1029 in the King Library at San José State University and MARC record in its online library catalog attached as Attachment 9b, it is my opinion that

[43] https://www.worldcat.org/title/1120616535. The *WorldCat* website does not permit many of its functional aspects to be captured in a printout. Therefore, when necessary, I cite to the *WorldCat* website, which is the authoritative database for OCLC records, as discussed above.

the Williamson article published in the journal *Nutrition Bulletin* was available in the King Library at San José State University on November 25, 2005.

I. Garrocho-Villegas article [Exhibit 1030]

105. Attached hereto as Exhibit 1030 is a copy of the journal article, "Plant Hemoglobins: What We Know Six Decades After Their Discovery" by Verónica Garrocho-Villegas, Sabarinathan Kuttalingam Gopalasubramaniam, and Raúl Arredondo-Peter (hereafter "Garrocho-Villegas"). The Garrocho-Villegas article was published in Volume 398, Issues 1-2 of the journal *Gene*. The Garrocho-Villegas article appears beginning on page 78 of this issue dated August 15, 2007.

106. I obtained Exhibit 1030 from the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). Exhibit 1030 is a true and correct copy of the Garrocho-Villegas article (pages 78-85). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Garrocho-Villegas article is also available from the publisher, Elsevier,[44] through the National Library of Medicine,[45] and the digital repository

[44] https://www.sciencedirect.com/science/article/abs/pii/S0378111907001965?via%3Dihub

[45] https://pubmed.ncbi.nlm.nih.gov/17540516/.

ResearchGate.[46] Exhibit 1030 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1030 is in a condition that creates no suspicion about its authenticity.

107. Attached hereto as Attachment 10a is a true and correct copy of the MARC record for the journal *Gene* at the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). The library ownership is indicated by the presence of the library's code (LHL) in field 049. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 10a occurred on October 29, 2019, as shown in field 005 field ("20191029"). I personally identified and retrieved the MARC record that is Attachment 10a.

108. Based on finding a copy of Exhibit 1030 in the Linda Hall Library of Science, Engineering & Technology and MARC record in its online library catalog attached as Attachment 10a, it is my opinion that the Garrocho-Villegas article published in the journal *Gene* was publicly available on or shortly after August 15, 2007, as indicated by the date stamp on the cover. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show

[46] https://www.researchgate.net/publication/6294855_Plant_hemoglobins_What_we_know_six_decades_after_their_discovery.

when an issue was received, verified, and checked. Attachment 10a also shows that Exhibit 1030 was catalogued with three descriptor terms reading "Genetic engineering $v Periodicals" (see Attachment 10b, Library of Congress subject heading sh2008117864), "Molecular cloning $v Periodicals" (see Attachment 10c, Library of Congress subject heading sh85086580 and Attachment 2d, Library of Congress subject heading sh85099890), and "Recombinant DNA $v Periodicals" (see Attachment 10d, Library of Congress subject heading sh85111851 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

109. As noted in the holdings information (362 field), the Linda Hall Library of Science, Engineering & Technology has received the journal *Gene* since 1976 and continues to receive the publication. In view of the MARC record for Exhibit 1030, the Garrocho-Villegas article was publicly available on or shortly after August 15, 2007, because the serial title had been received, cataloged, and indexed in the Linda Hall Library of Science, Engineering & Technology and made part of its online catalog database.

110. Attached hereto as Attachment 10e is a true and correct copy of the MARC record for the journal *Gene* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 10e, that library code is "DLC," which means that the MARC record for this serial was cataloged at the Library of

Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 3424642 on November 16, 1977, as shown in the "Entered" field ("19771116"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 10e occurred on August 9, 2022, as shown in the "Replaced" field ("20220809"). I personally identified and retrieved the MARC record that is Attachment 10e. The "BLvl" entry in Attachment 10e is "s," which indicates that the journal *Gene* is a serial publication. Field 310 of Attachment 10e reads "Biweekly, $b <15 July 1992-." Accordingly, the MARC record for Exhibit 1030 corresponds to the journal *Gene* from the time the serial title began publication and includes the date of the Garrocho-Villegas article.

111. Attachment 10e includes an entry in field 050 ("QH442 $b .G43")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b GE184M")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("575.1")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 10e further

includes four descriptor terms reading "Genetic engineering $v Periodicals" (see Attachment 10b, Library of Congress subject heading sh2008117864), "Molecular cloning $v Periodicals" (see Attachment 10c, Library of Congress subject heading sh85086580 and Attachment 2d, Library of Congress subject heading sh85099890), "Recombinant DNA $v Periodicals" (see Attachment 10d, Library of Congress subject heading sh85111851 and Attachment 2d, Library of Congress subject heading sh85099890), and "Genetic recombination" (see Attachment 10f, Library of Congress subject heading sh85053867) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 10e was indexed according to its subject matter by virtue of at least fur independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of November 16, 1977, the MARC record attached hereto as Attachment 10e was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

112. Attachment 10e indicates that the journal *Gene* as cataloged at the Library of Congress is currently available from 407 libraries. In view of the above, this issue of the journal *Gene* was publicly available on or shortly after August 15,

2007, because by that date it had been cataloged and indexed at the Library of Congress, made part of the OCLC bibliographic database, and received at the Linda Hall Library of Science, Engineering & Technology. For these reasons, it is my opinion that Exhibit 1030 was published and accessible to the public on or shortly after August 15, 2007.

J. McGorrin 2011 conference paper [Exhibit 1031]

113. Attached hereto as Exhibit 1031 is a copy of a conference paper published in the book titled *Volatile Sulfur Compounds in Food* edited by Michael C. Qian, Xuetong Fan, and Kanjana Mahattanatawee found in the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). The conference paper titled "The Significance of Volatile Sulfur Compounds in Food Flavors" by Robert J. McGorrin (hereafter "McGorrin 2011") appears beginning on page 3. The conference papers were presented at a symposium jointly sponsored by the Divisions of Agricultural and Food Chemistry and Carbohydrate Chemistry was held at the 183rd Meeting of the American Chemical Society on March 28-April 2, 1983, in Las Vegas, Nevada. The volume is also identified as ACS Symposium Series 215. Exhibit 1031 is a true and correct copy of the McGorrin 2011 conference paper (pages 3-31). I obtained this copy of the conference paper in the Linda Hall Library of Science, Engineering & Technology. Specifically, the text of the McGorrin 2011 conference paper is complete; no pages are missing, and the text on each page

appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1031 was found within the custody of a library – a place where, if authentic, a copy of this conference proceedings volume would likely be. Additionally, Exhibit 1031 is in a condition that creates no suspicion about authenticity.

114. Attached hereto as Attachment 11a is a true and correct copy of the MARC record for this conference proceedings volume from the Linda Hall Library of Science, Engineering & Technology online catalog. The library ownership is indicated by the presence of the library's code (LHL) in field 049. Based on finding a copy of Exhibit 1031 in the Linda Hall Library of Science, Engineering & Technology and MARC record in its online library catalog attached as Attachment 11a, it is my opinion that the book titled *Volatile Sulfur Compounds in Food* was publicly available as of or shortly after August 8, 2011, as shown in field 008 ("110808"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on March 2, 2012, as shown in field 005 ("20120302"). I personally identified and retrieved the library catalog record which is Attachment 11a.

115. Attachment 11a further includes an entry in field 050 ("TX553.S85 $b V65 2011")—as described above, a subject matter classification number consistent

with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("664")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 11a also shows that the volume was catalogued with three descriptor terms reading "Food $x Sulfur content" (see Attachment 11b, Library of Congress subject heading sh2011004474), "Sulfur compounds $v Congresses" (Attachment 11c, Library of Congress subject heading sh85130373 and Attachment 11d, Library of Congress subject heading sh85031115), and "Food analysis $v Congresses" (Attachment 11e, Library of Congress subject heading sh2008103843) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 11a was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entries. Further, as of August 8, 2011, the MARC record attached hereto as Attachment 11a was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired the conference proceedings volume, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

116. Attachment 11a indicates that the MARC record for the conference proceedings volume titled *Volatile Sulfur Compounds in Food* obtained from *WorldCat*, the public view of the OCLC bibliographic database.[47] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 11a indicates that a cataloger at the Library of Congress (DLC, field 040) created OCLC record number 747712875 field (first field 035) on August 8, 2011 (field 008), as part of the Cataloging in Publication (CIP) Program.[48] A cataloger prepares basic information about the forthcoming book which is included on the verso of the title page (also called the copyright page). The information is provided to save time needed for the cataloging process at the library after the book is purchased. The CIP data includes the author (field 100), title and subtitle (field 245), ISBN (field 022), suggested subject headings (field 650), classification numbers for the Library of Congress classification number (field 050), and the Dewey Decimal classification number (field 082). These data elements are included in the MARC record that the Library of Congress contributes to the OCLC bibliographic database.

[47] https://www.worldcat.org/title/747712875.

[48] https://www.loc.gov/publish/cip/.

117. Further supporting my opinion that Exhibit 1031 was publicly accessible to ordinarily skilled and interested researchers in the field is the fact that the conference proceedings volume titled *Volatile Sulfur Compounds in Food* was registered with the U.S. Copyright Office as item TX0007498381 on March 8, 2012, and indicated a publication date of August 24, 2011 (see Attachment 11f, U.S. Copyright Office Public Catalog). As noted above, this would have provided a person interested in the relevant subject matter with keyword searching capabilities and other tools to locate this book.

118. The *WorldCat* database indicates that the conference proceedings volume titled *Volatile Sulfur Compounds in Food* as cataloged at the Library of Congress is currently available from 746 libraries.[49] Based on finding a copy of Exhibit 1031 in the Linda Hall Library of Science, Engineering & Technology and MARC record in its online library catalog attached as Attachment 11a, it is my opinion that the conference proceedings volume titled *Volatile Sulfur Compounds in Food* was available to the public on or shortly after August 24, 2011, the publication date entered in the records of the U.S. Copyright Office.

[49] https://www.worldcat.org/title/747712875.

K. Cerny journal article [Exhibit 1032]

119. Attached hereto as Exhibit 1032 is a copy of the journal article, "Formation of Aroma Compounds from Ribose and Cysteine during the Maillard Reaction" by Christoph Cerny and Tomas Davidek (hereafter "Cerny"). The Cerny article was published in Volume 51, Number 9 of the *Journal of Agricultural and Food Chemistry*. The Cerny article appears beginning on page 2714 of this issue dated April 23, 2003.

120. I obtained Exhibit 1032 from the University of Wisconsin – Madison Libraries. Exhibit 1032 is a true and correct copy of the Cerny article (pages 2714-2721). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Cerny article is also available from the publisher, the American Chemical Society,[50] and through the National Library of Medicine.[51] Exhibit 1032 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1032 is in a condition that creates no suspicion about its authenticity.

[50] https://pubs.acs.org/doi/10.1021/jf026123f.

[51] https://pubmed.ncbi.nlm.nih.gov/12696962/.

121. Attached hereto as Attachment 12a is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 12a occurred on March 13, 2015, as shown in field 005 field ("20150313"). I personally identified and retrieved the MARC record that is Attachment 12a.

122. Based on finding a print copy of Exhibit 1032 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 12a, it is my opinion that the Cerny article published in the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after May 8, 2003, as shown by the date stamp on the cover. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked.

123. Attachment 12a also shows that Exhibit 1032 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c,

Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

124. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the *Journal of Agricultural and Food Chemistry* since April 1953 and continues to receive the publication. In view of the MARC record for Exhibit 1032, the Cerny article was publicly available on or shortly after May 8, 2003, because the serial title had been received, cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

125. Attached hereto as Attachment 12d is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 12d, that library code is "NRC," which means that the MARC record for this serial was cataloged at the University of North Carolina – Raleigh Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of North Carolina – Raleigh Libraries created OCLC record number 1800249 on December 24, 1974, as shown in the "Entered" field ("19741224"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 12d

occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 12d. The "BLvl" entry in Attachment 12d is "s," which indicates that the *Journal of Agricultural and Food Chemistry* is a serial publication. Field 310 of Attachment 12d reads "Weekly, $b <2012-." Accordingly, the MARC record for Exhibit 1032 corresponds to the *Journal of Agricultural and Food Chemistry* from the time the serial title began and includes the date of the Cerny article.

126. Attachment 12d includes an entry in field 050 ("S583")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO534D"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("630.2405"), a subject matter consistent with the Dewey Decimal classification system. Attachment 12d further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the

MARC record attached hereto as Attachment 12d was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of December 24, 1974, the MARC record attached hereto as Attachment 12d was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

127. Attachment 12d indicates that the *Journal of Agricultural and Food Chemistry* as cataloged at the University of North Carolina – Raleigh Libraries is currently available from 596 libraries. In view of the above, this issue of the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after May 8, 2003, because by that date it had been cataloged and indexed at the University of North Carolina – Raleigh Libraries, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1032 was published and accessible to the public on or shortly after May 8, 2003.

L. Reineccius 2006a book chapter 5 [Exhibit 1033]

128. Attached hereto as Exhibit 1033 is a copy of an excerpt from the book titled *Flavor Chemistry and Technology*, 2nd edition, by Garry Reineccius. The excerpt is Chapter 5, "Changes in Food Flavor Due to Processing" (hereafter "Reineccius 2006a") and issued by the CRC Press with a 2006 copyright date. I obtained this copy of the Reineccius 2006a excerpt from the University of Wisconsin – Madison Libraries. Specifically, the text of the Reineccius 2006a excerpt (pages 103-137) is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1033 was found within the custody of a library – a place where, if authentic, a copy of this volume would likely be. Additionally, Exhibit 1033 is in a condition that creates no suspicion about authenticity.

129. Attached hereto as Attachment 13a is a true and correct copy of the MARC record for this book from the University of Wisconsin 00 Madison Libraries online catalog. The library ownership is indicated by the presence of the library's code (GZM) in field 049. Based on finding a copy of Exhibit 1033 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 13a, it is my opinion that the book titled *Flavor Chemistry and Technology*, 2nd edition, was publicly available as of or shortly after September 24, 2005, as shown in field 008 ("050924"). The library continues to update this

MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on March 24, 2018, as shown in field 005 ("20180324"). I personally identified and retrieved the library catalog record which is Attachment 13a.

130. Attachment 13a further includes an entry in field 050 ("TP372.5 $b .H43 2006")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("664.5")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 13a also shows that the volume was catalogued with two descriptor terms reading "Flavor" (see Attachment 13b, Library of Congress subject heading sh85049034) and "Flavoring essences" (Attachment 13c, Library of Congress subject heading sh85049035) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 13a was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entries. Further, as of September 24, 2005, the MARC record attached hereto as Attachment 13a was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired the conference proceedings volume, which means that the corresponding publication

was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

131. Attachment 13a indicates that the MARC record for the conference proceedings volume titled *Flavor Chemistry and Technology*, 2nd edition, obtained from *WorldCat*, the public view of the OCLC bibliographic database.[52] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 13a indicates that a cataloger at the Library of Congress (DLC, field 040) created OCLC record number 57692776 field (first field 035) on September 24, 2005 (field 008), as part of the Cataloging in Publication (CIP) Program.[53] A cataloger prepares basic information about the forthcoming book which is included on the verso of the title page (also called the copyright page). The information is provided to save time needed for the cataloging process at the library after the book is purchased. The CIP data includes the author (field 100), title and subtitle (field 245), ISBN (field 022), suggested subject headings (field 650), classification numbers for the Library of Congress classification number (field 050), and the Dewey Decimal classification number (field 082). These data elements are

[52] https://www.worldcat.org/title/57692776

[53] https://www.loc.gov/publish/cip/

included in the MARC record that the Library of Congress contributes to the OCLC bibliographic database.

132. Further supporting my opinion that Exhibit 1033 was publicly accessible to ordinarily skilled and interested researchers in the field is the fact that the book titled *Flavor Chemistry and Technology*, 2nd edition, was registered with the U.S. Copyright Office as item TX0006117165 on July 15, 2005, and indicated a publication date of July 11, 2005 (see Attachment 13d, U.S. Copyright Office Public Catalog). As noted above, this would have provided a person interested in the relevant subject matter with keyword searching capabilities and other tools to locate this book.

133. The *WorldCat* database indicates that the conference proceedings volume titled *Flavor Chemistry and Technology*, 2nd edition, as cataloged at the Library of Congress is currently available from 434 libraries.[54] Based on finding a copy of Exhibit 1033 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 13a, it is my opinion that the book titled *Flavor Chemistry and Technology*, 2nd edition, was available to the public on or shortly after September 24, 2005.

[54] https://www.worldcat.org/title/57692776.

M. Reineccius 2006b book chapter 9 [Exhibit 1034]

134. Attached hereto as Exhibit 1034 is a copy of an excerpt from the book titled *Flavor Chemistry and Technology*, 2nd edition, by Garry Reineccius. The excerpt is Chapter 9, "Flavoring Materials Made by Processing" (hereafter "Reineccius 2006b") and issued by the CRC Press with a 2006 copyright date. I obtained this copy of the Reineccius 2006b excerpt from the University of Wisconsin – Madison Libraries. Specifically, the text of the Reineccius 2006b excerpt (pages 261-298) is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1034 was found within the custody of a library – a place where, if authentic, a copy of this volume would likely be. Additionally, Exhibit 1034 is in a condition that creates no suspicion about authenticity.

135. Attached hereto as Attachment 13a is a true and correct copy of the MARC record for this book from the University of Wisconsin – Madison Libraries online catalog. The library ownership is indicated by the presence of the library's code (GZM) in field 049. Based on finding a copy of Exhibit 1034 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 13a, it is my opinion that the book titled *Flavor Chemistry and Technology*, 2nd edition, was publicly available as of or shortly after September 24, 2005, as shown in field 008 ("050924"). The library continues to update this

MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on March 24, 2018, as shown in field 005 ("20180324"). I personally identified and retrieved the library catalog record which is Attachment 13a.

136. Attachment 13a further includes an entry in field 050 ("TP372.5 $b .H43 2006")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("664.5")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 13a also shows that the volume was catalogued with two descriptor terms reading "Flavor" (see Attachment 13b, Library of Congress subject heading sh85049034) and "Flavoring essences" (Attachment 13c, Library of Congress subject heading sh85049035) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 13a was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entries. Further, as of September 24, 2005, the MARC record attached hereto as Attachment 13a was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired the conference proceedings volume, which means that the corresponding publication

was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

137. Attachment 13a indicates that the MARC record for the conference proceedings volume titled *Flavor Chemistry and Technology*, 2nd edition, obtained from *WorldCat*, the public view of the OCLC bibliographic database.[55] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 13a indicates that a cataloger at the Library of Congress (DLC, field 040) created OCLC record number 57692776 field (first field 035) on September 24, 2005 (field 008), as part of the Cataloging in Publication (CIP) Program.[56] A cataloger prepares basic information about the forthcoming book which is included on the verso of the title page (also called the copyright page). The information is provided to save time needed for the cataloging process at the library after the book is purchased. The CIP data includes the author (field 100), title and subtitle (field 245), ISBN (field 022), suggested subject headings (field 650), classification numbers for the Library of Congress classification number (field 050), and the Dewey Decimal classification number (field 082). These data elements are

[55] https://www.worldcat.org/title/57692776.

[56] https://www.loc.gov/publish/cip/.

included in the MARC record that the Library of Congress contributes to the OCLC bibliographic database.

138. Further supporting my opinion that Exhibit 1034 was publicly accessible to ordinarily skilled and interested researchers in the field is the fact that the book titled *Flavor Chemistry and Technology*, 2nd edition, was registered with the U.S. Copyright Office as item TX0006117165 on July 15, 2005, and indicated a publication date of July 11, 2005 (see Attachment 13d, U.S. Copyright Office Public Catalog). As noted above, this would have provided a person interested in the relevant subject matter with keyword searching capabilities and other tools to locate this book.

139. The *WorldCat* database indicates that the conference proceedings volume titled *Flavor Chemistry and Technology*, 2nd edition, as cataloged at the Library of Congress is currently available from 434 libraries.[57] Based on finding a copy of Exhibit 1034 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 13a, it is my opinion that the book titled *Flavor Chemistry and Technology*, 2nd edition, was available to the public on or shortly after September 24, 2005.

[57] https://www.worldcat.org/title/57692776

N. Verbeke article [Exhibit 1035]

140. Attached hereto as Exhibit 1035 is a copy of the journal article, "Ethical Challenges for Livestock Production: Meeting Consumer Concerns about Meat Safety and Animal Welfare" by Wim Verbeke and Jacques Viaene (hereafter "Verbeke"). The Verbeke article was published in Volume 12, Number 2 of the *Journal of Agricultural and Environmental Ethics*. The Verbeke article appears beginning on page 141 of this issue dated March 2000.

141. I obtained Exhibit 1035 from the University of Wisconsin – Madison Libraries. Exhibit 1035 is a true and correct copy of the Verbeke article (pages 141-151). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Verbeke article is also available from the publisher, Springer,[58] and the digital repositories *ResearchGate*[59] and *Semantic Scholar*.[60] Exhibit 1035 was found within the custody of a library – a place where

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[58] https://link.springer.com/article/10.1023/A:1009538613588#citeas.

[59] https://www.researchgate.net/publication/227201060_Ethical_Challenges_for_Livestock_ProductionMeeting_Consumer_Concerns_about_Meat_Safety_and_AnimalWelfare.

[60] https://www.semanticscholar.org/paper/Ethical-Challenges-for-Livestock-Production%3AMeeting-Verbeke-Viaene/a7281fc51298c5031e54a8d2c8cae3722879ebab.

an authentic copy of this journal would likely be. Additionally, Exhibit 1035 is in a condition that creates no suspicion about its authenticity.

142. Attached hereto as Attachment 14a is a true and correct copy of the MARC record for the *Journal of Agricultural and Environmental Ethics* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's code (uwmadisondb) in the fourth field 035. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 14a occurred on March 13, 2015, as shown in field 005 field ("20150313"). I personally identified and retrieved the MARC record that is Attachment 14a.

143. Based on finding a print copy of Exhibit 1035 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 14a, it is my opinion that the Verbeke article published in the *Journal of Agricultural and Environmental Ethics* was publicly available on or shortly after June 1, 2000, as shown on the Table of Contents page. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 14a also shows that Exhibit 1035 was catalogued with a descriptor term reading "Agriculture $x Moral and ethical aspects $v Periodicals" (see Attachment 14b,

Library of Congress subject heading sh85002415 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 field.

144. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the *Journal of Agricultural and Environmental Ethics* since 1991 and continues to receive the publication.[61] In view of the MARC record for Exhibit 1035, the Verbeke article was publicly available on or shortly after June 1, 2000, because the serial title had been received, cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

145. Attached hereto as Attachment 14c is a true and correct copy of the MARC record for the *Journal of Agricultural and Environmental Ethics* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 14c, that library code is "NHM," which means that the MARC record for this serial was cataloged at the University of New Hampshire Library (Durham, New Hampshire). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of New Hampshire Library created OCLC

[61] The publication was originally titled *Journal of Agricultural Ethics* (1988-1990) and adopted the current title in 1991.

record number 24238888 on August 15, 1991, as shown in the "Entered" field ("19910815"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 14c occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 14c. The "BLvl" entry in Attachment 14c is "s," which indicates that the *Journal of Agricultural and Environmental Ethics* is a serial publication. Field 310 of Attachment 14c reads "Quarterly, $b <2001-." Accordingly, the MARC record for Exhibit 1035 corresponds to the *Journal of Agricultural and Environmental Ethics* from the time the serial title began publication and includes the date of the Verbeke article.

146. Attachment 14c includes an entry in field 050 ("BJ52.5 $b .J68")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("174/.963/05"), a subject matter consistent with the Dewey Decimal classification system. Attachment 14c further includes a descriptor term reading "Agriculture $x Moral and ethical aspects $v Periodicals" (see Attachment 14b, Library of Congress subject heading sh85002415 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record

attached hereto as Attachment 14c was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entry. As of August 15, 1991, the MARC record attached hereto as Attachment 14c was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

147. Attachment 14c indicates that the *Journal of Agricultural and Environmental Ethics* as cataloged at the University of New Hampshire Library is currently available from 104 libraries. In view of the above, this issue of the *Journal of Agricultural and Environmental Ethics* was publicly available on or shortly after June 1, 2000, because by that date it had been cataloged and indexed at the University of New Hampshire Library, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1035 was published and accessible to the public on or shortly after June 1, 2000.

O. Pimentel article [Exhibit 1036]

148. Attached hereto as Exhibit 1036 is a copy of the journal article, "Sustainability of Meat-Based and Plant-Based Diets and the Environment," by

David Pimentel and Marcia Pimentel (hereafter "Pimentel"). The Pimentel article was published in Supplement to Volume 78, Number 3 of *The American Journal of Clinical Nutrition*. The Pimentel article appears beginning on page 660s of this supplement dated September 2003.

149. I obtained Exhibit 1036 from the Hilton M. Briggs Library at South Dakota State University (Brookings, South Dakota). Exhibit 1036 is a true and correct copy of the Pimentel article (pages 660s-663s). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Pimentel article is also available from the publisher, Oxford, through the National Library of Medicine, [62] and through the digital repository *ResearchGate*.[63] A printout of the publisher's webpage for the Pimentel article is attached as Attachment 15a. Exhibit 1036 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1036 is in a condition that creates no suspicion about its authenticity.

[62] https://pubmed.ncbi.nlm.nih.gov/12936963/.

[63] https://www.researchgate.net/publication/10599108_Sustainability_of_Meat-based_and_Plant-based_Diets_and_the_Environment.

150. Attached hereto as Attachment 15b is a true and correct copy of the MARC record for *The American Journal of Clinical Nutrition* Supplement in the Hilton M. Briggs Library at South Dakota State University. The library ownership is indicated by the presence of the library's code (SDB) in the field 049. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 15b occurred on October 27, 2020, as shown in field 005 field ("20201027"). I personally identified and retrieved the MARC record that is Attachment 15b.

151. Based on finding a print copy of Exhibit 1036 in the Hilton M. Briggs Library at South Dakota State University and MARC record in its online library catalog attached as Attachment 15b, it is my opinion that the Pimentel article published in *The American Journal of Clinical Nutrition* Supplement was publicly available on or shortly after September 1, 2003, as indicated on the publisher's website (see Attachment 15a). Attachment 15b also shows that Exhibit 1036 was catalogued with two descriptor terms reading "Nutrition $v Periodicals" (see Attachment 5c, Library of Congress subject heading sh2008108541) and "Diet in disease $v Periodicals" (see Attachment 15c, Library of Congress subject heading sh85037854 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

152. As noted in the holdings information (362 field), the Hilton M. Briggs Library has received *The American Journal of Clinical Nutrition* since 1954 and continues to receive the publication. In view of the MARC record for Exhibit 1036, the Pimentel article was publicly available on or shortly after September 1, 2003, because the serial title had been received, cataloged, and indexed in the Hilton M. Briggs Library at South Dakota State University and made part of its online catalog database.

153. Attached hereto as Attachment 15d is a true and correct copy of the MARC record for *The American Journal of Clinical Nutrition* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 15d, that library code is "MUL," which means that the MARC record for this serial was cataloged as part of the Minnesota Union List of Serials at the University of Minnesota Libraries (Minneapolis, Minnesota). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of Minnesota Libraries created OCLC record number 1480127 on July 26, 1975, as shown in the "Entered" field ("19750726"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 15d occurred on August 16, 2021, as shown in the "Replaced" field ("20210816"). I personally identified and retrieved the MARC

record that is Attachment 15d. The "BLvl" entry in Attachment 15d is "s," which indicates that *The American Journal of Clinical Nutrition* is a serial publication. Field 310 of Attachment 15d reads "Monthly, $b <1965-." Accordingly, the MARC record for Exhibit 1036 corresponds to *The American Journal of Clinical Nutrition* from the time the serial title began and includes the date of the Pimentel article.

154. Attachment 15d includes an entry in field 050 ("RC584 $b .A5")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b AM45J")—as described above, a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("612.3")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 15d further includes two descriptor terms reading "Nutrition $v Periodicals" (see Attachment 5c, Library of Congress subject heading sh2008108541) and "Diet in disease $v Periodicals" (see Attachment 15c, Library of Congress subject heading sh85037854 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 15d was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the

field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of July 26, 1975, the MARC record attached hereto as Attachment12c was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

155. Attachment 15d indicates that *The American Journal of Clinical Nutrition* as cataloged at the University of Minnesota Libraries is currently available from 1,184 libraries. In view of the above, this issue of *The American Journal of Clinical Nutrition* was publicly available on or shortly after September 1, 2003, as shown by Attachment 15a, because by that date it had been cataloged and indexed at the University of Minnesota Libraries, made part of the OCLC bibliographic database, and received in the Hilton M. Briggs Library at the South Dakota State University. For these reasons, it is my opinion that Exhibit 1036 was published and accessible to the public on or shortly after September 1, 2003.

P. Pluhar article [Exhibit 1037]

156. Attached hereto as Exhibit 1037 is a copy of the journal article, "Meat and Morality: Alternatives to Factory Farming" by Evelyn B. Pluhar (hereafter "Pluhar"). The Pluhar article was published in Volume 23, Number 5 of the *Journal*

of Agricultural and Environmental Ethics. The Pluhar article appears beginning on page 455 of this issue dated October 2010.

157. I obtained Exhibit 1037 from the University of California – Los Angeles Libraries. Exhibit 1037 is a true and correct copy of the Pluhar article (pages 455-468). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Pluhar article is also available from the publisher, Springer, the digital repository *ResearchGate*,[64] and the Food and Agriculture Organization of the United Nations (AGRIS) website.[65] A printout of the publisher's webpage for the Pluhar article is attached as Attachment 16a. Exhibit 1037 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1037 is in a condition that creates no suspicion about its authenticity.

158. Attached hereto as Attachment 16b is a true and correct copy of the MARC record for the *Journal of Agricultural and Environmental Ethics* at the University of California – Los Angeles Libraries. The library ownership is indicated

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64 https://www.researchgate.net/publication/226093468_Meat_and_Morality_Alternatives_to_Factory_Farming

65 https://agris.fao.org/agris-search/search.do?recordID=US201301885498.

by the presence of the library's code (CLU) in the fourth field 035. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 16b occurred on June 15, 2021, as shown in field 005 field ("20210615"). I personally identified and retrieved the MARC record that is Attachment 16b.

159. Based on finding a copy of Exhibit 1037 in the University of California – Los Angeles Libraries and MARC record in its online library catalog attached as Attachment 16b, it is my opinion that the Pluhar article published in the *Journal of Agricultural and Environmental Ethics* was publicly available on or shortly after December 18, 2009, as indicated on the publisher's website (see Attachment 16a). Attachment 16b also shows that Exhibit 1037 was catalogued with a descriptor term reading "Agriculture $x Moral and ethical aspects $v Periodicals" (see Attachment 14b, Library of Congress subject heading sh85002415 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 field.

160. As noted in the holdings information (362 field), the University of California – Los Angeles Libraries has received the *Journal of Agricultural and Environmental Ethics* since 1991 and continues to receive the publication.[66] In view

[66] The publication was originally titled *Journal of Agricultural Ethics* (1988-1990) and adopted the current title in 1991.

of the MARC record for Exhibit 1037, the Pluhar article was publicly available on or shortly after December 18, 2009, because the serial title had been received, cataloged, and indexed in the University of California – Los Angeles Libraries and made part of its online catalog database.

161. Attached hereto as Attachment 16c is a true and correct copy of the MARC record for the *Journal of Agricultural and Environmental Ethics* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 16c, that library code is "NHM," which means that the MARC record for this serial was cataloged at the University of New Hampshire Library (Durham, New Hampshire). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of New Hampshire Library created OCLC record number 24238888 on August 15, 1991, as shown in the "Entered" field ("19910815"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 16c occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 16c. The "BLvl" entry in Attachment 16c is "s," which indicates that the *Journal of Agricultural and Environmental Ethics* is a serial publication. Field 310 of Attachment 16c reads "Quarterly, $b <2001-." Accordingly, the MARC

record for Exhibit 1037 corresponds to the *Journal of Agricultural and Environmental Ethics* from the time the serial title began publication and includes the date of the Pluhar article.

162. Attachment 16c includes an entry in field 050 ("BJ52.5 $b .J68")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("174/.963/05"), a subject matter consistent with the Dewey Decimal classification system. Attachment 16c further includes a descriptor term reading "Agriculture $x Moral and ethical aspects $v Periodicals" (see Attachment 14b, Library of Congress subject heading sh85002415 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 16c was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entry. As of August 15, 1991, the MARC record attached hereto as Attachment 16c was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

163. Attachment 16c indicates that the *Journal of Agricultural and Environmental Ethics* as cataloged at the University of New Hampshire Library is currently available from 104 libraries. In view of the above, this issue of the *Journal of Agricultural and Environmental Ethics* was publicly available on or shortly after December 18, 2009, because by that date it had been cataloged and indexed at the University of New Hampshire Library, made part of the OCLC bibliographic database, and received at the University of California – Los Angeles Libraries. For these reasons, it is my opinion that Exhibit 1037 was published and accessible to the public on or shortly after December 18, 2009 (see Attachment 16a).

Q. Manley book excerpt [Exhibit 1038]

164. Attached hereto as Exhibit 1038 is a copy of an excerpt from the book titled *Source Book of Flavors*, 2nd edition, edited by Gary Reineccius. The excerpt is Chapter 5, "Process Flavors" by Charles Manley (hereafter "Manley") and issued by CRC Press with a 1999 copyright date. Exhibit 1038 is a true and correct copy of the Manley chapter (pages 139-154), which I obtained from the Springer Link website. A printout for the Springer Link website is attached as Attachment 17a. The text in Exhibit 1038 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1038 is in a condition that creates no suspicion about its authenticity.

165. Attached hereto as Attachment 17b is a true and correct copy of the MARC record for this book from the National Library of Agriculture online catalog. The library ownership is indicated by the presence of the library's code (AGL) in field 049. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on February 3, 2022, as shown in the 005 field ("20220203"). I personally identified and retrieved the library catalog record which is Attachment 17b.

166. Based on finding a copy of the Manley chapter in the National Library of Agriculture and MARC record in its online library catalog attached as Attachment 17b, it is my opinion that the book titled *Source Book of Flavors*, 2nd edition, was publicly available on or shortly after June 25, 1992, as shown in field 008 ("920625").

167. Attachment 17b further includes an entry in field 050 ("TP418")—includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system). Attachment 17b further includes two descriptor terms reading "Flavoring essences" (see Attachment 13c, Library of Congress subject heading sh85049035) and "Flavor" (see Attachment 13b, Library of Congress subject heading sh85049034) in the 650 fields. Thus, as of its cataloging, the publication

corresponding to the MARC record attached hereto as Attachment 17b was indexed according to its subject matter by virtue of at least two independently sufficient classifications: the field 050 entry and the field 650 entries. Further, as of June 25, 1992, the MARC record attached hereto as Attachment 17b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

168. Attachment 17b indicates that the MARC record for the volume titled *Source Book of Flavors*, 2nd edition, obtained from *WorldCat*, the public view of the OCLC bibliographic database, was created at the Library of Congress.[67] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 17b indicates that a cataloger at the Library of Congress (DLC, field 040) created OCLC record number 26258575 field (second field 035) on June 25, 1992 (field 008).

169. The *WorldCat* database indicates that the book titles *Source Book of Flavors*, 2nd edition, as cataloged at the Library of Congress is currently available from 206 libraries. Based on finding a copy of Exhibit 1038 in the National

[67] https://www.worldcat.org/title/26258575.

Agricultural Library and MARC record in its online library catalog attached as Attachment 17b, it is my opinion that the Manley book chapter published in the volume titled *Source Book of Flavors*, 2nd edition, was available in the King Library at San José State University on June 25, 1992.

R. McGorrin 2012 book excerpt [Exhibit 1039]

170. Attached hereto as Exhibit 1039 is a copy of an excerpt from the book titled *Flavor Fragrance and Odor Analysis*, 2nd edition, edited by Ray Marsili. The excerpt is Chapter 9, "Character-impact flavor and off-flavor compounds" by Robert J. McGorrin (hereafter "McGorrin 2012") and issued by CRC Press with a 2012 copyright date. Exhibit 1039 is a true and correct copy of the title page, copyright page, table of contents, and McGorrin chapter (pages 207-262), which I obtained from the Library of Congress. The text in Exhibit 1039 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1039 is in a condition that creates no suspicion about its authenticity.

171. Attached hereto as Attachment 18a is a true and correct copy of the MARC record for this book from the Library of Congress online catalog. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record

occurred on May 19, 2016, as shown in the 005 field ("20160519"). I personally identified and retrieved the library catalog record which is Attachment 18a.

172. Based on finding a copy of the McGorrin 2012 chapter in the Library of Congress and MARC record in its online library catalog attached as Attachment 18a, it is my opinion that the book titled *Flavor Fragrance and Odor Analysis*, 2nd edition was publicly available on or shortly after February 7, 2012, as shown in field 955 ("2012-02-07").

173. Attached hereto as Attachment 18b is a true and correct copy of the MARC record for the book titled *Flavor Fragrance and Odor Analysis*, 2nd edition, obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 18b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 18b, that library code is "DLC," which means that the MARC record for this six-volume set was created at the Library of Congress, as part of the Cataloging in Publication (CIP) Program.[68] A cataloger prepares basic information about the forthcoming book which is included on the verso of the title page (also called the copyright page). The information is provided to save time needed for the cataloging process at the library after the book is purchased. The CIP data includes the author

[68] https://www.loc.gov/publish/cip/.

(field 100), title and subtitle (field 245), ISBN (field 022), suggested subject headings (field 650), classification numbers for the Library of Congress classification number (field 050), and the Dewey Decimal classification number (field 082). These data elements are included in the MARC record that the Library of Congress contributes to the OCLC bibliographic database.

174. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 606777788 on August 8, 2011, as shown in the "Entered" field ("20110808"). The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 18b occurred on May 23, 2022, as shown in the "Replaced" field ("20220523"). I personally identified and retrieved the MARC record that is Attachment 18b.

175. Attachment 18b further includes an entry in field 050 ("TX546 $b .F52 2012")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("664.07")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 18b further includes a descriptor term reading "Food $x Sensory evaluation" (see Attachment 18c, Library of Congress subject heading sh85050222) in the 650 field. Thus, as of its cataloging,

the publication corresponding to the MARC record attached hereto as Attachment 18b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entry. Further, as of August 8, 2011, the MARC record attached hereto as Attachment 18b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that added this book to its collection, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

176. Further supporting my opinion that Exhibit 1039 was publicly accessible to ordinarily skilled and interested researchers in the field is the fact that the book titled *Flavor Fragrance and Odor Analysis*, 2nd edition, was registered with the U.S. Copyright Office as item TX0007614145 on November 2, 2012 and indicated a publication date of December 21, 2011 (see Attachment 18d, U.S. Copyright Office Public Catalog). As noted above, this would have provided a person interested in the relevant subject matter with keyword searching capabilities and other tools to locate this book.

177. Attachment 18b indicates that the book titled *Flavor Fragrance and Odor Analysis*, 2nd edition, as cataloged at the Library of Congress is currently available from 71 libraries. In view of above, the book titled *Flavor Fragrance and*

Odor Analysis, 2nd edition, was publicly available on or shortly after February 7, 2012, because by that date it had been cataloged and indexed at the Library of Congress and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1039 was published and accessible to the public on or shortly after February 7, 2012.

S. Cha article [Exhibit 1040]

178. Attached hereto as Exhibit 1040 is a copy of the journal article, "Analysis of α-dicarbonyl compounds and volatiles formed in Maillard reaction model systems," by Jiyoon Cha, Trishna Debnath, and Kwang-Geun Lee (hereafter "Cha"). The Cha article was published in Volume 9, Number 5 of the online journal *Scientific Reports*. The Cha article appears beginning on page 1 of this issue dated March 29, 2019.

179. I obtained Exhibit 1040 from the website of the publisher, Nature Publishing Group's. A printout of the publisher's webpage for the Cha article is attached as Attachment 19a. Exhibit 1040 is a true and correct copy of the Cha article (pages 1-6). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Cha article is also

available through the National Library of Medicine,[69] and in the digital repositories *ResearchGate*[70] and *Semantic Scholar*.[71] Exhibit 1040 was found within the custody of the publisher – a place where an authentic copy of this online journal would likely be. Additionally, Exhibit 1040 is in a condition that creates no suspicion about its authenticity.

180. Attached hereto as Attachment 19b is a true and correct copy of the MARC record for the online journal *Scientific Reports* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 19b, that library code is "NRC," which means that the MARC record for this serial was cataloged at the University of North Carolina – Raleigh Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of North Carolina – Raleigh Libraries created OCLC record number 732869387 on

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[69] https://pubmed.ncbi.nlm.nih.gov/30926875/.

[70] https://www.researchgate.net/publication/332075350_Analysis_of_a-dicarbonyl_compounds_and_volatiles_formed_in_Maillard_reaction_model_systems.

[71] https://www.semanticscholar.org/paper/Analysis-of-%CE%B1-dicarbonyl-compounds-and-volatiles-in-Cha-Debnath/e24d2226396c359b9c84268f3d8895a24833a058.

June 24, 2011, as shown in the "Entered" field ("20110624"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 19b occurred on March 22, 2022, as shown in the "Replaced" field ("20220322"). I personally identified and retrieved the MARC record that is Attachment 19b. The "BLvl" entry in Attachment 19b is "s," which indicates that the journal *Scientific Reports* is a serial publication. Field 310 of Attachment 19b reads "Continuously updated." Accordingly, the MARC record for Exhibit 1040 corresponds to the online journal *Scientific Reports* from the time the serial title began and includes the date of the Cha article.

181. Attachment 19b includes an entry in field 050 ("QH1")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 060 ("W1"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system). Attachment 19b further includes five descriptor terms reading "Natural history $x Research $v Periodicals" (see Attachment 19c, Library of Congress subject heading sh85090222, Attachment 19d, Library of Congress subject heading sh85113021, and Attachment 2d, Library of Congress subject heading sh85099890), "Biology $x Research $v Periodicals" (see Attachment 19e, Library of Congress subject heading sh89006496

and Attachment 2d, Library of Congress subject heading sh85099890), "Physical sciences $x Research $v Periodicals" (see Attachment 19f, Library of Congress subject heading sh89005705, Attachment 19d, Library of Congress subject heading sh85113021, and Attachment 2d, Library of Congress subject heading sh85099890), "Earth sciences $x Research $v Periodicals" (see Attachment 19g, Library of Congress subject heading sh85802903, Attachment 19d, Library of Congress subject heading sh85113021, and Attachment 2d, Library of Congress subject heading sh85099890), and "Environmental sciences $x Research $v Periodicals" (see Attachment 19e, Library of Congress subject heading sh92004048, Attachment 19d, Library of Congress subject heading sh85113021, and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 19b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 060 entry, and the field 650 entries. As of June 24, 2011, the MARC record attached hereto as Attachment 19b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

182. Attachment 19b indicates that the online journal *Scientific Reports* as cataloged at the University of North Carolina – Raleigh Libraries is currently available from 976 libraries. In view of the above, this issue of the journal *Scientific Reports* was publicly available on or shortly after March 29, 2019, as indicated on the publisher's website (see Attachment 19a). Additionally, by that date the article had been received, cataloged, and indexed at the University of North Carolina – Raleigh Libraries and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1040 was published and accessible to the public on or shortly after March 29, 2019.

T. Bailey conference paper [Exhibit 1041]

183. Attached hereto is Exhibit 1041 is a copy of a conference paper published in *The Maillard Reaction in Foods and Nutrition* edited by G. R. Waller and M. S. Feather. The conference paper titled "The Maillard Reaction and Meat Flavor" by M. E. Bailey (hereafter "Bailey") appears beginning on page 169. The conference papers were presented at a symposium jointly sponsored by the Divisions of Agricultural and Food Chemistry and Carbohydrate Chemistry that was held at the 183rd Meeting of the American Chemical Society on March 28-April 2, 1983, in Las Vegas, Nevada. The volume is also identified as ACS Symposium Series 215.

184. I obtained Exhibit 1041 from the Kurt F. Wendt Engineering Library at the University of Wisconsin – Madison. Exhibit 1041 is a true and correct copy of

the Bailey conference paper (pages 169-184). Specifically, the text of the Bailey conference paper is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1041 was found within the custody of a library – a place where, if authentic, a copy of this conference proceedings volume would likely be. Additionally, Exhibit 1041 is in a condition that creates no suspicion about authenticity.

185. Attached hereto as Attachment 20a is a true and correct copy of the MARC record for this conference proceedings volume from the University of Wisconsin – Madison Libraries online catalog. The library ownership is indicated by the presence of the library's code (uwmadisondb) in the third field 035. The library has enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on June 4, 1999, as shown in field 005 ("19990604"). I personally identified and retrieved the library catalog record which is Attachment 20a.

186. Based on finding a print copy of Exhibit 1041 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 20a, it is my opinion that the book titled *The Maillard Reaction in Foods and Nutrition* was publicly available at the University of

Wisconsin – Madison Libraries as of March 7, 1983, as shown in field 008 ("830307").

187. Attached hereto as Attachment 20b is a true and correct copy of the MARC record for the book titled *The Maillard Reaction in Foods and Nutrition* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 20b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 20b, that library code is "DLC," which means that the MARC record for this conference proceedings volume was cataloged at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 9371025 on March 7, 1983, as shown in the "Entered" field ("19830307"). The library continues to update this MARC record the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on April 27, 2022, as shown in the "Replaced" field ("20220427").

188. Attachment 20b further includes an entry in field 050 ("TP372.55.M35 $b M34 1983")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("TP372.55.M35 $b M219 1982")—as described above, a subject matter classification number consistent

with the Library of Congress classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("664/.028")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 20b also shows that the volume was catalogued with four descriptor terms reading "Maillard reaction $v Congresses" (see Attachment 20c, Library of Congress subject heading sh85079891 and Attachment 11d, Library of Congress subject heading sh85031115), "Food industry and trade $v Congresses" (Attachment 20d, Library of Congress subject heading sh85050282 and Attachment 11d, Library of Congress subject heading sh85031115), "Food handling" (see Attachment 20e, Library of Congress subject heading sh85050276), and "Nutrition" (Attachment 5f, Library of Congress subject heading sh85093451) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 20b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. Further, as of March 7, 1983, the MARC record attached hereto as Attachment 20b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired the conference proceedings volume, which means that the corresponding publication was publicly available on or before

that same date through any library with access to the OCLC bibliographic database or through an individual library.

189. Attachment 20b indicates that the book titled *The Maillard Reaction in Foods and Nutrition* as cataloged at the Library of Congress is currently available from 253 libraries. In view of the above, the book titled *The Maillard Reaction in Foods and Nutrition* was publicly available on or shortly after March 7, 1983, because by that date it had been received, cataloged, and indexed at the Library of Congress and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1041 was published and publicly accessible on or shortly after March 7, 1983.

U. Fridman article [Exhibit 1042]

190. Attached hereto as Exhibit 1042 is a copy of the journal article, "Isolation and Characterization of Soybean Cytochrome c," by Celia Fridman, Halina Lis, Nathan Sharon, and Ephraim Katchalski (hereafter "Fridman"). The Fridman article was published in Volume 126, Number 1 of the journal *Archives of Biochemistry and Biophysics*. The Fridman article appears beginning on page 299 of this issue dated July 1968.

191. I obtained Exhibit 1042 from the Mann Library at Cornell University (Ithaca, New York). Exhibit 1042 is a true and correct copy of the Fridman article (pages 299-304). Specifically, the text of the article is complete; no pages are

missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Fridman article is also available from the publisher, Elsevier.[72] Exhibit 1042 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1042 is in a condition that creates no suspicion about its authenticity.

192. Attached hereto as Attachment 21a is a true and correct copy of the MARC record for the journal *Archives of Biochemistry and Biophysics* in the Mann Library at Cornell University. The library ownership is indicated by the presence of the library's code ("MANN") as shown in field 950. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 21a occurred on December 4, 2015, as shown in field 005 field ("20151204"). I personally identified and retrieved the MARC record that is Attachment 21a.

193. Based on finding a copy of Exhibit 1042 in the Mann Library at Cornell University and MARC record in its online library catalog attached as Attachment 21a, it is my opinion that the Fridman article published in the journal *Archives of Biochemistry and Biophysics* was publicly available on or shortly after July 15,

[72] https://www.sciencedirect.com/science/article/abs/pii/0003986168905869.

1968.[73] Attachment 21a also shows that Exhibit 1042 was catalogued with two descriptor terms reading "Biochemistry $v Periodicals" (see Attachment 21d, Library of Congress subject heading sh2007101985) and "Biophysics $v Periodicals" (see Attachment 21b, Library of Congress subject heading sh2007101987) in the 650 fields.

194. As noted in the holdings information (362 field), the Mann Library at Cornell University has received the journal *Archives of Biochemistry and Biophysics* since the serial adopted the current title in March 1951 and continues to receive the publication.[74] In view of the MARC record for Exhibit 1042, the Fridman article was publicly available on or shortly after July 15, 1968, because the serial title had been received, cataloged, and indexed in the Mann Library at Cornell University and made part of its online catalog database.

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[73] The journal *Archives of Biochemistry and Biophysics* was published semimonthly and, therefore, new issues were available approximately 15 days. Based on the frequency of publication (see Attachment 21a, field 310) and my years of experience working with serials, it is my opinion that issues would be published by middle and the end of the month. Therefore, a public availability date of July 15, 1968, is reasonable.

[74] The publication was originally titled *Archives of Biochemistry* (October 1942-February 1951) and adopted the current title, *Archives of Biochemistry and Biophysics,* with the March 1951 issue.

195. Attached hereto as Attachment 21c is a true and correct copy of the MARC record for the journal *Archives of Biochemistry and Biophysics* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 21c, that library code is "MUL," which means that the MARC record for this serial was cataloged as part of the Minnesota Union List of Serials at the University of Minnesota Libraries (Minneapolis, Minnesota). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of Minnesota Libraries created OCLC record number 1482120 on July 27, 1975, as shown in the "Entered" field ("19750727"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 21c occurred on August 4, 2020, as shown in the "Replaced" field ("20200804"). I personally identified and retrieved the MARC record that is Attachment 21c. The "BLvl" entry in Attachment 21c is "s," which indicates that the journal *Archives of Biochemistry and Biophysics* is a serial publication. Field 310 of Attachment 21c reads "Semimonthly, $b <Apr. 15,1996-." Accordingly, the MARC record for Exhibit 1042 corresponds to the journal *Archives of Biochemistry and Biophysics* from the time the serial title adopted the current title and includes the date of the Fridman article.

196. Attachment 21c includes an entry in field 050 ("QP501 $b .A77")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b AR449")—as described above, a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("574.1905")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 21c further includes a descriptor term reading "Biochemistry $v Periodicals" (see Attachment 21d, Library of Congress subject heading sh2007101985) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 21c was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entry. As of July 27, 1975, the MARC record attached hereto as Attachment 21c was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

197. Attachment 21c indicates that the journal *Archives of Biochemistry and Biophysics* as cataloged at the University of Minnesota Libraries is currently available from 877 libraries. In view of the above, this issue of the journal *Archives of Biochemistry and Biophysics* was publicly available on or shortly after July 15, 1968, because by that date it had been cataloged and indexed at the University of Minnesota Libraries, made part of the OCLC bibliographic database, and received in the Mann Library at Cornell University. For these reasons, it is my opinion that Exhibit 1042 was published and accessible to the public on or shortly after July 15, 1968.

V. Dreher journal article [Exhibit 1043]

198. Attached hereto as Exhibit 1043 is a copy of the journal article, "GC-Olfactometric Characterization of Aroma Volatiles from the Thermal Degradation of Thiamin in Model Orange Juice" by J. Glen Dreher, Russell L. Rouseff, and Michael Naim (hereafter "Dreher"). The Dreher article was published in Volume 51, Number 10 of the *Journal of Agricultural and Food Chemistry*. The Dreher article appears beginning on page 3097 of this issue dated May 7, 2003.

199. I obtained Exhibit 1043 from the University of Wisconsin – Madison Libraries. Exhibit 1043 is a true and correct copy of the Dreher article (pages 3097-3102). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there

are no visible alterations to the document. The Dreher article is also available from the publisher, the American Chemical Society,[75] through the National Library of Medicine,[76] and the digital repositories *ResearchGate*[77] and *Semantic Scholar*.[78] Exhibit 1043 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1043 is in a condition that creates no suspicion about its authenticity.

200. Attached hereto as Attachment 22a is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 22a occurred on March 13, 2015, as shown in

[75] https://pubs.acs.org/doi/10.1021/jf034023j.

[76] https://pubmed.ncbi.nlm.nih.gov/12720398/.

[77] https://www.researchgate.net/publication/10783463_GC-Olfactometric_Characterization_of_Aroma_Volatiles_from_the_Thermal_Degradation_of_Thiamin_in_Model_Orange_Juice.

[78] https://www.semanticscholar.org/paper/GC-olfactometric-characterization-of-aroma-from-the-Dreher-Rouseff/d57b61d8e688da0789859624f041c0ddd2604666

field 005 field ("20150313"). I personally identified and retrieved the MARC record that is Attachment 22a.

201. Based on finding a print copy of Exhibit 1043 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 22a, it is my opinion that the Dreher article published in the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after May 22, 2003, as shown by the date stamp on the cover. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked.

202. Attachment 22a also shows that Exhibit 1043 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

203. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the *Journal of Agricultural and Food Chemistry* since April 1953 and continues to receive the publication. In view of the MARC record for Exhibit 1043, the Dreher article was publicly available on or

shortly after May 22, 2003, because the serial title had been received, cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

204. Attached hereto as Attachment 22b is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 22b, that library code is "NRC," which means that the MARC record for this serial was cataloged at the University of North Carolina – Raleigh Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of North Carolina – Raleigh Libraries created OCLC record number 1800249 on December 24, 1974, as shown in the "Entered" field ("19741224"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 22b occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 22b. The "BLvl" entry in Attachment 22b is "s," which indicates that the *Journal of Agricultural and Food Chemistry* is a serial publication. Field 310 of Attachment 22b reads "Weekly, $b <2012-." Accordingly, the MARC record for Exhibit 1043

corresponds to the *Journal of Agricultural and Food Chemistry* from the time the serial title began and includes the date of the Dreher article.

205. Attachment 22b includes an entry in field 050 ("S583")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO534D"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("630.2405"), a subject matter consistent with the Dewey Decimal classification system. Attachment 22b further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 22b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of December 24, 1974, the MARC record attached hereto as Attachment 22b was accessible through any library with access to the OCLC bibliographic database or

the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

206. Attachment 22b indicates that the *Journal of Agricultural and Food Chemistry* as cataloged at the University of North Carolina – Raleigh Libraries is currently available from 596 libraries. In view of the above, this issue of the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after May 22, 2003, because by that date it had been cataloged and indexed at the University of North Carolina – Raleigh Libraries, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1043 was published and accessible to the public on or shortly after May 22, 2003.

W. Hofmann 1995 journal article [Exhibit 1045]

207. Attached hereto as Exhibit 1045 is a copy of the journal article, "Evaluation of the Key Odorants in a Thermally Treated Solution of Ribose and Cysteine by Aroma Extract Dilution Techniques" by Thomas Hofmann and Peter Schieberle (hereafter "Hofmann 1995"). The Hofmann 1995 article was published in Volume 43, Number 8 of the *Journal of Agricultural and Food Chemistry*. The

Hofmann 1995 article appears beginning on page 2187 of this issue dated August 1995.

208. I obtained Exhibit 1045 from the University of Wisconsin – Madison Libraries. Exhibit 1045 is a true and correct copy of the Hofmann 1995 article (pages 2187-2194). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Hofmann 1995 article is also available from the publisher, the American Chemical Society,[79] through the Food and Agriculture Organization of the United Nations (AGRIS)[80] and the digital repository *Semantic Scholar*.[81] Exhibit 1045 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1045 is in a condition that creates no suspicion about its authenticity.

209. Attached hereto as Attachment 23a is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* at the University

[79] https://pubs.acs.org/doi/10.1021/jf00056a042.

[80] https://agris.fao.org/agris-search/search.do?recordID=US9748578.

[81] https://www.semanticscholar.org/paper/Evaluation-of-the-Key-Odorants-in-a-Thermally-of-by-Hofmann-Schieberle/e6b44c539bcbceea1fae8c06aa621fe3226cee55.

of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 23a occurred on March 13, 2015, as shown in field 005 field ("20150313"). I personally identified and retrieved the MARC record that is Attachment 23a.

210. Based on finding a print copy of Exhibit 1045 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 23a, it is my opinion that the Hofmann 1995 article published in the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after September 8, 1995, as shown by the date stamp on the cover. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked.

211. Attachment 23a also shows that Exhibit 1045 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

212. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the *Journal of Agricultural and Food Chemistry* since April 1953 and continues to receive the publication. In view of the MARC record for Exhibit 1045, the Hofmann 1995 article was publicly available on or shortly after September 8, 1995, because the serial title had been received, cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

213. Attached hereto as Attachment 23b is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 23b, that library code is "NRC," which means that the MARC record for this serial was cataloged at the University of North Carolina – Raleigh Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of North Carolina – Raleigh Libraries created OCLC record number 1800249 on December 24, 1974, as shown in the "Entered" field ("19741224"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 23b occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 23b. The

"BLvl" entry in Attachment 23b is "s," which indicates that the *Journal of Agricultural and Food Chemistry* is a serial publication. Field 310 of Attachment 23b reads "Weekly, $b <2012-." Accordingly, the MARC record for Exhibit 1045 corresponds to the *Journal of Agricultural and Food Chemistry* from the time the serial title began and includes the date of the Hofmann 1995 article.

214. Attachment 23b includes an entry in field 050 ("S583")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO534D"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("630.2405"), a subject matter consistent with the Dewey Decimal classification system. Attachment 23b further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 23b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the

field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of December 24, 1974, the MARC record attached hereto as Attachment 23b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

215. Attachment 23b indicates that the *Journal of Agricultural and Food Chemistry* as cataloged at the University of North Carolina – Raleigh Libraries is currently available from 596 libraries. In view of the above, this issue of the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after September 8, 1995, because by that date it had been cataloged and indexed at the University of North Carolina – Raleigh Libraries, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1045 was published and accessible to the public on or shortly after September 8, 1995.

X. Goto article [Exhibit 1046]

216. Attached hereto as Exhibit 1046 is a copy of the journal article, "Iron Fortification of Rice Seed by the Soybean Ferritin Gene," by Fumiyuki Goto, Toshihiro Yoshihara, Naoki Shigemoto, Seiichi Toki, and Fumio Takaiwa (hereafter

"Goto"). The Goto article was published in Volume 17, Issue 3 of the journal *Nature Biotechnology*. The Goto article appears beginning on page 282 of this issue dated March 1999.

217. I obtained Exhibit 1046 from the University of Wisconsin – Madison Libraries. Exhibit 1046 is a true and correct copy of the Goto article (pages 282-286). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Goto article is also available from the publisher,[82] through the National Library of Medicine,[83] and on the digital repository *ResearchGate*.[84] Exhibit 1046 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1046 is in a condition that creates no suspicion about its authenticity.

218. Attached hereto as Attachment 24a is a true and correct copy of the MARC record for the journal *Nature Biotechnology* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's code (GZM) in field 049. The library continues to update and enhance the

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[82] https://www.nature.com/articles/nbt0399_282.

[83] https://pubmed.ncbi.nlm.nih.gov/10096297/.

[84] https://www.researchgate.net/publication/13195484_Iron_Fortification_of_Rice_Seed_by_Soybean_Ferritin_Gene.

MARC record to meet current cataloging rules. The most recent enhancement to Attachment 24a occurred on March 13, 2015, as shown in field 005 ("20150313"). I personally identified and retrieved the MARC record that is Attachment 24a.

219. Based on finding a print copy of Exhibit 1046 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 24a, it is my opinion that the Goto article published in the journal *Nature Biotechnology* was publicly available on or shortly after March 11, 1999, as shown by the date stamp on the second page of Exhibit 1046. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 24a also shows that Exhibit 1046 was catalogued with four descriptor terms reading "Biochemical engineering $v Periodicals" (see Attachment 24b, Library of Congress subject heading sh2009117040), "Biotechnology $v Periodicals" (see Attachment 24c, Library of Congress subject heading sh2007101988), "Bioengineering $v Periodicals" (see Attachment 24d, Library of Congress subject heading sh2009117061) and "Industrial microbiology $v Periodicals" (see Attachment 24e, Library of Congress subject heading sh85065899 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

220. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the journal *Nature Biotechnology* since

the title changed in March 1966 and continues to receive the publication.[85] In view of the MARC record for Exhibit 1046, the Goto article was publicly available on or shortly after March 11, 1999, because the serial title had been received, cataloged, and indexed at the University of Wisconsin – Madison Libraries and made part of its online catalog database.

221. Attached hereto as Attachment 24f is a true and correct copy of the MARC record for the journal *Nature Biotechnology* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 24f, that library code is "MUL," which means that the MARC record for this serial was cataloged as part of the National Serials Data Program at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 34160925 on February 9, 1996, as shown in the "Entered" field ("19960209"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 24f occurred on November 7, 2020, as shown in the "Replaced" field ("20201107"). I personally identified and retrieved the MARC

[85] The journal was originally titled *Bio/technology* (Nature Publishing Company) from March 1983 through February 1996.

record that is Attachment 24f. The "BLvl" entry in Attachment 24f is "s," which indicates that the journal *Nature Biotechnology* is a serial publication. Accordingly, the MARC record for Exhibit 1046 corresponds to the journal *Nature Biotechnology* from the time the serial title began using the current title and includes the date of the Goto article.

222. Attachment 24f includes an entry in field 050 ("TP248.3 $b .B557")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b BI918LW")—as described above, a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("660.6/05")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 24f further includes two descriptor terms reading "Biochemical engineering $v Periodicals" (see Attachment 24b, Library of Congress subject heading sh2009117040), "Biotechnology $v Periodicals" (see Attachment 24c, Library of Congress subject heading sh2007101988) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 24f was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the

field 082 entry, and the field 650 entries. As of February 9, 1996, the MARC record attached hereto as Attachment 24f was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

223. Attachment 24f indicates that the journal *Nature Biotechnology* as cataloged at the Library of Congress is currently available from 600 libraries. In view of the above, this issue of the journal *Nature Biotechnology* was publicly available on or shortly after March 11, 1999, because by that date it had been cataloged and indexed at the Library of Congress, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1046 was published and accessible to the public on or shortly after March 11, 1999.

Y. Zhu article [Exhibit 1047]

224. Attached hereto as Exhibit 1047 is a copy of the journal article, "Streamlined Approach for Careful and Exhaustive Aroma Characterization of Aged Distilled Liquors" by Wenqi Zhu and Keith R. Cadwallader (hereafter "Zhu"). The Zhu article was published in Volume 3 of the online journal *Food Chemistry: X*. The Zhu article appears as article 100038 in this issue dated September 30, 2019.

225. I obtained Exhibit 1047 from the website of the Zhu article's publisher, Elsevier. A printout of the publisher's webpage for the Zhu article is attached as Attachment 25a. Exhibit 1047 is a true and correct copy of the Zhu article (9 pages). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Zhu article is also available as an open access document through the National Library of Medicine.[86] Exhibit 1047 was found within the custody of its publisher – a place where an authentic copy of this Zhu Article would likely be. Additionally, Exhibit 1047 is in a condition that creates no suspicion about its authenticity.

226. Attached hereto as Attachment 25b is a true and correct copy of the MARC record for the online journal *Food Chemistry: X* at the National Library of Medicine (Bethesda, Maryland). The library ownership is indicated by the presence of the library's code (DNLM) in the field 935. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 25b occurred on December 4, 2021, as shown in field 005 field ("20211204"). I personally identified and retrieved the MARC record that is Attachment 25b.

[86] https://pubmed.ncbi.nlm.nih.gov/31432022/.

227. Based on finding a digital copy of Exhibit 1047 in the National Library of Medicine and MARC record in its online library catalog attached as Attachment 25b, it is my opinion that the Zhu article published in the online journal *Food Chemistry: X* was publicly available on or shortly after June 11, 2019, as shown on the publisher's website (see Attachment 25a). Attachment 25b also shows that Exhibit 1047 was catalogued with a descriptor term reading "Food Analysis" (see Attachment 25c, National Library of Medicine subject heading D005504) in the 650 field.

228. As noted in the holdings information (362 field), the National Library of Medicine has received the online journal *Food Chemistry: X* since March 2019 and continues to receive the publication. In view of the MARC record for Exhibit 1047, the Zhu article was publicly available on or shortly after June 11, 2019, because the serial title had been received, cataloged, and indexed in the National Library of Medicine and made part of its online catalog database.

229. Attached hereto as Attachment 25d is a true and correct copy of the MARC record for the online journal *Food Chemistry: X* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 25d, that library code is "CNCGM," which means that the MARC record for this serial was cataloged in the John L. Haar Library at Grant MacEwan University (Edmonton,

Alberta, Canada). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger in the John L. Haar Library at Grant MacEwan University created OCLC record number 1084235927 on January 31, 2019, as shown in the "Entered" field ("20190131"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 25d occurred on March 8, 2022, as shown in the "Replaced" field ("20220308"). I personally identified and retrieved the MARC record that is Attachment 25d. The "BLvl" entry in Attachment 25d is "s," which indicates that the online journal *Food Chemistry: X* is a serial publication. Field 310 of Attachment 25d reads "Quarterly." Accordingly, the MARC record for Exhibit 1047 corresponds to the online journal *Food Chemistry: X* from the time the serial title began publication and includes the date of the Zhu article.

230. Attachment 25d includes an entry in field 050 ("TX501")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system). Attachment 25d further includes two descriptor terms reading "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973) and "Food $x Composition $v Periodicals" (see Attachment 2c, Library of Congress subject heading sh85050191 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging,

the publication corresponding to the MARC record attached hereto as Attachment 25d was indexed according to its subject matter by virtue of at least two independently sufficient classifications: the field 050 entry and the field 650 entries. As of January 31, 2019, the MARC record attached hereto as Attachment 25d was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the online serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

231. Attachment 25d indicates that the online journal *Food Chemistry: X* as cataloged in the John L. Haar Library at Grant MacEwan University is currently available from 502 libraries. In view of the above, this issue of the online journal *Food Chemistry: X* was publicly available on or shortly after June 11, 2019, because by that date it had been cataloged and indexed in the John L. Haar Library at Grant MacEwan University, made part of the OCLC bibliographic database, and received at the National Library of Medicine. For these reasons, it is my opinion that Exhibit 1047 was published and accessible to the public on or shortly after June 11, 2019.

Z. Pearson conference paper [Exhibit 1048]

232. Attached hereto is Exhibit 1048 is a copy of a conference paper published in *The Maillard Reaction in Foods and Nutrition* edited by G. R. Waller

and M. S. Feather. The conference paper titled "Mechanism Responsible for Warmed-Over Flavor in Cooked Meat" by A. M. Pearson and J. I. Gray (hereafter "Pearson") appears beginning on page 287. The conference papers were presented at a symposium jointly sponsored by the Divisions of Agricultural and Food Chemistry and Carbohydrate Chemistry that was held at the 183rd Meeting of the American Chemical Society on March 28-April 2, 1983, in Las Vegas, Nevada. The volume is also identified as ACS Symposium Series 215.

233. I obtained Exhibit 1048 from the Kurt F. Wendt Engineering Library at the University of Wisconsin – Madison. Exhibit 1048 is a true and correct copy of the Pearson conference paper (pages 287-300). Specifically, the text of the Pearson conference paper is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1048 was found within the custody of a library – a place where, if authentic, a copy of this conference proceedings volume would likely be. Additionally, Exhibit 1048 is in a condition that creates no suspicion about authenticity.

234. Attached hereto as Attachment 26a is a true and correct copy of the MARC record for this conference proceedings volume from the University of Wisconsin – Madison Libraries online catalog. The library ownership is indicated by the presence of the library's code (uwmadisondb) in the third field 035. The

library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on June 4, 1999, as shown in field 005 ("19990604"). I personally identified and retrieved the library catalog record which is Attachment 26a.

235. Based on finding a print copy of Exhibit 1048 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 26a, it is my opinion that the book titled *The Maillard Reaction in Foods and Nutrition* was publicly available at the University of Wisconsin – Madison Libraries as of March 7, 1983, as shown in field 008 ("830307").

236. Attached hereto as Attachment 26b is a true and correct copy of the MARC record for the book titled *The Maillard Reaction in Foods and Nutrition* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 26b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 26b, that library code is "DLC," which means that the MARC record for this conference proceedings volume was cataloged at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 9371025 on March 7, 1983, as shown in the "Entered" field ("19830307"). The library continues to update this

MARC record the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on April 27, 2022, as shown in the "Replaced" field ("20220427").

237. Attachment 26b further includes an entry in field 050 ("TP372.55.M35 $b M34 1983")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("TP372.55.M35 $b M219 1982")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("664/.028")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 26b also shows that the volume was catalogued with four descriptor terms reading "Maillard reaction $v Congresses" (see Attachment 20c, Library of Congress subject heading sh85079891 and Attachment 11d, Library of Congress subject heading sh85031115), "Food industry and trade $v Congresses" (Attachment 20d, Library of Congress subject heading sh85050282 and Attachment 11d, Library of Congress subject heading sh85031115), "Food handling" (see Attachment 20e, Library of Congress subject heading sh85050276), and "Nutrition" (Attachment 5f, Library of Congress subject heading sh85093451) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the

MARC record attached hereto as Attachment 26b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. Further, as of March 7, 1983, the MARC record attached hereto as Attachment 26b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired the conference proceedings volume, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

238. Attachment 26b indicates that the book titled *The Maillard Reaction in Foods and Nutrition* as cataloged at the Library of Congress is currently available from 253 libraries. In view of the above, the book titled *The Maillard Reaction in Foods and Nutrition* was publicly available on or shortly after March 7, 1983, because by that date it had been received, cataloged, and indexed at the Library of Congress and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1048 was published and publicly accessible on or shortly after March 7, 1983.

AA. Hofmann 1998 article [Exhibit 1049]

239. Attached hereto as Exhibit 1049 is a copy of the journal article, "Quantitative Model Studies on the Effectiveness of Different Precursor Systems in

the Formation of the Intense Food Odorants 2-Furfurylthiol and 2-Methyl-3-Furanthiol" by T. Hofmann and P. Schieberle (hereafter "Hofmann 1998"). The Hofmann 1998 article was published in Volume 46, Number 1 of the *Journal of Agricultural and Food Chemistry*. The Hofmann 2008 article appears beginning on page 235 of this issue dated January 19, 1998.

240. I obtained Exhibit 1049 from the University of Wisconsin – Madison Libraries. Exhibit 1049 is a true and correct copy of the Hofmann 1998 article (pages 235-241). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Hofmann 1998 article is also available from the publisher, the American Chemical Society[87] and through the National Library of Medicine.[88] Exhibit 1049 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1049 is in a condition that creates no suspicion about its authenticity.

241. Attached hereto as Attachment 12a is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* at the University

[87] https://pubs.acs.org/doi/10.1021/jf9705983#.

[88] https://pubmed.ncbi.nlm.nih.gov/10554225/.

of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 12a occurred on March 13, 2015, as shown in field 005 field ("20150313"). I personally identified and retrieved the MARC record that is Attachment 12a.

242. Based on finding a print copy of Exhibit 1049 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 12a, it is my opinion that the Hofmann 1998 article published in the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after February 4, 1998, as shown by the date stamp on the second page of Exhibit 1049. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 12a also shows that Exhibit 1049 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

243. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the *Journal of Agricultural and Food Chemistry* since April 1953 and continues to receive the publication. In view of the MARC record for Exhibit 1049, the Hofmann 1998 article was publicly available on or shortly after February 4, 1998, because the serial title had been received, cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

244. Attached hereto as Attachment 12d is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 12d, that library code is "NRC," which means that the MARC record for this serial was cataloged at the University of North Carolina – Raleigh Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of North Carolina – Raleigh Libraries created OCLC record number 1800249 on December 24, 1974, as shown in the "Entered" field ("19741224"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 12d occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 12d. The

"BLvl" entry in Attachment 12d is "s," which indicates that the *Journal of Agricultural and Food Chemistry* is a serial publication. Field 310 of Attachment 12d reads "Weekly, $b <2012-." Accordingly, the MARC record for Exhibit 1049 corresponds to the *Journal of Agricultural and Food Chemistry* from the time the serial title began and includes the date of the Hofmann 1998 article.

245. Attachment 12d includes an entry in field 050 ("S583")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO534D"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("630.2405"), a subject matter consistent with the Dewey Decimal classification system. Attachment 12d further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 12d was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the

field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of December 24, 1974, the MARC record attached hereto as Attachment 12d was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

246. Attachment 12d indicates that the *Journal of Agricultural and Food Chemistry* as cataloged at the University of North Carolina – Raleigh Libraries is currently available from 596 libraries. In view of the above, this issue of the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after February 4, 1998, because by that date it had been cataloged and indexed at the University of North Carolina – Raleigh Libraries, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1049 was published and accessible to the public on or shortly after February 4, 1998.

BB. Jahreis article [Exhibit 1050, Exhibit 1059]

247. Attached hereto as Exhibit 1050 is a copy of the journal article, "Legume Flours: Nutritionally Important Sources of Protein and Dietary Fiber," by Gerhard Jahreis, Melanie Brese, Matthias Leiterer, Ulrich Schäfer, and Volker Böhm

(hereafter "Jahreis"). The Jahreis article was published in Volume 63, Number 2 of the journal *Ernährungs Umschau*. The Jahreis article appears beginning on page 36 of this issue dated February 2016.

248. I obtained Exhibit 1050—which is a copy of the Jahreis article in its original publication language, German—from the National Library of Medicine (Bethesda, Maryland). Exhibit 1050 is a true and correct copy of the Jahreis article (pages 36-42). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Jahreis article is also available from the publisher[89] and in the digital repository *ResearchGate*.[90] Exhibit 1050 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1050 is in a condition that creates no suspicion about its authenticity.

249. Attached hereto as Attachment 33a is a true and correct copy of the MARC record for the journal *Ernährungs Umschau* in the National Library of

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89 https://www.ernaehrungs-umschau.de/english-articles/15-02-2016-legume-flours-nutritionally-important-sources-of-protein-and-dietary-fiber/.

90 https://www.researchgate.net/publication/296933370_Legume_flours_Nutritionally_important_sources_of_protein_and_dietary_fiber#:~:text=Most%20legume%20flours%20are%20a,and%20fiber%20extracts%20from%20legumes

Medicine. The library ownership is indicated by the presence of the library's code ("DNLM") as shown in the first field 035. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 33a occurred on December 3, 2021, as shown in field 005 field ("20211203"). I personally identified and retrieved the MARC record that is Attachment 33a.

250. Based on finding a copy of Exhibit 1050 in the National Library of Medicine and MARC record in its online library catalog attached as Attachment 33a, it is my opinion that the Jahreis article published in the journal *Ernährungs Umschau* was publicly available on or shortly after March 8, 2016, as shown on the cover. This label has the general appearance of receipt labels or date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 33a also shows that Exhibit 1050 was catalogued with a descriptor term reading "Nutritional Physiological Phenomena" (see Attachment 40c, National Library of Medicine subject heading D009747) in the 650 field.

251. As noted in the holdings information (362 field), the National Library of Medicine has received the journal *Ernährungs Umschau* since the serial began publication in June 1954 and continues to receive the publication. In view of the MARC record for Exhibit 1050, the Jahreis article was publicly available on or shortly after March 8, 2016, because the serial title had been received, cataloged,

and indexed in the National Library of Medicine and made part of its online catalog database.

252. Attached hereto as Attachment 33b is a true and correct copy of the MARC record for the journal *Ernährungs Umschau* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 33b, that library code is "COO," which means that the MARC record for this serial was cataloged in the Mann Library at Cornell University (Ithaca, New York). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger in the Mann Library at Cornell University created OCLC record number 2916970 on April 26, 1977, as shown in the "Entered" field ("19770426"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 33b occurred on January 15, 2021, as shown in the "Replaced" field ("20210115"). I personally identified and retrieved the MARC record that is Attachment 33b. The "BLvl" entry in Attachment 33b is "s," which indicates that the journal *Ernährungs Umschau* is a serial publication. Accordingly, the MARC record for Exhibit 1050 corresponds to the journal *Ernährungs Umschau* from the time the serial title began and includes the date of the Jahreis article.

253. Attachment 33b includes an entry in field 050 ("QP141 $b .E71")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 060 ("W1 $b ER6924")—as described above, a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system). Attachment 33b further includes two descriptor terms reading "Nutrition $v Periodicals" (see Attachment 5c, Library of Congress subject heading sh2008108541) and "Food $v Periodicals" (see Attachment 33c, Library of Congress subject heading sh2008103974) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 33b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 060 entry, and the field 650 entries. As of April 26, 1977, the MARC record attached hereto as Attachment 33b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

254. Attachment 33b indicates that the journal *Ernährungs Umschau* as cataloged in the Mann Library at Cornell University is currently available from 20 libraries. In view of the above, this issue of the journal *Ernährungs Umschau* was publicly available on or shortly after March 8, 2016, because by that date it had been cataloged and indexed in the Mann Library at Cornell University, made part of the OCLC bibliographic database, and received in the National Library of Medicine. For these reasons, it is my opinion that Exhibit 1050 was published and accessible to the public on or shortly after March 8, 2016.

255. EX1059 is an English-language version of the Jahreis article I obtained from the publisher's website. A printout of the publisher's website is attached as attachment 71d. Although I do not speak German, and thus cannot testify to the accuracy of the translation itself, EX1059 appears to be an authentic copy of the Jahreis article translated into English. It has the same general appearance and runs over the same number of pages (36-42). It also has identical images and tables of information in the same locations as the German version and is marked with the same volume and issue number. Most importantly, EX1059 was obtained from the publisher's website (see Attachment 71d), a place where, if authentic, a translated copy of the Jahreis article would likely be.

CC. Hofmann 1996 article [Exhibit 1051]

256. Attached hereto as Exhibit 1051 is a copy of the journal article, "Model Studies on the Oxidative Stability of Odor-Active Thiols Occurring in Food Flavors" by Thomas Hofmann, Peter Schieberle, and Werner Grosch (hereafter "Hofmann 1996"). The Hofmann 1996 article was published in Volume 44, Number 1 of the *Journal of Agricultural and Food Chemistry*. The Hofmann 1996 article appears beginning on page 251 of this issue dated January 18, 1996.

257. I obtained Exhibit 1051 from the University of Wisconsin – Madison Libraries. Exhibit 1051 is a true and correct copy of the Hofmann 1996 article (pages 251-255). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Hofmann 1996 article is also available from the publisher, the American Chemical Society,[91] and through the Food and Agriculture Organization of the United Nations (AGRIS).[92] Exhibit 1051 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1051 is in a condition that creates no suspicion about its authenticity.

[91] https://pubs.acs.org/doi/10.1021/jf9500703.

[92] https://agris.fao.org/agris-search/search.do?recordID=US1997053891.

258. Attached hereto as Attachment 12a is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 12a occurred on March 13, 2015, as shown in field 005 field ("20150313"). I personally identified and retrieved the MARC record that is Attachment 12a.

259. Based on finding a print copy of Exhibit 1051 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 12a, it is my opinion that the Hofmann 1996 article published in the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after February 6, 1996, as shown by the date stamp on the third page of Exhibit 1051. The date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 12a also shows that Exhibit 1051 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c,

Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

260. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the *Journal of Agricultural and Food Chemistry* since April 1953 and continues to receive the publication. In view of the MARC record for Exhibit 1051, the Hofmann 1996 article was publicly available on or shortly after February 6, 1996, because the serial title had been received, cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

261. Attached hereto as Attachment 12d is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 12d, that library code is "NRC," which means that the MARC record for this serial was cataloged at the University of North Carolina – Raleigh Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of North Carolina – Raleigh Libraries created OCLC record number 1800249 on December 24, 1974, as shown in the "Entered" field ("19741224"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 12d

occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 12d. The "BLvl" entry in Attachment 12d is "s," which indicates that the *Journal of Agricultural and Food Chemistry* is a serial publication. Field 310 of Attachment 12d reads "Weekly, $b <2012-." Accordingly, the MARC record for Exhibit 1051 corresponds to the *Journal of Agricultural and Food Chemistry* from the time the serial title began and includes the date of the Hofmann 1996 article.

262. Attachment 12d includes an entry in field 050 ("S583")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO534D"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("630.2405"), a subject matter consistent with the Dewey Decimal classification system. Attachment 12d further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the

MARC record attached hereto as Attachment 12d was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of December 24, 1974, the MARC record attached hereto as Attachment 12d was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

263. Attachment 12d indicates that the *Journal of Agricultural and Food Chemistry* as cataloged at the University of North Carolina – Raleigh Libraries is currently available from 596 libraries. In view of the above, this issue of the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after February 4, 1998, because by that date it had been cataloged and indexed at the University of North Carolina – Raleigh Libraries, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1051 was published and accessible to the public on or shortly after February 6, 1996.

DD. GRAS Notice Number 737 [Exhibit 1052]

264. Exhibit 1052 is a printout of the report titled *GRAS Notice Number 737: GRAS Notification for Soy Leghemoglobin Protein Preparation Derived from Pichia Pastoris* prepared by Impossible™ Foods (hereafter "GRAS Notice Number 737"). I obtained Exhibit 1052 from the website maintained by the Food and Drug Administration (Silver Spring, Maryland).[93] Exhibit 1052 is a true and correct copy GRAS Notice Number 737. Specifically, the text of Exhibit 1052 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1052 was found within the custody of the sponsoring organization, a place where an authentic copy of this report would likely be. Additionally, Exhibit 1052 is a true and correct copy of the GRAS Notice Number 737 in a condition that creates no suspicion about its authenticity.

265. Based on the date recorded in the document on page 5, it is my opinion that the document titled *GRAS Notice Number 737: Notification for Soy Leghemoglobin Protein Preparation Derived from Pichia Pastoris* was available to the public on October 2, 2017, or shortly thereafter.

[93] https://www.fda.gov/media/124351/download.

EE. Wolf book [Exhibit 1053]

266. Attached hereto as Exhibit 1053 is a copy of a book titled *Soybeans as a Food Source*, revised edition, by W.J. Wolf and J.C. Cowan (hereafter "Wolf") and issued by the CRC Press with a 1975 date. Exhibit 1053 is a true and correct copy of the title page, copyright page, and table of contents which I obtained from the University of Wisconsin – Madison Libraries. The text in Exhibit 1053 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1053 is in a condition that creates no suspicion about its authenticity.

267. Attached hereto as Attachment 27a is a true and correct copy of the MARC record for this monograph from the University of Wisconsin – Madison Libraries online catalog. The library ownership is indicated by the presence of the library's code (uwmadisondb) in the third field 035. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on June 27, 2019, as shown in field 005 ("20190627"). I personally identified and retrieved the library catalog record which is Attachment 27a.

268. Based on finding a copy of the Wolf book in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog

attached as Attachment 27a, it is my opinion that the book titled *Soybeans as a Food Source*, revised edition, was publicly available on or shortly after March 21, 1975, as shown in field 008 ("750321"). The International Standard Book Number (ISBN) on Exhibit 1053 (0-87819-112-7) matches the ISBN in field 020 of Attachment 27a. Therefore, Exhibit 1053 is the same book as the one that the cataloger at the University of Wisconsin – Madison Libraries used to create the MARC record that is Attachment 27a.

269. Attached hereto as Attachment 27b is a true and correct copy of the MARC record for the book titled *Soybeans as a Food Source*, revised edition, obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 27b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 27b, that library code is "DLC," which means that the MARC record for this book was created at the Library of Congress as part of the Cataloging in Publication (CIP) Program.[94] A cataloger prepares basic information about the forthcoming book which is included on the verso of the title page (also called the copyright page). The information is provided to save time needed for the cataloging process at the library after the book is purchased. The CIP data includes the author

[94] https://www.loc.gov/publish/cip/

(field 100), title and subtitle (field 245), ISBN (field 022), suggested subject headings (field 650), classification numbers for the Library of Congress classification number (field 050), and the Dewey Decimal classification number (field 082). These data elements are included in the MARC record that the Library of Congress contributes to the OCLC bibliographic database. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 1288343 on March 21, 1975, as shown in the "Entered" field ("19750321"). The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 27b occurred on June 15, 2022, as shown in the "Replaced" field ("20220615"). I personally identified and retrieved the MARC record that is Attachment 27b.

270. Attachment 27b further includes an entry in field 050 ("TX558.S7 $b W65 1975")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("TX558.S7 $b W855s 1975")—as described above, this includes a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("664/.805655")—as described above, this includes a subject matter classification

number consistent with the Dewey Decimal classification system. Attachment 27b further includes a descriptor term reading "Soyfoods" (see Attachment 27c, Library of Congress subject heading sh85025887) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 27b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entry. Further, as of March 21, 1975, the MARC record attached hereto as Attachment 27b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that added this book to its collection, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

271. Attachment 27b indicates that the book titled *Soybeans as a Food Source*, revised edition, as cataloged at the Library of Congress is currently available from 353 libraries. In view of above, the book titled *Soybeans as a Food Source*, revised edition, was publicly available on or shortly after March 21, 1975, because by that date it had been received, cataloged, and indexed at the Library of Congress and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1053 was published and accessible to the public on or shortly after March 21, 1975.

FF. Kalman journal article [Exhibit 1054]

272. Exhibit 1054 is a copy of an article published in Volume 3 of the online open access journal *Food*. The article, "Amino Acid Composition of an Organic Brown Rice Protein Concentrate and Isolate Compared to Soy and Whey Concentrates and Isolates" by Douglas S. Kalma (hereafter "Kalman"), appears beginning on page 394 of this issue dated 2014.

273. I obtained Exhibit 1054 from the National Agricultural Library. Exhibit 1054 is a true and correct copy of the Kalman article (pages 394-402). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1054 was found within the custody of a library – a place where, if authentic, a copy of this online open access journal would likely be. Additionally, Exhibit 1054 is in a condition that creates no suspicion about its authenticity.

274. The Kalman journal article is available from its publisher (MDPI), the National Library of Medicine,[95] and the digital repositories *ResearchGate*[96] or

[95] https://pubmed.ncbi.nlm.nih.gov/28234326/.

[96] https://www.researchgate.net/publication/269337118_Amino_Acid_Composition_of_an_Organic_Brown_Rice_Protein_Concentrate_and_Isolate_Compared_to_Soy_and_Whey_Concentrates_and_Isolates.

Semantic Scholar.[97] A printout of the publisher's webpage for the Kalman article is attached as Attachment 28a.

275. Attached hereto as Attachment 28b is a true and correct copy of the MARC record for the online open access journal *Food* from the National Agricultural Library. The library ownership is indicated by the presence of the library's code (AGL) in field 049. I personally identified and retrieved the MARC record that is Attachment 28b.

276. As noted in the holdings information (field 362), the National Agricultural Library has received the online open access journal *Food* since December 2012 and continues to receive the publication. In view of the MARC record for Exhibit 1054, the Kalman article was publicly available on June 30, 2014, as shown on the publisher's website (see Attachment 28a).

277. The "BLvl" entry in Attachment 28b is "s," which indicates that the online open access journal *Food* is a serial publication. Field 310 of Attachment 28b reads "Quarterly." Accordingly, the MARC record for Exhibit 1054 corresponds to those issues of the online open access journal *Food* from the time of the serial began publication to the present day.

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[97] https://www.semanticscholar.org/paper/Amino-Acid-Composition-of-an-Organic-Brown-Rice-and-Kalman/96d81ed6d2de789a66fe81672f557cbfba37546c.

278. Attachment 28b further includes an entry in field 070 ("TX341")—includes a subject matter classification number consistent with the Library of Agriculture classification system (analogous to the Dewey Decimal classification system). Attachment 28b further includes two descriptor terms reading "Food $v Periodicals" (see Attachment 5e, Library of Congress sh85050184 and Attachment 2d, Library of Congress subject heading sh85099890) and "Nutrition $v Periodicals" (see Attachment 9c, Library of Congress sh2008108541) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 28b was indexed according to its subject matter by virtue of at least two independently sufficient classifications: the field 070 entry and the field 650 entries. Further, as of June 29, 2013, the MARC record attached hereto as Attachment 28b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

279. Attachment 28b indicates that the MARC record for the online open access journal *Food* obtained from *WorldCat*, the public view of the OCLC bibliographic database, was created at the Auckland University of Technology

Libraries (Auckland, New Zealand).[98] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 28b indicates that a cataloger at the Auckland University of Technology Libraries (Z5A, field 040) on June 29, 2013 (field 008).

280. The *WorldCat* database indicates that the online open access journal *Food* as cataloged at the Auckland University of Technology Libraries is currently available from 715 libraries. Based on finding a copy of Exhibit 1054 in the National Agricultural Library and MARC record in its online library catalog attached as Attachment 28b, it is my opinion that the Kalman article published in the online open access journal *Food* was available in the National Agricultural Library on June 30, 2014.

GG. Schaich book excerpt [Exhibit 1055]

281. Attached hereto as Exhibit 1055 is a copy of an excerpt from the six-volume set titled *Bailey's Industrial Oil and Fat Products*, 6th edition, edited by Fereidoon Shahidi. The excerpt is Chapter 7, "Lipid Oxidation: Theoretical Aspects" by Karen Schaich (hereafter "Schaich") and issued by Wiley Press with a 2005 copyright date. Exhibit 1055 is a true and correct copy of the title page, copyright page, table of contents, and Schaich chapter (volume 1, pages 269-343), which I

[98] https://www.worldcat.org/title/870683179.

obtained from the University of Wisconsin – Madison Libraries. The text in Exhibit 1055 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1055 is in a condition that creates no suspicion about its authenticity.

282. Attached hereto as Attachment 29a is a true and correct copy of the MARC record for this six-volume set from the University of Wisconsin – Madison Libraries online catalog. The library ownership is indicated by the presence of the library's code (GZM) in the 049 field. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on March 23, 2018, as shown in the 005 field ("20180623"). I personally identified and retrieved the library catalog record which is Attachment 29a.

283. Based on finding a print copy of the Schaich chapter in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 29a, it is my opinion that the six-volume set titled *Bailey's Industrial Oil and Fat Products*, 6th edition, was publicly available on or shortly after February 6, 2004, as shown in field 008 ("040206").

284. Attached hereto as Attachment 29b is a true and correct copy of the MARC record for the six-volume set titled *Bailey's Industrial Oil and Fat Products*,

6th edition, obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 29b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 29b, that library code is "DLC," which means that the MARC record for this six-volume set was created at the Library of Congress, as part of the Cataloging in Publication (CIP) Program.[99] A cataloger prepares basic information about the forthcoming book which is included on the verso of the title page (also called the copyright page). The information is provided to save time needed for the cataloging process at the library after the book is purchased. The CIP data includes the author (field 100), title and subtitle (field 245), ISBN (field 022), suggested subject headings (field 650), classification numbers for the Library of Congress classification number (field 050), and the Dewey Decimal classification number (field 082). These data elements are included in the MARC record that the Library of Congress contributes to the OCLC bibliographic database.

285. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 54407440 on February 6, 2004, as shown in the "Entered" field ("20040206"). The library continues to update and enhance this MARC record to meet current

[99] https://www.loc.gov/publish/cip/.

cataloging rules. The most recent enhancement to Attachment 29b occurred on June 27, 2022, as shown in the "Replaced" field ("20220627"). I personally identified and retrieved the MARC record that is Attachment 29b.

286. Attachment 29b further includes an entry in field 050 ("TP670 $b .B28 2005")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("665")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 29b further includes a descriptor term reading "Oils and fats" (see Attachment 29c, Library of Congress subject heading sh85094407) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 29b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entry. Further, as of February 6, 2004, the MARC record attached hereto as Attachment 29b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that added this six-volume set to its collection, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

287. Further supporting my opinion that Exhibit 1055 was publicly accessible to ordinarily skilled and interested researchers in the field is the fact that the six-volume set titled *Bailey's Industrial Oil and Fat Products*, 6th edition, was registered with the U.S. Copyright Office as item TX0006220900 on June 17, 2005 and indicated a publication date of March 24, 2005 (see Attachment 29d, U.S. Copyright Office Public Catalog). As noted above, this would have provided a person interested in the relevant subject matter with keyword searching capabilities and other tools to locate this book.

288. Attachment 29b indicates that the six-volume set titled *Bailey's Industrial Oil and Fat Products*, 6th edition, as cataloged at the Library of Congress is currently available from 103 libraries. In view of above, the six-volume set titled *Bailey's Industrial Oil and Fat Products*, 6th edition, was publicly available on or shortly after March 24, 2005, because by that date it had been cataloged and indexed at the Library of Congress and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1055 was published and accessible to the public on or shortly after March 24, 2005.

HH. Klesk journal article [Exhibit 1056]

289. Attached hereto as Exhibit 1056 is a copy of the journal article, "Aroma Extract Dilution Analysis of Cv. Marion (Rubus spp. hyb) and Cv. Evergreen (R. laciniatus L.) Blackberries" by Keith Klesk and Michael Qian (hereafter "Klesk").

The Klesk article was published in Volume 43, Number 8 of the *Journal of Agricultural and Food Chemistry*. The Klesk article appears beginning on page 3436 of this issue dated May 21, 2003.

290. I obtained Exhibit 1056 from the University of Wisconsin – Madison Libraries. Exhibit 1056 is a true and correct copy of the Klesk article (pages 3436-3441). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Klesk article is also available from the publisher, the American Chemical Society,[100] through the National Library of Medicine,[101] and the digital repositories *ResearchGate*[102] and *Semantic Scholar*.[103] Exhibit 1056 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1056 is in a condition that creates no suspicion about its authenticity.

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[100] https://pubs.acs.org/doi/10.1021/jf0262209.

[101] https://pubmed.ncbi.nlm.nih.gov/12744680/.

[102] https://www.researchgate.net/publication/10761461_Aroma_Extract_Dilution_Analysis_of_Cv_Marion_Rubus_spp_hyb_and_Cv_Evergreen_R_laciniatus_L_Blackberries.

[103] https://www.semanticscholar.org/paper/Aroma-extract-dilution-analysis-of-Cv.-Marion-spp.-Klesk-Qian/f0e7494006a1e66b5f1aff9cb21fdc889fa0e4a1.

291. Attached hereto as Attachment 30a is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 30a occurred on March 13, 2015, as shown in field 005 field ("20150313"). I personally identified and retrieved the MARC record that is Attachment 30a.

292. Based on finding a print copy of Exhibit 1056 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 30a, it is my opinion that the Klesk article published in the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after May 31, 2003, as shown on the cover. The date stamp on the cover has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Although the complete date cannot be clearly deciphered from the stamp, it appears to include the month of May, which would coincide with the date of the Issue, May 21, 2003.

293. Attachment 30a also shows that Exhibit 1056 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v

Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

294. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the *Journal of Agricultural and Food Chemistry* since April 1953 and continues to receive the publication. In view of the MARC record for Exhibit 1056, the Klesk article was publicly available on or shortly after June 5, 2003, because the serial title had been received, cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

295. Attached hereto as Attachment 30b is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 30b, that library code is "NRC," which means that the MARC record for this serial was cataloged at the University of North Carolina – Raleigh Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of North Carolina – Raleigh Libraries created OCLC record number 1800249 on December 24, 1974, as shown in the "Entered" field ("19741224"). The

library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 30b occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 30b. The "BLvl" entry in Attachment 30b is "s," which indicates that the *Journal of Agricultural and Food Chemistry* is a serial publication. Field 310 of Attachment 30b reads "Weekly, $b <2012-." Accordingly, the MARC record for Exhibit 1056 corresponds to the *Journal of Agricultural and Food Chemistry* from the time the serial title began and includes the date of the Klesk article.

296. Attachment 30b includes an entry in field 050 ("S583")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO534D"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("630.2405"), a subject matter consistent with the Dewey Decimal classification system. Attachment 30b further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading

sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 30b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of December 24, 1974, the MARC record attached hereto as Attachment 30b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

297. Attachment 30b indicates that the *Journal of Agricultural and Food Chemistry* as cataloged at the University of North Carolina – Raleigh Libraries is currently available from 596 libraries. In view of the above, this issue of the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after June 5, 2003, because by that date it had been cataloged and indexed at the University of North Carolina – Raleigh Libraries, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1056 was published and accessible to the public on or shortly after June 5, 2003.

II. Krumina-Zemture conference paper [Exhibit 1057]

298. Attached hereto as Exhibit 1057 is a copy of a conference paper published in the electronic proceedings two-volume set titled *International Scientific Conference Proceedings: Research for Rural Development 2016* published by the Latvia University of Agriculture with a 2016 copyright date. The conference paper titled "Amino Acid and Dietary Fibre Content of Pea and Buckwheat Flours" by Gita Krumina-Zemture, Ilze Beitane, and Ilze Gramatina (hereafter "Krumina-Zemture") appears beginning on page 84 in volume 1. The 22nd ICS Research for Rural Development Conference was held on May 180-20, 2016, in Jelgava, Latvia.[104]

299. I obtained Exhibit 1057 from the Research for Rural Development Conference Proceedings website. The *WayBack Machine* indicated that the two-volume set titled *International Scientific Conference Proceedings: Research for Rural Development 2016* was available online on May 19, 2017, at 7:26:35 p.m. (see Attachment 31a).Exhibit 1057 is a true and correct copy of the Krumina-Zemture conference paper (volume 1, pages 84-90). Specifically, the text of the Hrumina-Zemture conference paper is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no

[104] https://www2.llu.lv/research_conf/proceedings.htm

visible alterations to the document. Exhibit 1057 was found within the custody of the sponsoring higher education institution – a place where, if authentic, a copy of this electronic conference proceedings two-volume set would likely be. Additionally, Exhibit 1057 is in a condition that creates no suspicion about authenticity.

300. Attached hereto as Attachment 31b is a true and correct copy of the MARC record for the electronic conference proceedings two-volume set titled *International Scientific Conference Proceedings: Research for Rural Development 2016* obtained from the Library of Congress online catalog. I personally identified and retrieved the MARC record that is Attachment 31b. The MARC record indicates that the *International Scientific Conference Proceedings: Research for Rural Development* is a monographic serial.[105]

301. Attached hereto as Attachment 31c is a true and correct copy of the MARC record for the electronic conference proceedings two-volume set titled *International Scientific Conference Proceedings: Research for Rural Development*

[105] A monographic serial is a group of separate items (or books) related to one another by the fact that each item bears, in addition to its own title proper, a collective title applying to the group as a whole.

2016 obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 31c. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 31c, that library code is "DLC," which means that the MARC record for this monographic serial was cataloged at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger in the Library of Congress created OCLC record number 778564079 on February 28, 2012, as shown in the "Entered" field ("20120228"). The library continues to update this MARC record the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on November 2, 2018, as shown in the "Replaced" field ("20181102").

302. The ISSN in field 022 (1691-4031) matches the ISSN listed on Exhibit 1057. Therefore, the electronic conference proceedings that the cataloger at the Library of Congress used to create Attachment 31c matches Exhibit 1057. Furthermore, Attachment 31c indicates that two-volume set titled *International Scientific Conference Proceedings: Research for Rural Development 2016* contains papers presented at a conference (field 245, subfield "b" and field 550). The conference is an annual event (field 310). Attachment 31c also shows that the conference proceedings two-volume set can be searched in the online library catalog

by the title (field 245), key words in the subject headings (fields 650), and sponsoring organizations (fields 710).

303. Furthermore, Attachment 31c includes an entry in field 050 ("S535.L33 $b R47")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system). Attachment 31c also shows that the volume was catalogued with six descriptor terms reading "Agriculture $x Study and teaching (Higher) $z Latvia $v Congresses" (see Attachment 31d, Library of Congress subject heading sh85002455, Attachment 31e, Library of Congress name authority heading n80150219, and Attachment 11d, Library of Congress subject heading sh85031115), "Rural development $x Study and teaching (Higher) $z Latvia $v Congresses" (Attachment 31f, Library of Congress subject heading sh85115899, Attachment 31g, Library of Congress subject heading sh85133052, Attachment 31e, Library of Congress name authority heading n80150219, and Attachment 11d Library of Congress subject heading sh85031115), "Livestock $x Study and teaching (Higher) $z Latvia $v Congresses" (see Attachment 31h, Library of Congress subject heading sh85077784, Attachment 31g, Library of Congress subject heading sh85133052, Attachment 31e, Library of Congress name authority heading n80150219, and Attachment 11d Library of Congress subject heading sh85031115), "Agriculture $x Study and teaching (Higher) $v Congresses" (see Attachment 31d, Library of

Congress subject heading sh85002455 and Attachment 11d, Library of Congress subject heading sh85031115), "Rural development $x Study and teaching (Higher) $v Congresses" (Attachment 31f, Library of Congress subject heading sh85115899, Attachment 31g, Library of Congress subject heading sh85133052, and Attachment 11d Library of Congress subject heading sh85031115), "Livestock $x Study and teaching (Higher) $v Congresses" (see Attachment 31h, Library of Congress subject heading sh85077784, Attachment 31g, Library of Congress subject heading sh85133052, and Attachment 11d Library of Congress subject heading sh85031115), in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment25c was indexed according to its subject matter by virtue of at least two independently sufficient classifications: the field 050 entry and the field 650 entries.

304. As of February 28, 2012, the MARC record attached hereto as Attachment 31c was accessible through any library with access to *WorldCat*, the OCLC bibliographic database or the online catalog at a library that acquired the electronic conference proceedings volume, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

305. Attachment 31c indicates that the electronic two-volume set titled *International Scientific Conference Proceedings: Research for Rural Development*

2016 as cataloged in the Library of Congress is currently available from 20 libraries. In view of the above, the electronic two-volume set titled *International Scientific Conference Proceedings: Research for Rural Development 2016* was publicly available on May 19, 2017, because by that date it had been published by the Latvia University of Agriculture and available through its website. For these reasons, it is my opinion that Exhibit 1057 was published and publicly accessible on May 19, 2017.

JJ. Kuck online article [Exhibit 1058]

306. Attached hereto as Exhibit 1058 is a report titled *An Overview of Meat Consumption in the United States* prepared by Gretchen Kuck and Gary Schnitkey (hereafter "Kuck") in the Department of Agricultural and Consumer Economics at the University of Illinois (Urbana, Illinois). The Kuck report was issued as part of the *farmdoc daily* (volume 11, issue 76) on May 12, 2021.

307. I downloaded Exhibit 1058 from the University of Illinois farmdocDaily website.[106] Exhibit 1058 is a true and accurate copy of the Kuck article. Specifically, the text of the Kuck article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next;

[106] https://farmdocdaily.illinois.edu/2021/05/an-overview-of-meat-consumption-in-the-united-states.html.

further, there are no visible alterations to the document. Exhibit 1058 was found within the custody of its issuing university – a place where, if authentic, a copy of this document would likely be.

308. Attached hereto as Attachment 32a is a true and correct copy of the MARC record for the publication *farmdoc daily* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 32a, that library code is "COO," which means that the MARC record for this publication was cataloged in the Mann Library at Cornell University (Ithaca, New York). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger in the Mann Library at Cornell University created OCLC record number 898200173 on December 8, 2014, as shown in the "Entered" field ("20141208"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 32a occurred on December 3, 2016, as shown in the "Replaced" field ("20161203"). I personally identified and retrieved the MARC record that is Attachment 32a. Accordingly, the MARC record for Exhibit 1058 corresponds to the publication *farmdoc daily* from the time the serial title began and includes the date of the Kuck report.

309. As of December 8, 2014, the MARC record attached hereto as Attachment 32a was accessible through any library with access to the OCLC

bibliographic database or the online catalog at a library that owned the document, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

310. Attachment 32a indicates that the publication *farmdoc daily* as cataloged in the Mann Library at Cornell University is currently available from 37 libraries. In view of the above, this issue of the publication *farmdoc daily* was publicly available on or shortly after May 12, 2021, because by that date it had been received, cataloged, and indexed in the Mann Library at Cornell University and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1058 was published and accessible to the public on or shortly after May 12, 2021.

KK. Marchand article [Exhibit 1060]

311. Attached hereto as Exhibit 1060 is a copy of the journal article, "Possible Mechanism for Involvement of Cysteine in Aroma Production in Wine" by Stéphanie Marchand, Gilles de Revel, Joseph Vercauteren, and Alain Bertrand (hereafter "Marchand"). The Marchand article was published in Volume 50, Number 21 of the *Journal of Agricultural and Food Chemistry*. The Marchand article appears beginning on page 6160 of this issue dated October 9, 2002.

312. I obtained Exhibit 1060 from the University of Wisconsin – Madison Libraries. Exhibit 1060 is a true and correct copy of the Marchand article (pages 6160-6164). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Marchand article is also available from the publisher, the American Chemical Society, through the National Library of Medicine,[107] and the digital repository *ResearchGate*.[108] A printout for the publisher's webpage for the Marchand article is attached as Attachment 34a. Exhibit 1060 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1060 is in a condition that creates no suspicion about its authenticity.

313. Attached hereto as Attachment 12a is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update and enhance the MARC record to meet current cataloging rules. The most

[107] https://pubmed.ncbi.nlm.nih.gov/12358496/.

[108] https://www.researchgate.net/publication/11098128_Possible_Mechanism_for_Involvement_of_Cysteine_in_Aroma_Production_in_Wine.

recent enhancement to Attachment 12a occurred on March 13, 2015, as shown in field 005 field ("20150313"). I personally identified and retrieved the MARC record that is Attachment 12a.

314. Based on finding a print copy of Exhibit 1060 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 12a, it is my opinion that the Marchand article published in the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after September 11, 2002, as indicated on the publisher's website (see Attachment 34a). Attachment 12a also shows that Exhibit 1060 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

315. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the *Journal of Agricultural and Food Chemistry* since April 1953 and continues to receive the publication. In view of the MARC record for Exhibit 1060, the Marchand article was publicly available on or shortly after September 11, 2002, because the serial title had been received,

cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

316. Attached hereto as Attachment 12d is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 12d, that library code is "NRC," which means that the MARC record for this serial was cataloged at the University of North Carolina – Raleigh Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of North Carolina – Raleigh Libraries created OCLC record number 1800249 on December 24, 1974, as shown in the "Entered" field ("19741224"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 12d occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 12d. The "BLvl" entry in Attachment 12d is "s," which indicates that the *Journal of Agricultural and Food Chemistry* is a serial publication. Field 310 of Attachment 12d reads "Weekly, $b <2012-." Accordingly, the MARC record for Exhibit 1060 corresponds to the *Journal of Agricultural and Food Chemistry* from the time the serial title began and includes the date of the Marchand article.

317. Attachment 12d includes an entry in field 050 ("S583")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO534D"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("630.2405"), a subject matter consistent with the Dewey Decimal classification system. Attachment 12d further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 12d was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of December 24, 1974, the MARC record attached hereto as Attachment 12d was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date

through any library with access to the OCLC bibliographic database or through an individual library.

318. Attachment 12d indicates that the *Journal of Agricultural and Food Chemistry* as cataloged at the University of North Carolina – Raleigh Libraries is currently available from 596 libraries. In view of the above, this issue of the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after September 11, 2002, because by that date it had been cataloged and indexed at the University of North Carolina – Raleigh Libraries, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1060 was published and accessible to the public on or shortly after September 11, 2002 (see Attachment 34a).

LL. Edelman article [Exhibit 1061]

319. Attached hereto as Exhibit 1061 is a copy of the journal article, "Commentary: In Vitro-Cultured Meat Production," by P. D. Edelman, D. C. McFarland, V. A. Mironov, and J. G. Matheny (hereafter "Edelman"). The Edelman article was published in Volume 11, Number 5/6 of the journal *Tissue Engineering*. The Edelman article appears beginning on page 659 of this issue dated May-June 2005.

320. I obtained Exhibit 1061 from the University of Wisconsin – Madison Libraries. Exhibit 1061 is a true and correct copy of the Edelman article (pages 659-

662). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Edelman article is also available from the publisher, Mary Ann Liebert, and through the digital repositories *ResearchGate*[109] and *Semantic Scholar*.[110] Exhibit 1061 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1061 is in a condition that creates no suspicion about its authenticity. A printout of the publisher's webpage for the Edelman article is attached as Attachment 35a.

321. Attached hereto as Attachment 35b is a true and correct copy of the MARC record for the journal *Tissue Engineering* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 35b occurred on January 25, 2022, as shown in field 005 field

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109 https://www.researchgate.net/publication/7746539_Commentary_In_Vitro-Cultured_Meat_Production.

110 https://www.semanticscholar.org/paper/Commentary%3A-In-vitro-cultured-meat-production.-Edelman-McFarland/7e8cd59b83067ef2e495a3d52029b29e78149fa1.

("20220125"). I personally identified and retrieved the MARC record that is Attachment 35b.

322. Based on finding a print copy of Exhibit 1061 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 35b, it is my opinion that the Edelman article published in the journal *Tissue Engineering* was publicly available on or shortly after May 3, 2005, as shown on the publisher's website (see Attachment 35a). Attachment 35b also shows that Exhibit 1061 was catalogued with three descriptor terms reading "Biomedical materials $v Periodicals" (see Attachment 35c, Library of Congress subject heading sh2009117060), "Biomedical engineering $v Periodicals" (see Attachment 35d, Library of Congress subject heading sh2007102015), and "Tissue engineering $v Periodicals" (see Attachment 35e, Library of Congress subject heading sh2003001133 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

323. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the journal *Tissue Engineering* since March 1995 and continues to receive the publication.[111] In view of the MARC record for Exhibit 1061, the Edelman article was publicly available on or shortly

[111] The publication split into three separate journals in January 2008 (see 785 fields).

after May 3, 2005, because the serial title had been received, cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

324. Attached hereto as Attachment 35f is a true and correct copy of the MARC record for the journal *Tissue Engineering* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 35f, that library code is "NSD," which means that the MARC record for this serial was cataloged as part of the National Serials Data Program at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 30453761 on May 18, 1994, as shown in the "Entered" field ("19940518"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 35f occurred on January 24, 2022, as shown in the "Replaced" field ("20220124"). I personally identified and retrieved the MARC record that is Attachment 35f. The "BLvl" entry in Attachment 35f is "s," which indicates that the journal *Tissue Engineering* is a serial publication. Field 310 of Attachment 35f reads "Bimonthly, $b <1999-." Accordingly, the MARC record for Exhibit 1061 corresponds to the journal *Tissue Engineering* from the time the serial title began and includes the date of the Edelman article.

325. Attachment 35f includes an entry in field 050 ("R857.T55 $b T577")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b TI844")—as described above, a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("574")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 35f further includes four descriptor terms reading "Biomedical materials $v Periodicals" (see Attachment 35c, Library of Congress subject heading sh2009117060), "Biomedical engineering $v Periodicals" (see Attachment 35d, Library of Congress subject heading sh2007102015), "Tissue engineering $v Periodicals" (see Attachment 35e, Library of Congress subject heading sh2003001133 and Attachment 2d, Library of Congress subject heading sh85099890), and "Tissue culture $v Periodicals" (see Attachment 35g, Library of Congress subject heading sh85135588 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 35f was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry,

and the field 650 entries. As of May 18, 1994, the MARC record attached hereto as Attachment 35f was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

326. Attachment 35f indicates that the journal *Tissue Engineering* as cataloged at the Library of Congress is currently available from 96 libraries. In view of the above, this issue of the journal *Tissue Engineering* was publicly available on or shortly after May 3, 2005, because by that date it had been cataloged and indexed at the Library of Congress, made part of the OCLC bibliographic database, and received in the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1061 was published and accessible to the public on or shortly after May 3, 2005, as shown on the publisher's website (Attachment 35a).

MM. Chiang thesis [Exhibit 1063]

327. Attached hereto as Exhibit 1063 is a thesis, *Protein-Protein Interaction of Soy Protein Isolate from Extrusion Processing*, by Angela Chiang (hereafter "Chiang") and dated December 2007. Exhibit 1063 is a true and correct copy of the title page, table of contents, and text from the University of Missouri digital

repository MOspace.[112] I obtained this dissertation from Mospace and made the copies which comprise Exhibit 1063. Specifically, the text is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1063 was found within the custody of the custodian to whom the author granted permission to make copies and reproductions. Exhibit 1063 is in a condition that creates no suspicion about its authenticity.

328. A thesis exhibits the following characteristics: the thesis is attributed to a single creator or author (in this case Angela Chiang) who affixes a date of creation (in this case December 2007), recognizes a committee of three or more faculty members with their affiliations, (in this case Fu-Hung Hsieh, Andrew D. Clark, and Gang Yao), a list of scholarly references (in this case 46 references), and publishes the document through the higher education institute conferring the graduate degree (in this case the Department of Food Science at the University of Missouri – Columbia).

329. Attached hereto as Attachment 36a is a true and correct copy of the online catalog record for this thesis from the University of Missouri – Columbia

[112] https://mospace.umsystem.edu/xmlui/handle/10355/5099

Libraries. The catalog record indicates that copies of the thesis are located in the University of Missouri digital repository MOspace. I personally identified and retrieved the library catalog record which is Attachment 36a.

330. Attached hereto as Attachment 36b is a true and correct copy of the MARC record for the thesis titled *Protein-Protein Interaction of Soy Protein Isolate from Extrusion Processing* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 36b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 36b, that library code is "MUU," which means that the MARC record for this book was created in the University of Missouri – Columbia Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger in the University of Missouri – Columbia Libraries created OCLC record number 320770785 on May 11, 2009, as shown in the "Entered" field ("20090511").

331. Attachment 36b further includes three descriptor terms reading "Soy proteins" (see Attachment 36c, Library of Congress subject heading sh91003350), "Starch" (see Attachment 36d, Library of Congress subject heading sh85127386), and "Extrusion process" (see Attachment 36e, Library of Congress subject heading sh85046633) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 36b was indexed

according to its subject matter by virtue of the field 650 entries. Further, as of May 11, 2009, the MARC record attached hereto as Attachment 36b was accessible through any library with access to the OCLC bibliographic database or through an individual library.

332. Attachment 36b indicates that the Chiang thesis as cataloged in the University of Missouri – Columbia Libraries is currently available from that institution, the website included in field 856, and 2 other libraries. In view of above, this doctoral dissertation was publicly available no later than May 11, 2009, because by that date it had been received, cataloged, and indexed in the University of Missouri – Columbia Libraries, placed in the custody of the digital repository MOspace, and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1063 was published and accessible to the public on or shortly after May 11, 2009.

NN. Splivallo article [Exhibit 1064]

333. Attached hereto as Exhibit 1064 is a copy of the journal article, "Bacteria Associated with Truffle-Fruiting Bodies Contribute to Truffle Aroma" by Richard Splivallo, Aurélie Deveau, Nayuf Valdez, Nina Kirchhoff, Pascale Frey-Klett, and Petr Karlovsky (hereafter "Splivallo"). The Splivallo article was published in Volume 17, Issue 8 of the journal *Environmental Microbiology*. The Splivallo article appears beginning on page 2647 of this issue dated August 2015.

334. I obtained Exhibit 1064 from the National Library of Medicine. Exhibit 1064 is a true and correct copy of the Splivallo article (pages 2647-2660). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Splivallo article is also available from the publisher, Wiley,[113] and through the digital repositories *ResearchGate*[114] and *Semantic Scholar*.[115] Exhibit 1064 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1064 is in a condition that creates no suspicion about its authenticity.

335. Attached hereto as Attachment 37a is a true and correct copy of the MARC record for the journal *Environmental Microbiology* at the National Library of Medicine (Bethesda, Maryland). The library ownership is indicated by the presence of the library's code (DNLM) in field 935. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 37a occurred on June 29, 2022, as shown in field 005

[113] https://sfamjournals.onlinelibrary.wiley.com/doi/full/10.1111/1462-2920.12521.

[114] https://www.researchgate.net/publication/262931606_Bacteria_associated_with_truffle-fruiting_bodies_contribute_to_truffle_aroma.

[115] https://www.semanticscholar.org/paper/Bacteria-associated-with-truffle-fruiting-bodies-to-Splivallo-Deveau/802dbca14a94e881120b61d1b3bb39dfc410f329.

field ("20220629"). I personally identified and retrieved the MARC record that is Attachment 37a.

336. Based on finding a print copy of Exhibit 1064 in the National Library of Medicine and MARC record in its online library catalog attached as Attachment 37a, it is my opinion that the Splivallo article published in the journal *Environmental Microbiology* was publicly available on or shortly after September 16, 2015, as shown by the label on the cover. This label has the general appearance of receipt date labels that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 37a also shows that Exhibit 1064 was catalogued with a descriptor term reading "Environmental Microbiology" (see Attachment 37b, National Library of Medicine subject heading D004783) in the 650 field.

337. As noted in the holdings information (362 field), the National Library of Medicine has received the journal *Environmental Microbiology* since February 1999 and continues to receive the publication. In view of the MARC record for Exhibit 1064, the Splivallo article was publicly available on or shortly after September 16, 2015, because the serial title had been received, cataloged, and indexed in the National Library of Medicine and made part of its online catalog database.

338. Attached hereto as Attachment 37c is a true and correct copy of the MARC record for the journal *Environmental Microbiology* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 37c, that library code is "CUV," which means that the MARC record for this serial was cataloged in the Shields Library at the University of California – Davis. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger in the Shields Library at the University of California – Davis created OCLC record number 41134376 on April 8, 1999, as shown in the "Entered" field ("19990408"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 37c occurred on February 19, 2022, as shown in the "Replaced" field ("20220219"). I personally identified and retrieved the MARC record that is Attachment 37c. The "BLvl" entry in Attachment 37c is "s," which indicates that the journal *Environmental Microbiology* is a serial publication. Field 310 of Attachment 37c reads "Monthly, $b <May 2001-." Accordingly, the MARC record for Exhibit 1064 corresponds to the journal *Environmental Microbiology* from the time the serial title began and includes the date of the Splivallo article.

339. Attachment 37c includes an entry in field 050 ("QR100 $b .E582")—as described above, a subject matter classification number consistent with the

Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b EN584UM"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), and an entry in field 082 ("579.175"), a subject matter consistent with the Dewey Decimal classification system. Attachment 37c further includes a descriptor term reading "Microbial ecology $v Periodicals" (see Attachment 37d, Library of Congress subject heading sh85084757 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 37c was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entry. As of April 8, 1999, the MARC record attached hereto as Attachment 37c was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

340. Attachment 37c indicates that the journal *Environmental Microbiology* as cataloged in the Shields Library at the University of California – Davis is currently available from 104 libraries. In view of the above, this issue of the journal

Environmental Microbiology was publicly available on or shortly after September 16, 2015, because by that date it had been cataloged and indexed in the Shields Library at the University of California – Davis, made part of the OCLC bibliographic database, and received in the National Library of Medicine. For these reasons, it is my opinion that Exhibit 1064 was published and accessible to the public on or shortly after September 16, 2015.

OO. Mohsen journal article [Exhibit 1066]

341. Exhibit 1066 is a copy of the article "Effect of Substitution of Soy Protein Isolate on Aroma Volatiles, Chemical Composition and Sensory Quality of Wheat Cookies" by Sobhy M. Mohsen, Hoda H.M. Fadel, M.A. Bekhit, Amr E. Edris, and Mohamad Y. S. Ahmed (hereafter "Mohsen"). The Mohsen article was published in Volume 44, Issue 9 of the *International Journal of Food Science & Technology*. The Mohsen Article appears beginning on page 1705 of this issue dated September 2009.

342. I obtained Exhibit 1066 from the King Library at San José State University. Exhibit 1066 is a true and correct copy of the Mohsen article (pages 1705-1712). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1066 was found within the custody of a library – a place where, if authentic, a copy of this online

open access journal would likely be. Additionally, Exhibit 1066 is in a condition that creates no suspicion about its authenticity. The Mohsen journal article is also available from the publisher's website and the digital repository *Semantic Scholar*.[116] The publisher's website indicates a publication date of August 10, 2009 (see Attachment 38a).

343. Attached hereto as Attachment 38b is a true and correct copy of the MARC record for the *International Journal of Food Science & Technology* from the King Library at San José State University.[117] I personally identified and retrieved the MARC record that is Attachment 38b.

344. As noted in the holdings information (field 362), the King Library at San José State University has received the *International Journal of Food Science & Technology* since 1987 and continues to receive the publication. In view of the

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116 https://www.semanticscholar.org/paper/Effect-of-substitution-of-soy-protein-isolate-on-of-Mohsen-Fadel/601b3e74faeef19728202163f777130025ed0b28.

117 https://csu-sjsu.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991067625368602901&context=L&vid=01CALS_SJO:01CALS_SJO&lang=en&search_scope=MyInst_and_CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,international%20journal%20of%20food%20scieence%20and%20technology&offset=0.

MARC record for Exhibit 1066, the Mohsen article was publicly available on August 10, 2009, as indicated on the publisher's website.

345. The entry in field 008, character 7 of Attachment 38b is "c," which indicates that the *International Journal of Food Science & Technology* is a serial publication. Accordingly, the MARC record for Exhibit 1066 corresponds to those issues of the *International Journal of Food Science & Technology* from the time of the serial began publication to the present day.

346. Attachment 38b further includes an entry in field 050 ("TX341")— includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("664.005")— includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 38b further includes a descriptor term reading "Nutrition $v Periodicals" (see Attachment 5b, Library of Congress subject heading sh2008103991) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 38b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entry. Further, as of August 20, 1999, the MARC record attached hereto as Attachment 38b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library

that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

347. Attachment 38b indicates that the MARC record for the *International Journal of Food Science & Technology* obtained from *WorldCat*, the public view of the OCLC bibliographic database, is available in 30 editions.[118] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 38c indicates that a cataloger at the Library of Congress used OCLC record number 1754594 (field 035) which was created at the University of Minnesota Libraries (Minneapolis, Minnesota) (MUL, field 035) on November 1, 1975 (field 008, 751101).

348. The *WorldCat* database indicates that the *International Journal of Food Science & Technology* as cataloged in *WorldCat* is currently available from 987 libraries. Based on finding a copy of Exhibit 1066 in the King Library at San José State University and MARC record in its online library catalog attached as Attachment 38b, it is my opinion that the Mohsen article published in the *International Journal of Food Science & Technology* was available in the King

[118] https://www.worldcat.org/title/42201700.

Library at San José State University on August 10, 2009, the publication date provided on the publisher's website (see Attachment 38a).

PP. Meng book chapter [Exhibit 1067]

349. Attached hereto as Exhibit 1067 is a copy of an excerpt from the volume titled *Microencapsulation in the Food Industry: A Practical Implementation Guide* edited by Anilkumar G. Gaonkar, Niraj Vasisht, Atul Khare, and Robert Sobel. The excerpt is Chapter 20, "Gelatin and Other Proteins for Microencapsulation" by Yang Meng and Sylvia Cloutier (hereafter "Meng") and issued by the Elsevier Academic Press with a 2014 copyright date.

350. Exhibit 1067 is a true and correct copy of the title page, copyright page, table of contents, and Meng book chapter (pages 227-239), which I obtained from the Raynor Memorial Libraries at Marquette State University (Milwaukee, Wisconsin). The text in Exhibit 1067 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1067 is in a condition that creates no suspicion about its authenticity. The Meng book chapter is also available from the publisher Elsevier Academic Press. A printout of the publisher's website is attached as Attachment 39a.

351. Attached hereto as Attachment 39b is a true and correct copy of the metadata record for this volume from the Raynor Memorial Libraries at Marquette

University online catalog. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. I personally identified and retrieved the library catalog record which is Attachment 39b.

352. Based on finding a copy of the volume in which the Meng chapter was published in the Raynor Memorial Libraries at Marquette University and metadata record in its online library catalog attached as Attachment 39b, it is my opinion that the volume titled *Microencapsulation in the Food Industry: A Practical Implementation Guide* was publicly available electronically from the publisher on or shortly after July 4, 2014 (see Attachment 39a).

353. Attached hereto as Attachment 39c is a true and correct copy of the MARC record for volume titled *Microencapsulation in the Food Industry: A Practical Implementation Guide* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 39c. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 39c, that library code is "DLC," which means that the MARC record for this volume was created at the Library of Congress. The volume titled *Microencapsulation in the Food Industry: A Practical Implementation Guide* was also cataloged at the Library of Congress as part of the Cataloging in

Publication (CIP) Program.[119] A cataloger prepares basic information about the forthcoming book which is included on the verso of the title page (also called the copyright page). The information is provided to save time needed for the cataloging process at the library after the book is purchased. The CIP data includes the author (field 100), title and subtitle (field 245), ISBN (field 022), suggested subject headings (field 650), classification numbers for the Library of Congress classification number (field 050), and the Dewey Decimal classification number (field 082). These data elements are included in the MARC record that the Library of Congress contributes to the OCLC bibliographic database.

354. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 875239445 on August 8, 2016, as shown in the "Entered" field ("20160808"). The International Standard Book Number (ISBN) for the volume (978-0-12-404568-2) matches the ISBN in the second field 020 of Attachment 39c. Therefore, Exhibit 1067 is the same book that the cataloger at the Library of Congress used to create the MARC record that is Attachment 39c. The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 39c occurred on April 17, 2022, as shown in the

[119] https://www.loc.gov/publish/cip/.

"Replaced" field ("20220417"). I personally identified and retrieved the MARC record that is Attachment 39c.

355. Further, Attachment 39c further includes an entry in field 050 ("TP371 $b .M53 2014")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification scheme) and an entry in field 082 ("664/.02")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 39c further includes two descriptor terms reading "Encapsulation" (see Attachment 39d, Library of Congress subject heading sh85084826) and "Food industry and trade" (see Attachment 20d, Library of Congress subject heading sh85050282) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 39c was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry and the field 650 entries. Further, as of August 8, 2016, the MARC record attached hereto as Attachment 39c was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that added this book to its collection, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

356. Attachment 39c indicates that the volume titled *Microencapsulation in the Food Industry: A Practical Implementation Guide* as cataloged at the Library of Congress is currently available from 20 libraries. In view of above, the volume titled *Microencapsulation in the Food Industry: A Practical Implementation Guide* was publicly available on or shortly after August 8, 2016, because by that date it had been received, cataloged, and indexed at the Library of Congress and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1067 was published and accessible to the public on or shortly after August 8, 2016.

QQ. Norton journal article [Exhibit 1068]

357. Exhibit 1068 is a copy of an article from Volume 9, Number 1 of the online open access journal *Nutrition & Metabolism*. The article, "Leucine Content of Dietary Proteins is a Determinant of Postprandial Skeletal Muscle Protein Synthesis in Adult Rats" by Layne E. Norton, Gabriel J. Wilson, Donald K. Layman, Christopher J. Moulton, and Peter J. Garlick (hereafter "Norton"), appears page 9 of this issue dated July 2012.

358. I obtained Exhibit 1068 from the National Library of Medicine. Exhibit 1068 is a true and correct copy of the Norton article (9 pages). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1068 was found within the custody of a library – a place

where, if authentic, a copy of this online open access journal would likely be. Additionally, Exhibit 1068 is in a condition that creates no suspicion about its authenticity. The Norton journal article is available from the publisher's website, the National Library of Medicine,[120] and the digital repositories *ResearchGate*[121] and *Semantic Scholar*.[122] A printout of the publisher's website is attached as Attachment 40a.

359. Attached hereto as Attachment 40b is a true and correct copy of the MARC record for the online open access journal *Nutrition & Metabolism* from the National Library of Medicine. The library ownership is indicated by the presence of the library's code (DNL) in field 935. I personally identified and retrieved the MARC record that is Attachment 40b.

360. As noted in the holdings information (field 362), the National Library of Medicine has received the online open access journal *Nutrition & Metabolism* since August 2004 and continues to receive the publication. In view of the MARC

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[120] https://pubmed.ncbi.nlm.nih.gov/22818257/.

[121] https://www.researchgate.net/publication/229434502_Leucine_content_of_dietary_proteins_is_a_determinant_of_postprandial_skeletal_muscle_protein_synthesis_in_adult_rats.

[122] https://www.semanticscholar.org/paper/Leucine-content-of-dietary-proteins-is-a-of-muscle-Norton-Wilson/13e24abc01b9c0b88f371a9ccba9f2be0a4ae9c6.

record for Exhibit 1068, the Norton article was publicly available on July 20, 2012, as indicated on the publisher's website (see Attachment 40a).

361. The "BLvl" entry in Attachment 40b is "s," which indicates that the online open access journal *Nutrition & Metabolism* is a serial publication. Accordingly, the MARC record for Exhibit 1068 corresponds to those issues of the online open access journal *Nutrition & Metabolism* from the time of the serial began publication to the present day.

362. Attachment 40b further includes an entry in field 090 ("QP141")—includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system). Attachment 40b further includes three descriptor terms reading "Nutritional Physiological Phenomena $v Periodicals" (see Attachment 40c, National Library of Medicine subject heading D009747), "Diet" (see Attachment 40d, National Library of Medicine subject heading D004032), and "Metabolism" (see Attachment 40e, National Library of Medicine D008660) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 40b was indexed according to its subject matter by virtue of at least two independently sufficient classifications: the field 090 entry and the field 650 entries. Further, as of August 25, 2004, the MARC record attached hereto as Attachment 40b was accessible through any library with access to the OCLC bibliographic

database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

363. Attachment 40b indicates that the MARC record for the online open access journal *Nutrition & Metabolism* obtained from *WorldCat*, the public view of the OCLC bibliographic database, was created at the Ohio University Libraries (Athens, Ohio).[123] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 40b indicates that a cataloger at the University of Minnesota Libraries (MUL, field 040) created OCLC record number 47250782 field (second field 035) on September 21, 1975 (field 008).

364. The *WorldCat* database indicates that the online public access journal *Nutrition & Metabolism* as cataloged at the Ohio University Libraries is currently available from 1,659 libraries. Based on finding a copy of Exhibit 1068 in the National Library of Medicine and MARC record in its online library catalog attached as Attachment 40b, it is my opinion that the Norton article published in the online open access journal *Nutrition & Metabolism* was available in the National Library of Medicine on July 20, 2012 (see Attachment 40a).

[123] https://www.worldcat.org/title/56349665

RR. Dürig book chapter [Exhibit 1069]

365. Attached hereto as Exhibit 1069 is a copy of an excerpt from the book titled *Handbook of Pharmaceutical Wet Granulation: Theory and Practice in a Quality by Design Paradigm*, edited by Ajit S. Narang and Sherif I. F. Badawy. The excerpt is Chapter 9, "Binders in Wet Granulation" by Thomas Dürig and Kapish Karan (hereafter "Dürig book chapter") and issued by the Academic Press with a 2018 copyright date.

366. I obtained Exhibit 1069 from the Rowland Medical Library at the University of Mississippi (Jackson, Mississippi). Exhibit 1069 is a true and correct copy of the title page, copyright page, table of contents, and Dürig chapter (pages 317-349). The text in Exhibit 1069 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1069 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1069 is in a condition that creates no suspicion about its authenticity. The Dürig book chapter is also available as an ebook from the publisher Academic Press. A printout of the publisher's webpage for the Dürig chapter is attached as Attachment 41a.

367. Attached hereto as Attachment 41b is a true and correct copy of the metadata record for this monograph from the Rowland Medical Library at the

University of Mississippi online catalog. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. I personally identified and retrieved the library catalog record which is Attachment 41b.

368. Based on finding a print copy of the Dürig book chapter in the Rowland Medical Library at the University of Mississippi and metadata record in its online library catalog attached as Attachment 41b, it is my opinion that the book titled *Handbook of Pharmaceutical Wet Granulation: Theory and Practice in a Quality by Design Paradigm* was publicly available on or shortly after October 5, 2018, as shown on the publisher's website (see Attachment 41a).

369. Attached hereto as Attachment 41c is a true and correct copy of the MARC record for the book titled *Handbook of Pharmaceutical Wet Granulation: Theory and Practice in a Quality by Design Paradigm* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 41c. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 41c, that library code is "UKMGB," which means that the MARC record for this book was created at the British Library. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the British Library created OCLC record number

1002834514 on November 26, 2018, as shown in the "Entered" field ("20181126"). The International Standard Book Number (ISBN) on Exhibit 1069 (978-0-12-810460-6) matches the ISBN in field 020 of Attachment 41c. Therefore, Exhibit 1069 is the same book as the one that the cataloger at the British Library used to create the MARC record that is Attachment 41c. The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 41c occurred on April 3, 2022, as shown in the "Replaced" field ("20220403"). I personally identified and retrieved the MARC record that is Attachment 41c.

370. Attachment 41c further includes an entry in field 082 ("615.19")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 41c further includes two descriptor terms reading "Pharmaceutical technology" (see Attachment 41d, Library of Congress subject heading sh85100590) and "Granulation" (see Attachment 41e, Library of Congress subject heading sh90002672) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 41c was indexed according to its subject matter by virtue of at least two independently sufficient classifications: the field 082 entry and the field 650 entries. Further, as of November 26, 2018, the MARC record attached hereto as Attachment 41c was accessible through any library with access to the OCLC bibliographic

database or the online catalog at a library that added this book to its collection, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

371. Further supporting my opinion that Exhibit 1069 was publicly accessible to ordinarily skilled and interested researchers in the field is the fact that the book titled *Handbook of Pharmaceutical Wet Granulation: Theory and Practice in a Quality by Design Paradigm* was registered with the U.S. Copyright Office as item TX0008830249 on December 6, 2019, and indicated a publication date of October 9, 2018 (see Attachment 41f, U.S. Copyright Office Public Catalog). As noted above, this would have provided a person interested in the relevant subject matter with keyword searching capabilities and other tools to locate this book.

372. Attachment 41c indicates that the book titled *Handbook of Pharmaceutical Wet Granulation: Theory and Practice in a Quality by Design Paradigm* as cataloged at the British Library is currently available from 6 libraries. In view of above, the book titled *Handbook of Pharmaceutical Wet Granulation: Theory and Practice in a Quality by Design Paradigm* was publicly available on or shortly after November 26, 2018, because by that date it had been received, cataloged, and indexed at the British Library and made part of the OCLC

bibliographic database. For these reasons, it is my opinion that Exhibit 1069 was published and accessible to the public on or shortly after November 26, 2018.

SS. Can Karaca book chapter [Exhibit 1070]

373. Attached hereto as Exhibit 1070 is a copy of an excerpt from the volume titled *Food Structure and Functionality* edited by Charis M. Galanakis. The excerpt is Chapter 9, "Nanostructured Proteins" by Asli Can Karaca (hereafter "Can Karaca") and issued by the Elsevier Academic Press with a 2021 copyright date.

374. I obtained Exhibit 1070 from the King Library at San José State University (San José, California). Exhibit 1070 is a true and correct copy of the title page, copyright page, table of contents, and Can Karaca book chapter (pages 181-200). The text in Exhibit 1070 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1070 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1070 is in a condition that creates no suspicion about its authenticity. The Can Karaca book chapter is also available from the publisher

Elsevier Academic Press.[124] The publisher's website indicates that the ebook was available online on January 19, 2021.

375. Attached hereto as Attachment 42a is a true and correct copy of the MARC record for this volume from the King Library at San José State University online catalog.[125] The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. I personally identified and retrieved the library catalog record which is Attachment 42a.

376. Based on finding a copy of the volume in which the Can Karaca chapter was published in the King Library at San José State University and MARC record in its online library catalog attached as Attachment 42a, it is my opinion that the volume titled *Food Structure and Functionality* was publicly available on or shortly after May 4, 2021, as shown in field 008 ("210504").

377. Attached hereto as Attachment 42b is a true and correct copy of the MARC record for volume titled *Food Structure and Functionality* obtained from the

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[124] https://www.sciencedirect.com/science/article/pii/B9780128214534000120?via%3Dihub.

[125] https://csu-sjsu.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma9910140196914029 19&context=L&vid=01CALS_SJO:01CALS_SJO&lang=en&search_scope=MyInst_and_CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,food%20structure%20and%20functionality&offset=0.

OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 42b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 42b, that library code is "YDX," which means that the MARC record for this volume was created at the Yankee Book Peddler (Contoocook, New Hampshire). The volume titled *Food Structure and Functionality* was also cataloged at the Library of Congress as part of the Cataloging in Publication (CIP) Program.[126] A cataloger prepares basic information about the forthcoming book which is included on the verso of the title page (also called the copyright page). The information is provided to save time needed for the cataloging process at the library after the book is purchased. The CIP data includes the author (field 100), title and subtitle (field 245), ISBN (field 022), suggested subject headings (field 650), classification numbers for the Library of Congress classification number (field 050), and the Dewey Decimal classification number (field 082). These data elements are included in the MARC record that the Library of Congress contributes to the OCLC bibliographic database.

378. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Yankee Book Peddler created OCLC record number 1222940869 on November 19, 2020, as shown in the "Entered" field ("20201119").

[126] https://www.loc.gov/publish/cip/.

The International Standard Book Number (ISBN) for the volume (0-12-821464-3) matches the ISBN in field 020 of Attachment 42b. Therefore, Exhibit 1070 is the same book that the cataloger at the Yankee Books Peddler used to create the MARC record that is Attachment 42b. The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 42b occurred on October 25, 2022, as shown in the "Replaced" field ("20221025"). I personally identified and retrieved the MARC record that is Attachment 42b.

379. Further, Attachment 42b further includes an entry in field 050 ("TX531")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification scheme) and an entry in field 082 ("664")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 42b further includes a descriptor term reading "Food $x Composition" (see Attachment 2c, Library of Congress subject heading sh8505091) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 42b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry and the field 650 entry. Further, as of November 19, 2020, the MARC record attached

hereto as Attachment 42b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that added this book to its collection, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

380. Further supporting my opinion that Exhibit 1070 was publicly accessible to ordinarily skilled and interested researchers in the field is the fact that the volume titled *Food Structure and Functionality* was registered with the U.S. Copyright Office as item TX0009034703 on February 26, 2021, and indicated a publication date of November 19, 2020 (see Attachment 42c, U.S. Copyright Office Public Catalog). As noted above, this would have provided a person interested in the relevant subject matter with keyword searching capabilities and other tools to locate this book.

381. Attachment 42b indicates that the volume titled *Food Structure and Functionality* as cataloged at the Yankee Book Peddler is currently available from 171 libraries. In view of above, the volume titled *Food Structure and Functionality* was publicly available on or shortly after November 19, 2020, because by that date it had been received, cataloged, and indexed at the Yankee Book Peddler and made part of the OCLC bibliographic database. For these reasons, it is my opinion that

Exhibit 1070 was published and accessible to the public on or shortly after November 19, 2020.

TT. Flutto book excerpt [Exhibit 1071]

382. Attached hereto as Exhibit 1071 is a copy of an excerpt from the ten-volume set titled *Encyclopedia of Food Sciences and Nutrition*, 2nd edition, edited by Benjamin Caballero, Luiz C. Trugo, and Paul M. Finglas. The excerpt is an article titled "PECTIN: Properties and Determination" by L. Flutto (hereafter "Flutto") and issued by the Elsevier Academic Press with a 2003 copyright date. Exhibit 1071 is a true and correct copy of the title page, copyright page, table of contents, and Flutto excerpt (volume 7, pages 4440-4449), which I obtained from the University of Wisconsin – Madison Libraries. The text in Exhibit 1071 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1071 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1071 is in a condition that creates no suspicion about its authenticity.

383. Attached hereto as Attachment 43a is a true and correct copy of the MARC record for this ten-volume set from the University of Wisconsin – Madison Libraries online catalog. The library ownership is indicated by the presence of the library's code (GZM) in the 049 field. The library continues to update this MARC

record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on June 23, 2003, as shown in the 005 field ("20030623"). I personally identified and retrieved the library catalog record which is Attachment 43a.

384. Based on finding a print copy of the Flutto article in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 43a, it is my opinion that the ten-volume set titled *Encyclopedia of Food Sciences and Nutrition*, 2nd edition, was publicly available on or shortly after October 9, 2002, as shown in field 008 ("021009").

385. Attached hereto as Attachment 43b is a true and correct copy of the MARC record for the ten-volume set titled *Encyclopedia of Food Sciences and Nutrition*, 2nd edition, obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 43b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 43b, that library code is "NLM," which means that the MARC record for this ten-volume set was created at the National Library of Medicine (Bethesda, Maryland). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the National Library of Medicine created OCLC record number 51315683 on October 9, 2002, as shown in the "Entered" field ("20021009"). The library continues to update and enhance this MARC record to

meet current cataloging rules. The most recent enhancement to Attachment 43b occurred on April 22, 2022, as shown in the "Replaced" field ("20220422"). I personally identified and retrieved the MARC record that is Attachment 43b.

386. Attachment 43b further includes an entry in field 050 ("TX349 $b .E47 2003")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("QU13 $b E558 2003")—as described above, this includes a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("613.203")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 43b further includes six descriptor terms reading "Nutrition $v Encyclopedias" (see Attachment 43c, Library of Congress subject heading sh2010104090), "Food $x Composition $v Encyclopedias" (see Attachment 2c, Library of Congress subject heading sh85050191 and Attachment 43d, Library of Congress subject heading sh85042997), "Food" (see Attachment 5e, Library of Congress subject heading sh85050184), "Nutrition" (see Attachment 5f, Library of Congress subject heading sh85093451), "Food industry and trade $v Encyclopedias" (see Attachment 20d, Library of Congress subject heading sh85050282 and Attachment 43d, Library of

Congress subject heading 85042997), and "Food $v encyclopedias" (see Attachment 43e, Library of Congress subject heading sh2008120933) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 43b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. Further, as of October 9, 2002, the MARC record attached hereto as Attachment 43b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that added this ten-volume set to its collection, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

387. Attachment 43b indicates that the ten-volume set titled *Encyclopedia of Food Sciences and Nutrition*, 2nd edition, as cataloged at the National Library of Medicine is currently available from 284 libraries. In view of above, the ten-volume set titled *Encyclopedia of Food Sciences and Nutrition*, 2nd edition, was publicly available on or shortly after October 9, 2002, because by that date it had been received, cataloged, and indexed at the National Library of Medicine and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1071 was published and accessible to the public on or shortly after October 9, 2002.

UU. Green book chapter [Exhibit 1072]

388. Attached hereto as Exhibit 1072 is a copy of an excerpt from the ten-volume set titled *Encyclopedia of Analytical Science*, 2nd edition, edited by Paul Worsfold, Alan Townshend, and Colin Poole. The excerpt is "Headspace Analysis" by J.D. Green (hereafter "Green") and issued by the Elsevier Academic Press with a 2005 copyright date.

389. Exhibit 1072 is a true and correct copy of the title page, copyright page, table of contents, and Green book chapter (volume 4, pages 229-236), which I obtained from the University of Wisconsin – Madison Libraries. The text in Exhibit 1072 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1072 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1072 is in a condition that creates no suspicion about its authenticity. The Green book chapter is also available as an ebook set from the publisher Elsevier Academic Press.[127] The publisher's website indicates that the ebook set was available online on May 28, 2005.

[127] https://www.sciencedirect.com/science/article/pii/B9780128104606000105?via%3Dihub

390. Attached hereto as Attachment 44a is a true and correct copy of the MARC record for this ten-volume set from the University of Wisconsin – Madison Libraries online catalog. The library ownership is indicated by the presence of the library's code (GZM) in field 049. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. I personally identified and retrieved the library catalog record which is Attachment 44a.

391. Based on finding a print copy of the ten-volume set in which the Green chapter was published in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 44a, it is my opinion that the ten-volume set titled *Encyclopedia of Analytical Science*, 2nd edition, was publicly available on or shortly after March 22, 2004, as shown in field 008 ("040322").

392. Attached hereto as Attachment 44b is a true and correct copy of the MARC record for the ten-volume set titled *Encyclopedia of Analytical Science*, 2nd edition, obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 44b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 44b, that library code is "DLC," which means that the MARC record for this ten-volume set was created at the Library of Congress as part of the Cataloging

in Publication (CIP) Program.[128] A cataloger prepares basic information about the forthcoming book which is included on the verso of the title page (also called the copyright page). The information is provided to save time needed for the cataloging process at the library after the book is purchased. The CIP data includes the author (field 100), title and subtitle (field 245), ISBN (field 022), suggested subject headings (field 650), classification numbers for the Library of Congress classification number (field 050), and the Dewey Decimal classification number (field 082). These data elements are included in the MARC record that the Library of Congress contributes to the OCLC bibliographic database.

393. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 61287955 on March 22, 2004, as shown in the "Entered" field ("20040322"). The International Standard Book Number (ISBN) for the ten-volume set (0-12-764100-9) matches the ISBN in the first field 020 of Attachment 44b. Therefore, Exhibit 1072 is part of the ten-volume set that the cataloger at the Library of Congress used to create the MARC record that is Attachment 44b.[129] The library continues to update

[128] https://www.loc.gov/publish/cip/.

[129] The MARC record for the ten-volume set titled *Encyclopedia of Analytical Science*, 2nd edition, from the Library of Congress online catalog indicates that the cataloging process was completed on October 17, 2000 (see Attachment 44c).

and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 44b occurred on July 24, 2022, as shown in the "Replaced" field ("20220724"). I personally identified and retrieved the MARC record that is Attachment 44b.

394. Further, Attachment 44b further includes an entry in field 050 ("QD71.5 $b .E53 2005")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification scheme) and an entry in field 082 ("543.03")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 44b further includes two descriptor terms reading "Analytical chemistry $v Encyclopedias" (see Attachment 44d, Library of Congress subject heading sh85023011 and Attachment 43d, Library of Congress subject heading sh85042997) and "Analytical chemistry $v Dictionaries" (see Attachment 44d, Library of Congress subject heading sh85023011 and Attachment 43d, Library of Congress subject heading sh85042997) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 44b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry and the field 650 entries. Further, as of March 22, 2004, the MARC record attached hereto as Attachment 44b was accessible

through any library with access to the OCLC bibliographic database or the online catalog at a library that added this book to its collection, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

395. Further supporting my opinion that Exhibit 1072 was publicly accessible to ordinarily skilled and interested researchers in the field is the fact that the ten-volume set titled *Encyclopedia of Analytical Science*, 2nd edition, was registered with the U.S. Copyright Office as item TX0004171888 on January 3, 1996, and indicated a publication date of June 14, 1995 (see Attachment 44e, U.S. Copyright Office Public Catalog). As noted above, this would have provided a person interested in the relevant subject matter with keyword searching capabilities and other tools to locate this book.

396. Attachment 44b indicates that the ten-volume set titled *Encyclopedia of Analytical Science,* 2nd edition, as cataloged at the Library of Congress is currently available from 70 libraries. In view of above, the ten-volume set titled *Encyclopedia of Analytical Science*, 2nd edition, was publicly available on or shortly after October 17, 2005, because by that date it had been received, cataloged, and indexed at the Library of Congress and made part of the OCLC bibliographic database. For these

reasons, it is my opinion that Exhibit 1072 was published and accessible to the public on or shortly after October 17, 2005.

VV. Santana article [Exhibit 1073]

397. Attached hereto as Exhibit 1073 is a copy of the journal article, "Evidence That the Plant Host Synthesizes the Heme Moiety of Leghemoglobin in Root Nodules," by Maria A. Santana, Kaarina Pihakaski-Maunsbach, Niels Sandal, Kjeld A. Marcker and Alison G. Smith (hereafter "Santana"). The Santana article was published in Volume 116, Number 4 of the journal *Plant Physiology*. The Santana article appears beginning on page 1259 of this issue dated April 1998.

398. I obtained Exhibit 1073 from the Linda Hall Library of Science, Engineering & Technology. Exhibit 1073 is a true and correct copy of the Santana article (pages 1259-1269). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Santana article is also available from the publisher, Oxford University Press, and through the National Library of Medicine.[130] A printout of the publisher's webpage for the Santana article is attached as Attachment 45a. Exhibit 1073 was found within the custody of a library – a place where an authentic copy of this journal would likely

[130] https://pubmed.ncbi.nlm.nih.gov/9536042/

be. Additionally, Exhibit 1073 is in a condition that creates no suspicion about its authenticity.

399. Attached hereto as Attachment 45b is a true and correct copy of the MARC record for the journal *Plant Physiology* in the Linda Hall Library of Science, Engineering & Technology. The library ownership is indicated by the presence of the library's code (LHL) in field 049. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 45b occurred on October 29, 2019, as shown in field 005 field ("20191029"). I personally identified and retrieved the MARC record that is Attachment 45b.

400. Based on finding a copy of Exhibit 1073 in the Linda Hall Library of Science, Engineering & Technology, and a MARC record in its online library catalog attached as Attachment 45b, it is my opinion that the Santana article published in the journal *Plant Physiology* was publicly available on or shortly after April 23, 1998, as shown on the second page of Exhibit 1073. This stamp has the general appearance of receipt date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 45b also shows that Exhibit 1073 was catalogued with a descriptor term reading "Plant physiology $v Periodicals" (see Attachment 45c, Library of Congress subject heading sh2010106534) in the 650 field.

401. As noted in the holdings information (362 field), the Linda Hall Library of Science, Engineering & Technology has received the journal *Plant Physiology* since the serial began publication in 1926 and continues to receive the publication. In view of the MARC record for Exhibit 1073, the Santana article was publicly available on or shortly after April 23, 1998, because the serial title had been received, cataloged, and indexed in the Linda Hall Library of Science, Engineering & Technology made part of its online catalog database.

402. Attached hereto as Attachment 45d is a true and correct copy of the MARC record for the journal *Plant Physiology* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 45d, that library code is "MUL," which means that the MARC record for this serial was cataloged as part of the Minnesota Union List of Serials at the University of Minnesota Libraries (Minneapolis, Minnesota). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of Minnesota Libraries created OCLC record number 1642351 on September 21, 1975, as shown in the "Entered" field ("19750921"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 45d occurred on August 8, 2022, as shown in the "Replaced" field ("20220808"). I personally identified and retrieved the MARC

record that is Attachment 45d. The "BLvl" entry in Attachment 45d is "s," which indicates that the journal *Plant Physiology* is a serial publication. Field 310 of Attachment 45d reads "Monthly, $b <Jan.-Mar. 1982-." Accordingly, the MARC record for Exhibit 1073 corresponds to the journal *Plant Physiology* from the time the serial title began and includes the date of the Santana article.

403. Attachment 45d includes an entry in field 050 ("QK1 $b .P68")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b PL105P")—as described above, a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("581.1/05")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 45d further includes a descriptor term reading "Plant physiology $v Periodicals" (see Attachment 45c, Library of Congress subject heading sh2010106534) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 45d was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entry. As of September 21, 1975, the MARC record attached hereto as

Attachment 45d was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

404. Attachment 45d indicates that the journal *Plant Physiology* as cataloged at the University of Minnesota Libraries is currently available from 659 libraries. In view of the above, this issue of the journal *Plant Physiology* was publicly available on or shortly after April 23, 1998, because by that date it had been cataloged and indexed at the University of Minnesota Libraries, made part of the OCLC bibliographic database, and received in the Linda Hall Library of Science, Engineering & Technology. For these reasons, it is my opinion that Exhibit 1073 was published and accessible to the public on or shortly after April 23, 1998.

WW. Dos Santos article [Exhibit 1074]

405. Attached hereto as Exhibit 1074 is a copy of the article, "Polysaccharide Nanoparticles for Protein and Peptide Delivery: Exploring Less-Known Materials," by Marlise A. dos Santos and Ana Grenha (hereafter "dos Santos"). The dos Santos article was published in Volume 98 of the monographic serial titled *Advances in Protein Chemistry and Structural Biology*. The dos Santos article appears beginning on page 223 of this volume dated 2015.

406. I obtained Exhibit 1074 from the Mathematics Library at the University of Oregon – Eugene. Exhibit 1074 is a true and correct copy of the dos Santos article (pages 223-261). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The dos Santos article is also available from the publisher, Elsevier,[131] through the National Library of Medicine,[132] and in the digital repository *ResearchGate.*[133] The publisher's website indicates an online publication date of March 3, 2015. Exhibit 1074 was found within the custody of a library – a place where an authentic copy of this monographic serial would likely be. Additionally, Exhibit 1074 is in a condition that creates no suspicion about its authenticity.

407. Attached hereto as Attachment 46a is a true and correct copy of the MARC record for the monographic serial *Advances in Protein Chemistry and Structural Biology* in the Mathematics Library at the University of Oregon –

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[131] https://www.sciencedirect.com/science/article/abs/pii/S1876162314000339?via%3Dihub.

[132] https://pubmed.ncbi.nlm.nih.gov/25819281/.

[133] https://www.researchgate.net/publication/274261074_Chapter_Seven_Polysaccharide_Nanoparticles_for_Protein_and_Peptide_Delivery.

Eugene.[134] The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 46a occurred on July 26, 2022, as shown in field 005 field ("20220726"). I personally identified and retrieved the MARC record that is Attachment 46a.

408. Based on finding a copy of Exhibit 1074 in the Mathematics Library at the University of Oregon – Eugene and MARC record in its online library catalog attached as Attachment 46a, it is my opinion that the dos Santos article published in the monographic serial *Advances in Protein Chemistry and Structural Biology* was publicly available on or shortly after March 3, 2015. Attachment 46a also shows that Exhibit 1074 was catalogued with two descriptor terms reading "Proteins" (see Attachment 46b, Library of Congress subject heading sh85107666) and "Biochemistry" (see Attachment 46c, Library of Congress subject heading sh85014171) in the 650 fields.

409. As noted in the holdings information (362 field), the Mathematics Library at the University of Oregon – Eugene has received the monographic serial *Advances in Protein Chemistry and Structural Biology* since the serial adopted the

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[134] https://alliance-uoregon.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991218443018 52&context=L&vid=01ALLIANCE_UO:UO&lang=en&search_scope=Everything&adaptor=Local%20Search%20Engine&tab=Rollup&query=any,contains,1876-1623&offset=0.

current in 2008 and continues to receive the publication[135] in print and electronic formats. In view of the MARC record for Exhibit 1074, the dos Santos article was publicly available on or shortly after March 3, 2015, because the serial title had been received, cataloged, and indexed in the Mathematics Library at the University of Oregon – Eugene and made part of its online catalog database.

410. Attached hereto as Attachment 46d is a true and correct copy of the MARC record for the monographic serial titled *Advances in Protein Chemistry and Structural Biology* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 46d, that library code is "XFF," which means that the MARC record for this volume was cataloged at the University of Western Washington Libraries (Bellingham, Washington). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of Western Washington Libraries created OCLC record number 908639898 on May 8, 2015, as shown in the "Entered" field ("20150508"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent

[135] The publication was originally titled *Advances in Protein Chemistry* (1944-2007) and adopted the current title, *Advances in Protein Chemistry and Structural Biology*, in 2008.

enhancement to Attachment 46d occurred on April 19, 2022, as shown in the "Replaced" field ("20220419"). I personally identified and retrieved the MARC record that is Attachment 46d.

411. Attachment 46d includes an entry in field 050 ("RS431.P37 $b .D384 2015")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("615.6")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 46d further includes three descriptor terms reading "Nanoparticles" (see Attachment 46e, Library of Congress subject heading sh85089689), "Peptide drugs $x Dosage forms" (see Attachment 46f, Library of Congress subject heading sh94005144), and "Protein drugs $x Dosage forms" (see Attachment 46g, Library of Congress subject heading sh94005142) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 46d was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entries. As of May 8, 2015, the MARC record attached hereto as Attachment 46d was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the monographic serial or purchased the volume, which means that the

corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

412. Attachment 46d indicates that this volume of the *Advances in Protein Chemistry and Structural Biology* as cataloged at the University of Western Washington Libraries is currently available from 35 libraries. In view of the above, this print volume of the *Advances in Protein Chemistry and Structural Biology* was publicly available on or shortly after May 8, 2015, because by that date it had been cataloged and indexed at the University of Western Washington Libraries, made part of the OCLC bibliographic database, and received in the Mathematics Library at the University of Oregon – Eugene. For these reasons, it is my opinion that Exhibit 1074 was published and accessible to the public on or shortly after May 8, 2015.

XX. Urade book chapter [Exhibit 1075]

413. Attached hereto as Exhibit 1075 is a copy of an excerpt from the book titled *Flour and Breads and their Fortification in Health and Disease Prevention* edited by Victor R. Preedy, Ronald Ross Watson, and Vinood B. Patel. (hereafter "Wolf") and issued by the CRC Press with a 1975 date. The excerpt is Chapter 38, "Fortification of Bread with Soy Proteins to Normalize Serum Cholesterol and Triacylglycerol Levels" by Reiko Urade (hereafter "Urade book chapter").

414. Exhibit 1075 is a true and correct copy of the title page, copyright page, table of contents, and chapter 38 (pages 417-427), which I obtained from the King Library at San José State University (San José, California). The text in Exhibit 1075 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1075 was found within the custody of library, a place where an authentic copy of this article would likely be. Exhibit 1075 is in a condition that creates no suspicion about its authenticity.

415. Attached hereto as Attachment 47a is a true and correct copy of the MARC record for this monograph from the King Library at San José State University online catalog.[136] The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on May 20, 2020, as shown in field 005 ("20200520"). I personally identified and retrieved the library catalog record which is Attachment 47a.

[136] https://csu-sjsu.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991067611173102901&context=L&vid=01CALS_SJO:01CALS_SJO&lang=en&search_scope=MyInst_and_CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,flour%20and%20breads%20and%20their%20fortification%20in%20health%20and%20disease%20prevention&offset=0.

416. Based on finding a copy of the Urade book chapter in the book titled *Flour and Breads and their Fortification in Health and Disease Prevention* in the King Library at San José State University and MARC record in its online library catalog attached as Attachment 47a, it is my opinion that the book was publicly available on or shortly after February 2, 2011, as shown in field 008 ("110202").

417. Attached hereto as Attachment 47b is a true and correct copy of the MARC record for the book titled *Flour and Breads and their Fortification in Health and Disease Prevention* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 47b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 47b, that library code is "MERUC," which means that the MARC record for this book was created at the University of California – Merced Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of California – Merced Libraries created OCLC record number 700701869 on February 5, 2011, as shown in the "Entered" field ("20110205"). The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 47b occurred on July 26, 2022, as shown in the "Replaced" field ("20220726"). I personally identified and retrieved the MARC record that is Attachment 47b.

418. Attachment 47b further includes an entry in field 050 ("TX558.W5")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("QU145.5")—as described above, this includes a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("664.72272")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 47b further includes six descriptor terms reading "Flour $x Additives" (see Attachment 47c, Library of Congress subject heading sh85049267 and Attachment 47d, Library of Congress subject heading sh85000820), "Flour $x Health aspects" (see Attachment 47c, Library of Congress subject heading sh85049267), "Bread $x Additives" (see Attachment 47e, Library of Congress subject heading sh85016646 and Attachment 47d, Library of Congress subject heading sh85000820), "Bread $x Health aspects" (see Attachment 47e, Library of Congress subject heading sh85016646), "Medicine, Preventive" (see Attachment 47f, Library of Congress subject heading sh85083162), and "Enriched foods" (see Attachment 47g, Library of Congress subject heading sh85050240) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 47b was indexed according to its

subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. Further, as of February 5, 2011, the MARC record attached hereto as Attachment 47b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that added this book to its collection, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

419. Attachment 47b indicates that the book titled *Flour and Breads and their Fortification in Health and Disease Prevention* as cataloged at the University of California – Merced Libraries is currently available from 506 libraries. In view of above, the book titled *Flour and Breads and their Fortification in Health and Disease Prevention* was publicly available on or shortly after February 5, 2011, because by that date it had been received, cataloged, and indexed at the University of California – Merced Libraries and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1075 was published and accessible to the public on or shortly after February 5, 2011.

YY. Buffo book chapter [Exhibit 1083]

420. Attached hereto as Exhibit 1083 is a copy of an excerpt from the book titled *Innovations in Food Packaging*, edited by Jun H. Han. The excerpt is Chapter

17, "Edible Films and Coatings From Plant Origin Proteins" by Roberto A. Buffo and Jun H. Han (hereafter "Buffo book chapter") and issued by the Elsevier Academic Press with a 2005 copyright date. Exhibit 1083 is a true and correct copy of the title page, copyright page, table of contents, and Buffo chapter (pages 277-300), which I obtained from the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). The text in Exhibit 1083 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1083 was found within the custody of library, a place where an authentic copy of this article would likely be. Additionally, Exhibit 1083 is in a condition that creates no suspicion about its authenticity.

421. Attached hereto as Attachment 48a is a true and correct copy of the MARC record for this monograph from the Linda Hall Library of Science, Engineering & Technology online catalog. The library ownership is indicated by the presence of the library's code (LHL) in the 049 field. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on February 4, 2016, as shown in the "Replaced" field ("20160204"). I personally identified and retrieved the library catalog record which is Attachment 48a.

422. Based on finding a print copy of the Buffo book chapter in the Linda Hall Library of Science, Engineering & Technology and MARC record in its online library catalog attached as Attachment 48a, it is my opinion that the book titled *Innovations in Food Packaging* was publicly available on or shortly after February 23, 2005, as shown in field 008 ("050523"). The International Standard Book Number (ISBN) on Exhibit 1083 (0-12-311632-5) matches the ISBN in field 020 of Attachment 48a. Therefore, Exhibit 1083 is the same book as the one that the cataloger at the Linda Hall Library of Science, Engineering & Technology used to create the MARC record that is Attachment 48a.

423. Attached hereto as Attachment 48b is a true and correct copy of the MARC record for the book titled *Innovations in Food Packaging* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 48b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 48b, that library code is "UKM," which means that the MARC record for this book was created at the British Library. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the British Library created OCLC record number 58828180 on February 23, 2005, as shown in the "Entered" field ("20050223"). The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 48b

occurred on December 20, 2021, as shown in the "Replaced" field ("20211220"). I personally identified and retrieved the MARC record that is Attachment 48b.

424. Attachment 48b further includes an entry in field 050 ("TP374 $b .I55 2005eb")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("664.09")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 48b further includes two descriptor terms reading "Food $x Packaging" (see Attachment 48c, Library of Congress subject heading sh85050207) and "Food $x Packaging $x Technological innovations" (see Attachment 48c, Library of Congress subject heading sh85050207) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 48b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entries. Further, as of February 23, 2005, the MARC record attached hereto as Attachment 48b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that added this book to its collection, which means that the corresponding publication was publicly available on or before that

same date through any library with access to the OCLC bibliographic database or through an individual library.

425. Attachment 48b indicates that the book titled *Innovations in Food Packaging* as cataloged at the British Library is currently available from 119 libraries. In view of above, the book titled *Innovations in Food Packaging* was publicly available on or shortly after February 23, 2005, because by that date it had been received, cataloged, and indexed at the British Library and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1083 was published and accessible to the public on or shortly after February 23, 2005.

ZZ. Fellows book chapter [Exhibit 1084]

426. Attached hereto as Exhibit 1084 is a copy of an excerpt from the digital book, *Food Processing Technology: Principles and Practice*, 3rd edition, by P.J. Fellows (hereafter "Fellows") and issued by Woodhead Publishing in 2009. Exhibit 1084 is a true and correct copy of Chapter 6, "Food Biotechnology" (pages 229-270), which I obtained through the King Library at San José State University (San José, California). The text in the digital version of Exhibit 1084 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1084 was found within the custody of library, a place where an authentic copy of

this article would likely be. Additionally, Exhibit 1084 is in a condition that creates no suspicion about its authenticity.

427. Attached hereto as Attachment 49a is a true and correct copy of the MARC record for this digital book from the King Library at San José State University online catalog. The library ownership is indicated by the presence of the library's name at the top of the screen.[137] The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on May 20, 2020, as shown in the field 005 ("20200520"). I personally identified and retrieved the library catalog record which is Attachment 49a.

428. Based on finding a digital copy of the book *Food Processing Technology: Principles and Practice*, 3rd edition, in the King Library at San José State University and MARC record in its online library catalog attached as Attachment 49a, it is my opinion that the book was publicly available on or shortly after February 8, 2014, as shown in field 008 ("140208").

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[137] https://csu-sjsu.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma9910676111496029 01&context=L&vid=01CALS_SJO:01CALS_SJO&lang=en&search_scope=MyInst_and_CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,Food%20Processing%20Technology:%20Principles%20and%20Practice&offset=0.

429. Attached hereto as Attachment 49b is a true and correct copy of the MARC record for the digital book *Food Processing Technology: Principles and Practice*, 3rd edition, obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 49b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 49b, that library code is "AU@," which means that the MARC record for this book was created at (Canberra City, Australian Capital Territory, Australia). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at Libraries Australia created OCLC record number 798341671 on April 1, 2011, as shown in the "Entered" field ("20110401"). The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 49b occurred on December 31, 2021, as shown in the "Replaced" field ("20211231"). I personally identified and retrieved the MARC record that is Attachment 49b.

430. Attachment 49b further includes an entry in field 050 ("TP370 $b .F49 2000")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("664.02")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 49b further includes a

descriptor term reading "Food industry and trade" (see Attachment 20d, Library of Congress subject heading sh85050282) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 49b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entry. Further, as of April 1, 2011, the MARC record attached hereto as Attachment 49b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that added this book to its collection, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

431. Attachment 49b indicates that the digital book *Food Processing Technology: Principles and Practice*, 3rd edition, as cataloged at Libraries Australia is currently available from 467 libraries. In view of above, the digital book *Food Processing Technology: Principles and Practice*, 3rd edition, was publicly available on or shortly after April 1, 2011, because by that date it had been received, cataloged, and indexed at Libraries Australia and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1084 was published and accessible to the public on or shortly after April 1, 2011.

AAA. Wacker report [Exhibit 1085]

432. Exhibit 1085 is a printout of a document titled *Fermopure® – Plant-Based L-Cystine and L-Cysteine* prepared by Wacker Chemie AG (hereafter "Wacker"). I obtained Exhibit 1085 from the Wacker Chemie AG website.[138] Exhibit 1085 is a true and correct copy of the Wacker document. Specifically, the text of Exhibit 1085 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1085 was found within the custody of the digital repository at the manufacturer, a place where an authentic copy of this document would likely be. Additionally, Exhibit 1085 is in a condition that creates no suspicion about its authenticity.

433. Based on the date recorded in the document (2021) and the recorded presence through the WayBack Machine (Attachment 50a), it is my opinion that the document titled *Fermopure® – Plant-Based L-Cystine and L-Cysteine* was available to the public on September 21, 2020, or shortly thereafter.

BBB. Walker article [Exhibit 1086]

434. Attached hereto as Exhibit 1086 is a copy of the journal article, "Public Health Implications of Meat Production and Consumption" by Polly Walker,

[138] https://www.wacker.com/h/medias/6699-EN.pdf.

Pamela Rhubart-Berg, Shawn McKenzie, Kristin Kelling, and Robert S. Lawrence (hereafter "Walker"). The Walker article was published in Volume 8, Number 4 of the journal *Public Health Nutrition*. The Walker article appears beginning on page 348 of this issue dated June 2005.

435. I obtained Exhibit 1086 from the National Library of Medicine. Exhibit 1086 is a true and correct copy of the Walker article (pages 348-356). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Walker article is also available from the publisher, Cambridge University Press, as well as through the National Library of Medicine,[139] and the digital repositories *ResearchGate*[140] and *Semantic Scholar*.[141] A printout of the publisher's webpage for the Waler article is attached as Attachment 51a. Exhibit 1086 was found within the custody of a library – a place where an authentic copy of

[139] https://pubmed.ncbi.nlm.nih.gov/15975179/.

[140] https://www.researchgate.net/publication/7768860_Public_Health_Implications_of_Meat_Production_and_Consumption.

[141] https://www.semanticscholar.org/paper/Public-health-implications-of-meat-production-and-Walker-Rhubart-Berg/653127accb7a4d1632739d1d4f7ac663351e8673.

this journal would likely be. Additionally, Exhibit 1086 is in a condition that creates no suspicion about its authenticity.

436. Attached hereto as Attachment 51b is a true and correct copy of the MARC record for the journal *Public Health Nutrition* at the National Library of Medicine (Bethesda, Maryland). The library ownership is indicated by the presence of the library's code (DNLM) in field 935. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 51b occurred on June 29, 2022, as shown in field 005 field ("20220629"). I personally identified and retrieved the MARC record that is Attachment 51b.

437. Based on finding a copy of Exhibit 1086 in the National Library of Medicine and MARC record in its online library catalog attached as Attachment 51b, it is my opinion that the Walker article published in the journal *Public Health Nutrition* was publicly available on or shortly after January 2, 2007, as indicated on the publisher's website (see Attachment 51a). Attachment 51b also shows that Exhibit 1086 was catalogued with four descriptor terms reading "Diet" (see Attachment 40d, National Library of Medicine subject heading D004032), "Health Promotion" (see Attachment 51c, National Library of Medicine subject heading D006293), "Nutritional Physiological Phenomena" (see Attachment 40c, National Library of Medicine subject heading D009747), and "Public Health $v Periodical"

(see Attachment 51d, National Library of Medicine subject heading D011634) in the 650 fields.

438. As noted in the holdings information (362 field), the National Library of Medicine has received the journal *Public Health Nutrition* since March 1998 and continues to receive the publication. In view of the MARC record for Exhibit 1086, the Walker article was publicly available on or shortly after January 2, 2007, because the serial title had been received, cataloged, and indexed in the National Library of Medicine and made part of its online catalog database.

439. Attached hereto as Attachment 51e is a true and correct copy of the MARC record for the journal *Public Health Nutrition* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 51c, that library code is "NLM," which means that the MARC record for this serial was cataloged at the National Library of Medicine. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the National Library of Medicine created OCLC record number 39319725 on June 11, 1998, as shown in the "Entered" field ("19980611"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 51e occurred on February 19, 2022, as shown in the "Replaced" field ("20220219"). I personally identified and retrieved the MARC

record that is Attachment 51e. The "BLvl" entry in Attachment 51e is "s," which indicates that the journal *Public Health Nutrition* is a serial publication. Field 310 of Attachment 51e reads "Eighteen issues a year, $b <2015-." Accordingly, the MARC record for Exhibit 1086 corresponds to the journal *Public Health Nutrition* from the time the serial title began publication and includes the date of the Walker article.

440. Attachment 51e includes an entry in field 050 ("RA784 $b .P83")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 060 ("W1 $b PU535")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system). Attachment 51e further includes eight descriptor terms reading "Nutrition $v Periodicals" (see Attachment 5c, Library of Congress subject heading sh2008108541), "Diseases $x Nutritional aspects $v Periodicals" (see Attachment 51f, Library of Congress subject heading sh85038411 and Attachment 2d, Library of Congress subject heading sh85099890), "Public health $v Periodicals" (see Attachment 51g, Library of Congress subject heading sh208110201), "Diet in disease" (see Attachment 51h, Library of Congress subject heading sh85037854), "Health promotion" (see Attachment 51i, Library of Congress subject heading sh85059591), "Nutrition" (see

Attachment 5f, Library of Congress subject heading sh85093451), "Public health" (see Attachment 53f, Library of Congress subject heading sh85108638), and "Health promotion $v Periodicals" (see Attachment 51i, Library of Congress subject heading sh85059591 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 51e was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entries. As of June 11, 1998, the MARC record attached hereto as Attachment 51e was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

441. Attachment 51e indicates that the journal *Public Health Nutrition* as cataloged at the National Library of Medicine is currently available from 90 libraries. In view of the above, this issue of the journal *Public Health Nutrition* was publicly available on or shortly after January 2, 2007, because by that date it had been received, cataloged, and indexed at the National Library of Medicine and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1086 was published and accessible to the public on or shortly after January

2, 2007, the publication date indicated on the publisher's website (see Attachment 51a).

CCC. Williams journal article [Exhibit 1087]

442. Exhibit 1087 is a copy of an article from Volume 64, Supplement 4 of the online open access journal *Nutrition and Dietetics*. The article, "Nutritional Composition of Red Meat" by Peter Williams (hereafter "Williams"), appears beginning on page S113 of this supplemental issue dated 2007.

443. I obtained Exhibit 1087 from the King Library at San José State University. Exhibit 1087 is a true and correct copy of the Williams article (pages S113-S119). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1087 was found within the custody of a library – a place where, if authentic, a copy of this online open access journal would likely be. Additionally, Exhibit 1087 is in a condition that creates no suspicion about its authenticity. The Williams journal article is available from the publisher's website and through the digital repository *ResearchGate*.[142] A

[142] https://www.researchgate.net/publication/228040397_Nutritional_composition_of_red_meat.

printout of the publisher's website for the Williams article is attached as Attachment 52a.

444. Attached hereto as Attachment 52b is a true and correct copy of the MARC record for the online open access journal *Nutrition and Dietetics* from the King Library at San José State University. I personally identified and retrieved the MARC record that is Attachment 52b.

445. As noted in the holdings information (field 362), the King Library at San José State University has received the online open access journal *Nutrition and Dietetics* since March 2002 and continues to receive the publication. In view of the MARC record for Exhibit 1087, the Williams article was publicly available on August 15, 2007, as indicated on the publisher's website.

446. The "BLvl" entry in Attachment 52b is "s," which indicates that the online open access journal *Nutrition and Dietetics* is a serial publication. Accordingly, the MARC record for Exhibit 1087 corresponds to those issues of the online open access journal *Nutrition and Dietetics* from the time of the serial began publication to the present day.

447. Attachment 52b further includes an entry in field 050 ("TX341")— includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b AU613G")— includes a subject matter

classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("615.854")— includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 52b further includes two descriptor terms reading "Nutrition $v Periodicals" (see Attachment 9c, Library of Congress subject heading sh2008108541) and "Dietetics $v Periodicals" (see Attachment 52c, Library of Congress subject heading sh86005508 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 52b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. Further, as of August 22, 2005, the MARC record attached hereto as Attachment 52b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

448. Attachment 52b indicates that the MARC record for the online open access journal *Nutrition and Dietetics* obtained from *WorldCat*, the public view of

the OCLC bibliographic database, was created at the Library of Congress.[143] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 52b indicates that a cataloger at the Library of Congress (CONSER, third field 035) created OCLC record number 61313740 field (second field 035) on August 22, 2005 (field 008).

449. The *WorldCat* database indicates that the online public access journal *Nutrition and Dietetics* as cataloged at the Library of Congress is currently available from 1,668 libraries. Based on finding a copy of Exhibit 1087 in the King Library at San José State University and MARC record in its online library catalog attached as Attachment 52b, it is my opinion that the Williams article published in the online open access journal *Nutrition and Dietetics* was available in the King Library at San José State University on August 15, 2007, the publication date indicated on the publisher's website (see Attachment 52a).

DDD. Cross article [Exhibit 1088]

450. Attached hereto as Exhibit 1088 is a copy of the journal article, "A Prospective Study of Red and Processed Meat Intake in Relation to Cancer Risk" by Amanda J. Cross, Michael F. Leitzmann, Mitchell H. Gail, Albert R. Hollenbeck, Arthur Schatzkin, and Rashmi Sinha (hereafter "Cross"). The Cross article was

[143] https://www.worldcat.org/title/61313740.

published in Volume 4, Issue 12 of the online open access journal *PLoS Medicine.* The Cross article appears beginning on page e325 in this issue dated December 2007.

451. I obtained Exhibit 1088 from the website of the publisher, Plos Medicine. A printout of the publisher's webpage for the Cross article is attached as Attachment 53a. Exhibit 1088 is a true and correct copy of the Cross article (28 pages). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Cross article is also available through the National Library of Medicine.[144] Exhibit 1088 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1088 is in a condition that creates no suspicion about its authenticity.

452. Attached hereto as Attachment 53b is a true and correct copy of the MARC record for the online open access journal *PLoS Medicine* at the National Library of Medicine (Bethesda, Maryland). The library ownership is indicated by the presence of the library's code (DNLM) in the field 935. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 53b occurred on April 29, 2022, as shown in field

[144] https://pubmed.ncbi.nlm.nih.gov/18076279/.

005 field ("20220429"). I personally identified and retrieved the MARC record that is Attachment 53b.

453. Based on finding a digital copy of Exhibit 1088 in the National Library of Medicine and MARC record in its online library catalog attached as Attachment 53b, it is my opinion that the Cross article published in the online open access journal *PLoS Medicine* was publicly available on or shortly after December 11, 2007, as shown on the publisher's website (see Attachment 53a). Attachment 53b also shows that Exhibit 1088 was catalogued with two descriptor terms reading "Medicine" (see Attachment 53c, National Library of Medicine subject heading D008511) and "Public Health $v Periodical" (see Attachment 51d, National Library of Medicine subject heading D011634) in the 650 fields.

454. As noted in the holdings information (362 field), the National Library of Medicine has received the online open access journal *PLoS Medicine* since October 2004 and continues to receive the publication. In view of the MARC record for Exhibit 1088, the Cross article was publicly available on or shortly after December 11, 2007, because the serial title had been received, cataloged, and indexed in the National Library of Medicine and made part of its online catalog database.

455. Attached hereto as Attachment 53d is a true and correct copy of the MARC record for the online open access journal *PLoS Medicine* obtained from the

OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 53d, that library code is "NSD," which means that the MARC record for this serial was cataloged as part of the National Serials Data Program at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger in the Library of Congress created OCLC record number 54674092 on March 10, 2004, as shown in the "Entered" field ("20040310"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 53d occurred on February 19, 2022, as shown in the "Replaced" field ("20220219"). I personally identified and retrieved the MARC record that is Attachment 53d. The "BLvl" entry in Attachment 53d is "s," which indicates that the online open access journal *PLoS Medicine* is a serial publication. Field 310 of Attachment 53d reads "Monthly." Accordingly, the MARC record for Exhibit 1088 corresponds to the online open access journal *PLoS Medicine* from the time the serial title began publication and includes the date of the Cross article.

456. Attachment 53d includes an entry in field 050 ("R11 $b .P686")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b PL265")—as described above, a subject

matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("610")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 53d further includes three descriptor terms reading "Medicine $v Periodicals" (see Attachment 53e, Library of Congress subject heading sh2008107665), "Public health $v Periodicals" (see Attachment 51g, Library of Congress subject heading sh2008110201), and "Public health" (see Attachment 53f, Library of Congress subject heading sh85108638) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 53d was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of March 10, 2004, the MARC record attached hereto as Attachment 53d was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the online serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

457. Attachment 53d indicates that the online open access journal *PLoS Medicine* as cataloged in the Library of Congress is currently available from 66

libraries. In view of the above, this issue of the online open access journal *PLoS Medicine* was publicly available on or shortly after December 11, 2007, because by that date it had been cataloged and indexed in the Library of Congress, made part of the OCLC bibliographic database, and received at the National Library of Medicine. For these reasons, it is my opinion that Exhibit 1088 was published and accessible to the public on or shortly after December 11, 2007, as indicated on the publisher's website (see Attachment 53a).

EEE. Yebra-Biurrun book excerpt [Exhibit 1089]

458. Attached hereto as Exhibit 1089 is a copy of an excerpt from the online ten-volume set titled *Encyclopedia of Analytical Science*, 3rd edition, edited by Paul J. Worsfold, Alan Townshend, Colin F. Poole, and Manuel Miró. The excerpt is titled "Food and Nutritional Analysis | Sweeteners" by M.C. Yebra-Biurrun (hereafter "Yebra-Biurrun") and issued by Elsevier with a 2019 copyright date.

459. Exhibit 1089 is a true and correct copy of the Yebra-Biurrun chapter (pages 471-481), which I obtained from the King Library at San José State University (San José, California). The text in Exhibit 1089 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1089 was found within the custody of a library – a place where an authentic copy of this journal

would likely be. Additionally, Exhibit 1089 is in a condition that creates no suspicion about its authenticity.

460. Attached hereto as Attachment 54a is a true and correct copy of the MARC record for this online ten-volume set from the King Library at San José State University online catalog. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on November 2, 2022, as shown in the 005 field ("20221102"). I personally identified and retrieved the library catalog record which is Attachment 54a.

461. Based on finding a digital copy of the Yerba-Biurrun chapter in the King Library at San José State University and MARC record in its online library catalog attached as Attachment 54a, it is my opinion that the online ten-volume set titled *Encyclopedia of Analytical Science*, 3rd edition, was publicly available on or shortly after May 10, 2019, as shown in field 008 ("190510").

462. Attached hereto as Attachment 54b is a true and correct copy of the MARC record for the online ten-volume set titled *Encyclopedia of Analytical Science*, 3rd edition, obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 54b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 54b, that library code is "OPELS," which means that the

MARC record for this online ten-volume set was created at the Elsevier Corporate Library (Amsterdam, Netherlands).

463. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Elsevier Corporate Library created OCLC record number 1090140183 on March 19, 2019, as shown in the "Entered" field ("20190319"). The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 54b occurred on June 6, 2022, as shown in the "Replaced" field ("20220606"). I personally identified and retrieved the MARC record that is Attachment 54b.

464. Attachment 54b further includes an entry in field 050 ("QD71.5")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("543.03")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 54b further includes a descriptor term reading "Analytical chemistry $v Encyclopedias" (see Attachment 44d, Library of Congress subject heading sh85023011 and Attachment 43d, Library of Congress subject heading sh85042997) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 54b was indexed according to its subject matter by virtue of at least three independently sufficient

classifications: the field 050 entry, the field 082 entry, and the field 650 entry. Further, as of March 19, 2019, the MARC record attached hereto as Attachment 54b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that added this online ten-volume set to its collection, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

465. Attachment 54b indicates that the online ten-volume set titled *Encyclopedia of Analytical Science*, 3rd edition, as cataloged at the Elsevier Corporate Library is currently available from 87 libraries. In view of above, the online ten-volume set titled *Encyclopedia of Analytical Science*, 3rd edition, was publicly available on or shortly after May 10, 2019, because by that date it had been cataloged and indexed at the Elsevier Corporate Library, made part of the OCLC bibliographic database, and received in the King Library at San José State University. For these reasons, it is my opinion that Exhibit 1089 was published and accessible to the public on or shortly after May 10, 2019.

FFF. Larsson article [Exhibit 1090]

466. Attached hereto as Exhibit 1090 is a copy of the journal article, "Meat Consumption and Risk of Colorectal Cancer: A Meta-Analysis of Prospective Studies," by Susanna C. Larsson and Alicja Wolk (hereafter "Larsson"). The

Larsson article was published in Volume 119, Number 11 of the *International Journal of Cancer*. The Larsson article appears beginning on page 2657 of this issue dated December 1, 2006.

467. I obtained Exhibit 1090 from the Health Sciences Library at the University of Washington (Seattle, Washington). Exhibit 1090 is a true and correct copy of the Larsson article (pages 2657-2664). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Larsson article is also available from the publisher, Wiley Press,[145] through the National Library of Medicine,[146] and through the digital repository *ResearchGate*.[147] The publisher's website indicates that the Larsson article was published online on October 20, 2006. Exhibit 1090 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1090 is in a condition that creates no suspicion about its authenticity.

[145] https://onlinelibrary.wiley.com/doi/10.1002/ijc.22170.

[146] https://pubmed.ncbi.nlm.nih.gov/9536042/.

[147] https://www.researchgate.net/publication/6803628_Meat_consumption_and_risk_of_colorectal_cancer_A_meta-analysis_of_prospective_studies.

468. Attached hereto as Attachment 55a is a true and correct copy of the MARC record for the *International Journal of Cancer* in the Health Sciences Library at the University of Washington. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 55a occurred on August 9, 2022, as shown in field 005 field ("20220809"). I personally identified and retrieved the MARC record that is Attachment 55a.

469. Based on finding a copy of Exhibit 1090 in the Health Sciences Library at the University of Washington and MARC record in its online library catalog attached as Attachment 55a, it is my opinion that the Larsson article published in the *International Journal of Cancer* was publicly available on or shortly after November 15, 2006, as shown by the date stamp on the cover of Exhibit 1090. This stamp has the general appearance of receipt date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 55a also shows that Exhibit 1090 was catalogued with two descriptor terms reading "Cancer $v Periodicals" (see Attachment 55b, Library of Congress subject heading sh2008100056) and "Cancer $x Prevention $v Periodicals" (see Attachment 55c, Library of Congress subject heading sh85019527 and Attachment 2d, Library of Congress sh85099890) in the 650 fields.

470. As noted in the holdings information (362 field), the Health Sciences Library at the University of Washington has received the *International Journal of Cancer* since the serial began publication in January 1966 and continues to receive the publication. In view of the MARC record for Exhibit 1090, the Larsson article was publicly available on or shortly after November 15, 2006, because the serial title had been received, cataloged, and indexed in the Health Sciences Library at the University of Washington made part of its online catalog database.

471. Attached hereto as Attachment 55d is a true and correct copy of the MARC record for the *International Journal of Cancer* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 55d, that library code is "MUL," which means that the MARC record for this serial was cataloged as part of the Minnesota Union List of Serials at the University of Minnesota Libraries (Minneapolis, Minnesota). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of Minnesota Libraries created OCLC record number 1753562 on November 1, 1975, as shown in the "Entered" field ("19751101"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 55d occurred on August 9, 2022, as shown in the "Replaced" field ("20220809"). I personally identified and retrieved the MARC

record that is Attachment 55d. The "BLvl" entry in Attachment 55d is "s," which indicates that the *International Journal of Cancer* is a serial publication. Field 310 of Attachment 55d reads "Thirty no. a year, $b <2005-." Accordingly, the MARC record for Exhibit 1090 corresponds to the *International Journal of Cancer* from the time the serial title began and includes the date of the Larsson article.

472. Attachment 55d includes an entry in field 050 ("RC261 $b .A34")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b IN766B")—as described above, a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("616.9/94/005")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 55d further includes two descriptor terms reading "Cancer $v Periodicals" (see Attachment 55b, Library of Congress subject heading sh2008100056) and "Cancer $x Prevention $v Periodicals" (see Attachment 55c, Library of Congress subject heading sh85019527 and Attachment 2d, Library of Congress sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 55d was indexed according to its subject matter by virtue of at least four independently sufficient

classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of November 1, 1975, the MARC record attached hereto as Attachment 55d was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

473. Attachment 55d indicates that the *International Journal of Cancer* as cataloged at the University of Minnesota Libraries is currently available from 319 libraries. In view of the above, this issue of the *International Journal of Cancer* was publicly available on or shortly after November 15, 2006, because by that date it had been cataloged and indexed at the University of Minnesota Libraries, made part of the OCLC bibliographic database, and received in the Health Sciences Library at the University of Washington. For these reasons, it is my opinion that Exhibit 1090 was published and accessible to the public on or shortly after November 15, 2006.

GGG. De Wulf journal article [Exhibit 1091]

474. Exhibit 1091 is a copy of an article published in Volume 48, Number 2 of the journal *Applied Microbiology and Biotechnology*. The article, "Production of D-ribose by Fermentation" by P. De Wulf and E. J. Vandamme (hereafter "De Wulf"), appears beginning on page 141 of this issue dated August 1997.

475. I obtained Exhibit 1091 from the King Library at San José State University. Exhibit 1091 is a true and correct copy of the De Wulf article (pages 141-148). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1091 was found within the custody of a library – a place where, if authentic, a copy of this online open access journal would likely be. Additionally, Exhibit 1091 is in a condition that creates no suspicion about its authenticity. The De Wulf journal article is also available from the publisher's website, the National Library of Medicine,[148] and the digital repositories *ResearchGate*[149] and *Semantic Scholar*.[150] A printout of the publisher's webpage for the De Wulf article is attached as Attachment 56a.

476. Attached hereto as Attachment 56b is a true and correct copy of the MARC record for the journal *Applied Microbiology and Biotechnology* from the King Library at San José State University. I personally identified and retrieved the MARC record that is Attachment 56b.

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[148] https://pubmed.ncbi.nlm.nih.gov/9299771/.

[149] https://www.researchgate.net/publication/13921205_Production_of_D-ribose_by_fermentation.

[150] https://www.semanticscholar.org/paper/Production-of-d-ribose-by-fermentation-Wulf-Vandamme/9646360bb15e98656c1bf9d981cf0d608f9111a1.

477. As noted in the holdings information (field 362), the King Library at San José State University has received the journal *Applied Microbiology and Biotechnology* since 1984 and continues to receive the publication. In view of the MARC record for Exhibit 1091, the De Wulf article was publicly available on August 31, 1997, as indicated on the publisher's website (see Attachment 56a).

478. The entry in field 008, character 7 of Attachment 56b is "c," which indicates that the journal *Applied Microbiology and Biotechnology* is a serial publication. Accordingly, the MARC record for Exhibit 1091 corresponds to those issues of the journal *Applied Microbiology and Biotechnology* from the time of the serial adopted the current title to the present day.

479. Attachment 56b further includes an entry in field 050 ("QR53")— includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b AP528B")— includes a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("660.6205")— includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 56b further includes two descriptor terms reading "Industrial microbiology $v Periodicals" (see Attachment 24e, Library of Congress subject heading sh85065899) and "Biotechnology $v

Periodicals" (see Attachment 35d, Library of Congress subject heading sh2007101988) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 56b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. Further, as of February 8, 1999, the MARC record attached hereto as Attachment 56b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

480. Attachment 56b indicates that the MARC record for the journal *Applied Microbiology and Biotechnology* obtained from *WorldCat*, the public view of the OCLC bibliographic database, is available in 24 editions.[151] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 56c indicates that a cataloger at the National Library of Medicine used OCLC record number 1754594 (second field 035) to create the local MARC record dated May 31, 1984 (field 008, 840531).

[151] https://www.worldcat.org/title/10397249.

481. The *WorldCat* database indicates that the journal *Applied Microbiology and Biotechnology* as cataloged in *WorldCat* is currently available from 1,769 libraries. Based on finding a copy of Exhibit 1091 in the King Library at San José State University and MARC record in its online library catalog attached as Attachment 56b, it is my opinion that the de Wulf article published in the journal *Applied Microbiology and Biotechnology* was available in the King Library at San José State University on August 31, 1997.

HHH. Vauthey journal article [Exhibit 1093]

482. Attached hereto as Exhibit 1093 is a copy of the journal article, "Structured Fluids as Microreactors for Flavor Formation by the Maillard Reaction" by S. Vauthey, Ch. Milo, Ph. Frossard, N. Garti, M. E. Leser, and H. J. Watzke (hereafter "Vauthey"). The Vauthey article was published in Volume 48, Number 10 of the *Journal of Agricultural and Food Chemistry*. The Vauthey article appears beginning on page 4808 of this issue dated October 2000.

483. I obtained Exhibit 1093 from the University of Wisconsin – Madison Libraries. Exhibit 1093 is a true and correct copy of the Vauthey article (pages 4808-4816). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Vauthey article is also available from the publisher, the American Chemical Society, as well as the National Library of

Medicine[152] and the digital repository *ResearchGate*.[153] A printout of the publisher's webpage for the Vauthey article is attached as Attachment 57a. Exhibit 1093 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1093 is in a condition that creates no suspicion about its authenticity.

484. Attached hereto as Attachment 57b is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 57b occurred on March 13, 2015, as shown in field 005 field ("20150313"). I personally identified and retrieved the MARC record that is Attachment 57b.

485. Based on finding a print copy of Exhibit 1093 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 57b, it is my opinion that the Vauthey article published in

[152] https://pubmed.ncbi.nlm.nih.gov/11052737.

[153] https://www.researchgate.net/publication/12273415_Structured_Fluids_as_Microreactors_for_Flavor_Formation_by_the_Maillard_Reaction.

the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after September 7, 2000, as indicated on the publisher's website (see Attachment 57a).

486. Attachment 57b also shows that Exhibit 1093 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

487. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the *Journal of Agricultural and Food Chemistry* since April 1953 and continues to receive the publication. In view of the MARC record for Exhibit 1093, the Vauthey article was publicly available on or shortly after September 9, 2000, because the serial title had been received, cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

488. Attached hereto as Attachment 57c is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the

record is recorded in field 040 with a unique library code or name. For Attachment 57c, that library code is "NRC," which means that the MARC record for this serial was cataloged at the University of North Carolina – Raleigh Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of North Carolina – Raleigh Libraries created OCLC record number 1800249 on December 24, 1974, as shown in the "Entered" field ("19741224"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 57c occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 57c. The "BLvl" entry in Attachment 57c is "s," which indicates that the *Journal of Agricultural and Food Chemistry* is a serial publication. Field 310 of Attachment 57c reads "Weekly, $b <2012-." Accordingly, the MARC record for Exhibit 1093 corresponds to the *Journal of Agricultural and Food Chemistry* from the time the serial title began and includes the date of the Vauthey article.

489. Attachment 57c includes an entry in field 050 ("S583")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO534D"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an

entry in field 082 ("630.2405"), a subject matter consistent with the Dewey Decimal classification system. Attachment 57c further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 57c was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of December 24, 1974, the MARC record attached hereto as Attachment 57c was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

490. Attachment 57c indicates that the *Journal of Agricultural and Food Chemistry* as cataloged at the University of North Carolina – Raleigh Libraries is currently available from 596 libraries. In view of the above, this issue of the *Journal*

of Agricultural and Food Chemistry was publicly available on or shortly after September 9, 2000, because by that date it had been cataloged and indexed at the University of North Carolina – Raleigh Libraries, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1093 was published and accessible to the public on or shortly after September 9, 2000 (see Attachment 57a).

III. Suman journal article [Exhibit 1094]

491. Exhibit 1094 is a copy of an article published in Volume 4 of the online open access journal *Annual Review of Food Science and Technology*. The article, "Myoglobin Chemistry and Meat Color" by Surendranath P. Suman and Poulson Joseph (hereafter "Suman"), appears beginning on page 77 of this issue dated 2013.

492. I obtained Exhibit 1094 from the King Library at San José State University. Exhibit 1094 is a true and correct copy of the Suman article (pages 77-99). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1094 was found within the custody of a library – a place where, if authentic, a copy of this online open access journal would likely be. Additionally, Exhibit 1094 is in a condition that creates no suspicion about its authenticity. The Suman journal article is available from the

publisher's website and through the National Library of Medicine.[154] The publisher's webpage for the Suman article is attached as Attachment 58a.

493. Attached hereto as Attachment 58b is a true and correct copy of the MARC record for the online open access journal *Annual Review of Food Science and Technology* from the King Library at San José State University. I personally identified and retrieved the MARC record that is Attachment 58b.

494. As noted in the holdings information (field 362), the King Library at San José State University has received the online open access journal *Annual Review of Food Science and Technology* since 2010 and continues to receive the publication. In view of the MARC record for Exhibit 1094, the Suman article was publicly available on November 26, 2012, as indicated on the publisher's website (see Attachment 58a).

495. The "BLvl" entry in Attachment 58b is "s," which indicates that the online open access journal *Annal Review of Food Technology and Technology* is a serial publication. Accordingly, the MARC record for Exhibit 1094 corresponds to those issues of the online open access journal *Annual Review of Food Science and Technology* from the time of the serial began publication to the present day.

[154] https://pubmed.ncbi.nlm.nih.gov/23190143/.

496. Attachment 58b further includes an entry in field 060 ("W1 $b AN771F")— includes a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system) and an entry in field 070 ("TX341 $b .A655")— includes a subject matter classification number consistent with the National Agricultural Library classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("664")— includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 58b further includes a descriptor term reading "Food industry and trade $v Periodicals" (see Attachment 5b, Library of Congress subject heading sh2008 103991) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 58b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 060 entry, the field 070 entry, the field 082 entry, and the field 650 entry. Further, as of January 16, 2008, the MARC record attached hereto as Attachment 58b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

497. Attachment 58b indicates that the MARC record for the online open access journal *Annual Review of Food Science and Technology* obtained from *WorldCat*, the public view of the OCLC bibliographic database, was created at the Library of Congress.[155] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 58b indicates that a cataloger at the Library of Congress (CONSER, third field 035) created OCLC record number 190848556 field (second field 035) on November 26, 2012 (field 008).

498. The *WorldCat* database indicates that the online public access journal *Annual Review of Food Science and Technology* as cataloged at the Library of Congress is currently available from 476 libraries. Based on finding a copy of Exhibit 1094 in the King Library at San José State University and MARC record in its online library catalog attached as Attachment 58b, it is my opinion that the Suman article published in the online open access journal *Annual Review of Food Science and Technology* was available in the King Library at San José State University on November 26, 2012.

[155] https://www.worldcat.org/title/190848556.

JJJ. Withycombe journal article [Exhibit 1095]

499. Exhibit 1095 is a copy of an article published in Volume 53, Issue 2 of the *Journal of Food Science*. The article, "Identification of 2-Methyl-3-Furanthiol in the Steam Distillate from Canned Tuna Fish" by Donald A. Withycombe and Cynthia J. Mussinan (hereafter "Withycombe"), appears beginning on page 658 of this issue dated March 1998.

500. I obtained Exhibit 1095 from the King Library at San José State University. Exhibit 1095 is a true and correct copy of the Withycombe article (pages 658, 660). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1095 was found within the custody of a library – a place where, if authentic, a copy of this online open access journal would likely be. Additionally, Exhibit 1095 is in a condition that creates no suspicion about its authenticity. The Withycombe journal article is available from the publisher's website and the digital repository *ResearchGate.*[156] A printout of the publisher's webpage for the Withycombe article is attached as Attachment 59a.

[156] https://www.researchgate.net/publication/230080237_Identification_of_2-Methyl-3-Furanthiol_in_the_Steam_Distillate_from_Canned_Tuna_Fish.

501. Attached hereto as Attachment 59b is a true and correct copy of the MARC record for the *Journal of Food Science from* the King Library at San José State University. I personally identified and retrieved the MARC record that is Attachment 59b.

502. As noted in the holdings information (field 362), the King Library at San José State University has received the *Journal of Food Science* since 1961 and continues to receive the publication. In view of the MARC record for Exhibit 1095, the Withycombe article was publicly available on March 31, 1988, as indicated on the publisher's website (see Attachment 59a).

503. The entry in field 008, character 7 of Attachment 59b is "c," which indicates that the *Journal of Food Science* is a serial publication. Accordingly, the MARC record for Exhibit 1095 corresponds to those issues of the *Journal of Food Science* from the time of the serial adopted the current title to the present day.

504. Attachment 59b further includes an entry in field 050 ("TX1 $b .F65")— includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO651")— includes a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("664 $b qF68r")— includes a subject matter classification number consistent

with the Dewey Decimal classification system. Attachment 59b further includes two descriptor terms reading "Food $v Periodicals" (see Attachment 5e, Library of Congress subject heading sh85050184 and Attachment 2d, Library of Congress subject headings sh85099890) and "Food $x Research $v Periodicals" (see Attachment 5e, Library of Congress subject heading sh85050184, Attachment 19d, Library of Congress subject heading sh85113021, and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 59b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. Further, as of October 7, 1975, the MARC record attached hereto as Attachment 59b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

505. Attachment 59b indicates that the MARC record for the *Journal of Food Science* obtained from *WorldCat*, the public view of the OCLC bibliographic

database, is available in 24 editions.[157] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 59c indicates that a cataloger at the Library of Congress created OCLC record number 1680911 (field 040) to create the local MARC record on October 7, 1975 (field 008, 840531).

506. The *WorldCat* database indicates that the *Journal of Food Science* as cataloged in *WorldCat* is currently available from 1,046 libraries. Based on finding a copy of Exhibit 1095 in the King Library at San José State University and MARC record in its online library catalog attached as Attachment 59b, it is my opinion that the Withycombe article published in the *Journal of Food Science* was available in the King Library at San José State University on March 31, 1988, as indicated on the publisher's website (see Attachment 59a).

KKK. Kerscher journal article [Exhibit 1096]

507. Attached hereto as Exhibit 1096 is a copy of the journal article, "Quantification of 2-Methyl-3-furanthiol, 2-Furfurylthiol, 3-Mercapto-2-pentanone, and 2-Mercapto-3-pentanone in Heated Meat" by Roland Kerscher and Werner Grosch (hereafter "Kerscher"). The Kerscher article was published in Volume 46,

[157] https://www.worldcat.org/title/1680911.

Number 5 of the *Journal of Agricultural and Food Chemistry*. The Kerscher article appears beginning on page 1954 of this issue dated 1995.

508. I obtained Exhibit 1096 from the University of Southern California Libraries (Los Angeles, California). Exhibit 1096 is a true and correct copy of the Kerscher article (pages 1954-1958). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1096 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1096 is in a condition that creates no suspicion about its authenticity. The Kerscher article is also available from the publisher, the American Chemical Society, and through the Food and Agriculture Organization of the United Nations (AGRIS).[158] A printout of the publisher's webpage for the Kerscher article is attached as Attachment 60a.

509. Attached hereto as Attachment 60b is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* at the University of Southern California Libraries (Los Angeles, California). The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 60b occurred on February 19, 2022, as shown in

[158] https://agris.fao.org/agris-search/search.do?recordID=US1997091893.

field 005 field ("20220219"). I personally identified and retrieved the MARC record that is Attachment 60b.

510. Based on finding a print copy of Exhibit 1096 in the University of Southern California Libraries and MARC record in its online library catalog attached as Attachment 60b, it is my opinion that the Kerscher article published in the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after April 17, 1998, as indicated on the publisher's website (see Attachment 60a).

511. Attachment 60b also shows that Exhibit 1096 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

512. As noted in the holdings information (362 field), the University of Southern California Libraries has received the *Journal of Agricultural and Food Chemistry* since April 1953 and continues to receive the publication. In view of the MARC record for Exhibit 1096, the Kerscher article was publicly available on or shortly after April 17, 1998, because the serial title had been received, cataloged,

and indexed in the University of Southern California Libraries and made part of its online catalog database.

513. Attached hereto as Attachment 60c is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 60c, that library code is "NRC," which means that the MARC record for this serial was cataloged at the University of North Carolina – Raleigh Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of North Carolina – Raleigh Libraries created OCLC record number 1800249 on December 24, 1974, as shown in the "Entered" field ("19741224"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 60c occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 60c. The "BLvl" entry in Attachment 60c is "s," which indicates that the *Journal of Agricultural and Food Chemistry* is a serial publication. Field 310 of Attachment 60c reads "Weekly, $b <2012-." Accordingly, the MARC record for Exhibit 1096 corresponds to the *Journal of Agricultural and Food Chemistry* from the time the serial title began and includes the date of the Kerscher article.

514. Attachment 60c includes an entry in field 050 ("S583")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO534D"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("630.2405"), a subject matter consistent with the Dewey Decimal classification system. Attachment 60c further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 60c was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of December 24, 1974, the MARC record attached hereto as Attachment 60c was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date

through any library with access to the OCLC bibliographic database or through an individual library.

515. Attachment 60c indicates that the *Journal of Agricultural and Food Chemistry* as cataloged at the University of North Carolina – Raleigh Libraries is currently available from 596 libraries. In view of the above, this issue of the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after April 17, 1998, because by that date it had been cataloged and indexed at the University of North Carolina – Raleigh Libraries, made part of the OCLC bibliographic database, and received at the University of Southern California Libraries. For these reasons, it is my opinion that Exhibit 1096 was published and accessible to the public on or shortly after April 17, 1998 (see Attachment 60a).

LLL. Hofmann 1995 journal article [Exhibit 1097]

516. Attached hereto as Exhibit 1097 is a copy of the journal article, "Studies on the Formation and Stability of the Roast-Flavor Compound 2-Acetyl-2-thiazoline" by Thomas Hofmann and Peter Schieberle (hereafter "Hofmann 1995"). The Hofmann 1995 article was published in Volume 43, Number 11 of the *Journal of Agricultural and Food Chemistry*. The Hofmann 1995 article appears beginning on page 2946 of this issue dated November 1995.

517. I obtained Exhibit 1097 from the University of Southern California Libraries (Los Angeles, California). Exhibit 1097 is a true and correct copy of the

Hofmann 1995 article (pages 2946-2950). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1097 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Additionally, Exhibit 1097 is in a condition that creates no suspicion about its authenticity. The Hofmann 1995 article is also available from the publisher, the American Chemical Society, as well as through the Food and Agriculture Organization of the United Nations (AGRIS)[159] and the digital repository *Semantic Scholar*.[160] A printout of the publisher's webpage for the Hofmann 1995 article is attached as Attachment 61a.

518. Attached hereto as Attachment 61b is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* at the University of Southern California Libraries (Los Angeles, California). The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 61b occurred on February 19, 2022, as shown in

[159] https://agris.fao.org/agris-search/search.do?recordID=US1997061492,

[160] https://www.semanticscholar.org/paper/Studies-on-the-Formation-and-Stability-of-the-Hofmann-Schieberle/a9fdf3d65db97282f61c3d8abe0ce84e158ff5cf.

field 005 field ("20220219"). I personally identified and retrieved the MARC record that is Attachment 61b.

519. Based on finding a print copy of Exhibit 1097 in the University of Southern California Libraries and MARC record in its online library catalog attached as Attachment 61b, it is my opinion that the Hofmann 1995 article published in the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after November 1, 1995, as indicated on the publisher's website (see Attachment 61a).

520. Attachment 61b also shows that Exhibit 1097 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

521. As noted in the holdings information (362 field), the University of Southern California Libraries has received the *Journal of Agricultural and Food Chemistry* since April 1953 and continues to receive the publication. In view of the MARC record for Exhibit 1097, the Hofmann 1995 article was publicly available on or shortly after November 1, 1995, because the serial title had been received,

cataloged, and indexed in the University of Southern California Libraries and made part of its online catalog database.

522. Attached hereto as Attachment 61c is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 61c, that library code is "NRC," which means that the MARC record for this serial was cataloged at the University of North Carolina – Raleigh Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of North Carolina – Raleigh Libraries created OCLC record number 1800249 on December 24, 1974, as shown in the "Entered" field ("19741224"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 61c occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 61c. The "BLvl" entry in Attachment 61c is "s," which indicates that the *Journal of Agricultural and Food Chemistry* is a serial publication. Field 310 of Attachment 61c reads "Weekly, $b <2012-." Accordingly, the MARC record for Exhibit 1097 corresponds to the *Journal of Agricultural and Food Chemistry* from the time the serial title began and includes the date of the Hofmann 1995 article.

523. Attachment 61c includes an entry in field 050 ("S583")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO534D"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("630.2405"), a subject matter consistent with the Dewey Decimal classification system. Attachment 61c further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 61c was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of December 24, 1974, the MARC record attached hereto as Attachment 61c was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date

through any library with access to the OCLC bibliographic database or through an individual library.

524. Attachment 61c indicates that the *Journal of Agricultural and Food Chemistry* as cataloged at the University of North Carolina – Raleigh Libraries is currently available from 596 libraries. In view of the above, this issue of the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after November 1, 1995, because by that date it had been cataloged and indexed at the University of North Carolina – Raleigh Libraries, made part of the OCLC bibliographic database, and received at the University of Southern California Libraries. For these reasons, it is my opinion that Exhibit 1097 was published and accessible to the public on or shortly after November 1, 1995.

MMM. Mottram book excerpt [Exhibit 1099]

525. Attached hereto as Exhibit 1099 is a copy of an excerpt from the book titled *Flavours and Fragrances* edited by Ralf Günter Berger. The excerpt is Chapter 12, "The Maillard Reaction: Source of Flavour in Thermally Processed Foods" by Donald S. Mottram (hereafter "Mottram") and issued by Springer Press with a 2007 copyright date.

526. Exhibit 1099 is a true and correct copy of the Mottram chapter (pages 269-283), which I obtained from counsel. The text in Exhibit 1099 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one

page to the next; further, there are no visible alterations to the document. Exhibit 1099 is in a condition that creates no suspicion about its authenticity.

527. Attached hereto as Attachment 62a is a true and correct copy of the MARC record for this book from the Library of Congress online catalog. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on May 25, 2012, as shown in the 005 field ("20120525"). I personally identified and retrieved the library catalog record which is Attachment 62a.

528. Based on finding a copy of the Mottram chapter in the Library of Congress and MARC record in its online library catalog attached as Attachment 62a, it is my opinion that the book titled *Flavours and Fragrances* was publicly available on or shortly after June 19, 2007, as shown in field 955 ("2007-06-19").

529. Attachment 62a further includes an entry in field 050 ("TP418 $b .F58 2007")— includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("664/.07")— includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 62a further includes four descriptor terms reading "Flavoring essences" (see Attachment 13c, Library of Congress subject heading sh85049035), "Food,

Odor" (see Attachment 62b, Library of Congress subject heading sh85050205), "Perfumes, Synthetic" (see Attachment 62c, Library of Congress subject heading sh85099841), and "Industrial microbiology" (see Attachment 24e, Library of Congress subject heading sh85065899) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 62a was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entries. Further, as of November 21, 2006, the MARC record attached hereto as Attachment 62a was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

530. Attachment 62a indicates that the MARC record for the volume titled *Flavours and Fragrances* obtained from *WorldCat*, the public view of the OCLC bibliographic database, was created at the Library of Congress.[161] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 62a indicates that a cataloger at the British Library (UKM, field

[161] https://www.worldcat.org/title/77541318.

040) created OCLC record number 77541318 field (field 035) on November 21, 2006 (field 008).

531. The *WorldCat* database indicates that the book titles *Flavours and Fragrances* as cataloged at the British Library is currently available from 561 libraries. Based on finding a copy of Exhibit 1099 in the Library of Congress and MARC record in its online library catalog attached as Attachment 62a, it is my opinion that the Mottram book chapter published in the volume titled *Flavours and Fragrances* was available in the Library of Congress on or shortly after June 19, 2007.

NNN. Ulrich journal article [Exhibit 1100]

532. Exhibit 1100 is a copy of an article published in Volume 77 of the *American Journal of Potato Research*. The article, "Investigation of the Boiled Potato Flavor by Human Sensory and Instrumental Methods" by D. Ulrich, E. Hoberg, W. Neugebauer, H. Tiemann, and U. Darsow (hereafter "Ulrich"), appears beginning on page 111 of this issue dated March 2000.

533. I obtained Exhibit 1100 from the King Library at San José State University. Exhibit 1100 is a true and correct copy of the Ulrich article (pages 111-117). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1100 was found within the

custody of a library – a place where, if authentic, a copy of this online open access journal would likely be. Additionally, Exhibit 1100 is in a condition that creates no suspicion about its authenticity. The Ulrich journal article is also available from the publisher's website and the digital repository *ResearchGate.*[162] A printout of the publisher's webpage for the Ulrich article is attached as Attachment 63a.

534. Attached hereto as Attachment 63b is a true and correct copy of the MARC record for the *American Journal of Potato Research* from the King Library at San José State University. I personally identified and retrieved the MARC record that is Attachment 63b.

535. As noted in the holdings information (field 362), the King Library at San José State University has received the *American Journal of Potato Research* since 1998 and continues to receive the publication. In view of the MARC record for Exhibit 1100, the Ulrich article was publicly available on March 31, 2000, as indicated on the publisher's website (see Attachment 63a).

536. The entry in field 008, character 7 of Attachment 63b is "c," which indicates that the *American Journal of Potato Research* is a serial publication. Accordingly, the MARC record for Exhibit 1100 corresponds to those issues of the

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162 https://www.researchgate.net/publication/225338776_Investigation_of_the_boiled_potato_flavor_by_human_sensory_and_instrumental_methods.

American Journal of Potato Research from the time of the serial adopted the current title to the present day.

537. Attachment 63b further includes an entry in field 050 ("SB211 $b .P8")— includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system) and an entry in field 082 ("583")— includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 63b further includes a descriptor term reading "Potatoes $v Periodicals" (see Attachment 63c, Library of Congress subject heading sh85105652) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 63b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entry. Further, as of June 14, 2005, the MARC record attached hereto as Attachment 63b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

538. Attachment 63b indicates that the MARC record for the *American Journal of Potato Research* obtained from *WorldCat*, the public view of the OCLC

bibliographic database, is available in 15 editions.[163] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 63c indicates that a cataloger in the King Library at San José State University used OCLC record number 60626757 (first field 035) to create the local MARC record dated June 14, 2005 (field 008, 050614).

539. The *WorldCat* database indicates that the *American Journal of Potato Research* as cataloged in *WorldCat* is currently available from 1,175 libraries. Based on finding a copy of Exhibit 1100 in the King Library at San José State University and MARC record in its online library catalog attached as Attachment 63b, it is my opinion that the Ulrich article published in the *American Journal of Potato Research* was available in the King Library at San José State University on March 31, 2000, in accordance with the publication date indicated on the publisher's website.

OOO. *Food Made with Cultured Animal Cells* [Exhibit 1102]

540. Exhibit 1102 is a printout of the website *Food Made with Cultured Animal Cells* developed at the U.S. Food and Drug Administration (Silver Spring, Maryland) (FDA). This document is part of the main website designed for the public, researchers, and scientists.[164] Clicking on the search box of the FDA home page

[163] https://www.worldcat.org/title/60626757.

[164] https://www.fda.gov/.

takes the information seeker to the description and information about food, and selecting the section titled "Food Ingredients and Packaging" results in a selection of related documents including *Food Made with Cultured Animal Cells*.[165]

541. Exhibit 1102 is a true and correct copy dated October 5, 2020 that I downloaded from the FDA . Specifically, the text of Exhibit 1102 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1102 was found within the custody of the host federal agency, a place where an authentic copy of this document could be obtained.

542. Exhibit 1102 is a true and correct copy of the document titled *Food Made with Cultured Animal Cells* from the FDA website in a condition that creates no suspicion about its authenticity. Based on the date recorded in the document, it is my opinion that the document titled *Food Made with Cultured Animal Cells* was available to the public on October 6, 2020.

PPP. *DDBJ Annotated/Assembled Sequences: Codes Used in Sequence Description* [Exhibit 1103]

543. Attached hereto as Exhibit 1103 is a website entry titled *DDBJ Annotated/Assembled Sequence: Codes Used in Sequence Description* prepared by

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165 https://www.fda.gov/food/food-ingredients-packaging/food-made-cultured-animal-cells.

the DNA Data Bank of Japan (DDBJ), and published on its website by February 9, 2018, according to the WayBack Machine (see Attachment 65a). "The Bioinformation and DDBJ Center provides sharing and analysis services for data from life science researchers and advances science."[166]

544. Exhibit 1103 is a true and accurate copy of the website and was issued as a public document on the DDBJ website.[167] Specifically, the text of Exhibit 1103 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1103 was found within the custody of the issuing entity, a place where an authentic copy of this document would likely be.

545. Based on finding a digital copy of Exhibit 1103 on the Internet, it is my opinion that the website titled *DDBJ Annotated/Assembled Sequence: Codes Used in Sequence Description* was available to the public on February 9, 2018. It is also my opinion that there is no reason to doubt the authenticity of Exhibit 1103 given its appearance, contents, and the web address from which it was obtained.

[166] https://www.ddbj.nig.ac.jp/index-e.html.

[167] https://www.ddbj.nig.ac.jp/ddbj/code-e.html.

QQQ. *Inosinic Acid* [Exhibit 1104]

546. Exhibit 1104 is a printout of the website *Inosinic Acid* (hereafter "Inosinic acid") prepared for the multilingual digital encyclopedia Wikipedia.[168] This digital resource is written and maintained by a community of volunteers through open collaboration and a wiki-based editing system. Entering the term "inosinic acid" takes the information seeker to the description and information about the nucleotide.

547. I downloaded Exhibit 1104 from the Wikipedia website. Exhibit 1104 is a true and correct copy of the Wikipedia entry that was last edited on November 30, 2021. Specifically, the text of Exhibit 1104 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1104 was found within the custody of the issuing entity, a place where an authentic copy of this document would likely be. Based on the date recorded in the history of the Wikipedia entry, it is my opinion that the document titled *Inosinic Acid* was originally prepared on June 19, 2013, and made available to the public.

[168] https://en.wikipedia.org/wiki/Wikipedia.

RRR. *Mikro Pulverizer® Hammer & Screen Mill* [Exhibit 1105]

548. Attached hereto as Exhibit 1105 is a website entry titled *Mikro Pulverizer® Hammer & Screen Mill* prepared by Hosokawa Micron Powder Systems and published on its website as early as November 26, 2015, at 9:30:40 a.m. according to the WayBack Machine (see Attachment 66a).

549. Exhibit 1105 is a true and accurate copy of the website and was issued as a public document and appears on the Hosokawa Micron Powder Systems website.[169] Specifically, the text of Exhibit 1105 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1105 was found within the custody of the issuing entity, a place where an authentic copy of this document would likely be.

550. Based on finding a digital copy of Exhibit 1105 on the Internet, it is my opinion that the website titled *Mikro Pulverizer® Hammer & Screen Mill* was available to the public on November 26, 2015. It is also my opinion that there is no reason to doubt the authenticity of Exhibit 1105 given its appearance, contents, and the web address from which it was obtained.

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169 https://www.hmicronpowder.com/products/product/mikro-pulverizer-hammer-and-screen-mill/.

SSS. *FoodData Central Search: Peas, Green, Raw* [Exhibit 1106]

551. Attached hereto as Exhibit 1106 is a website entry titled *FoodData Central Search: Peas, Green, Raw* prepared by the Agricultural Research Service of the U.S. Department of Agriculture and published on its website as early as April 1, 2019, according to the official government website. The document is also identified as FDC ID 170419 and NDB Number 11034.

552. Exhibit 1106 is a true and accurate copy of the website and was issued as a public document and appears on the Agricultural Research Service website.[170] Specifically, the text of Exhibit 1106 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1106 was found within the custody of the issuing government agency, a place where an authentic copy of this document would likely be.

553. Based on finding a digital copy of Exhibit 1106 on the Internet, it is my opinion that the website titled *FoodData Central Search: Peas, Green, Raw* was available to the public on April 1, 2019. It is also my opinion that there is no reason to doubt the authenticity of Exhibit 1106 given its appearance, contents, and the web address from which it was obtained.

[170] https://fdc.nal.usda.gov/fdc-app.html#/food-details/170419/nutrients.

TTT. Exploratorium report [Exhibit 1107]

554. Exhibit 1107 is a printout of a document titled *What Gives Meat Its Color?* prepared by the Exploratorium Team (hereafter "Exploratorium").[171] The Exploratorium is a non-profit educational organization located in San Franisco, California. I obtained Exhibit 1107 from the Exploratorium website.[172] The text of Exhibit 1107 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1107 was found within the custody of the digital repository at the hosting organization, a place where an authentic copy of this document would likely be.

555. Exhibit 1107 is a true and correct copy of the Exploratorium document in a condition that creates no suspicion about its authenticity. Based on the date recorded in the document (2021) and the recorded presence through the WayBack Machine (Attachment 67a), it is my opinion that the document titled *What Gives Meat Its Color?* was available to the public on October 5, 2002, or shortly thereafter.

[171] https://www.exploratorium.edu/.

[172] https://www.exploratorium.edu/cooking/meat/INT-what-meat-color.html.

UUU. *Cysteine: Pub Chem* [Exhibit 1108]

556. Exhibit 1108 is a printout of the website *Cysteine: Pub Chem* developed at the National Library of Medicine (hereafter "Cysteine"). *Pub Chem* is an open chemistry database at the National Institutes of Health (Bethesda, Maryland).[173] Clicking on the search box of the *PubChem* home page takes the information seeker to the description and information about the chemical. I downloaded Exhibit 1108 from the *PubChem* website dated September 16, 2004.[174] Specifically, the text of Exhibit 1108 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1108 was found within the custody of the host federal agency, a place where an authentic copy of this document would likely be.

557. Exhibit 1108 is a true and correct copy of the website *Cysteine: Pub Chem* in a condition that creates no suspicion about its authenticity. Based on the date recorded in the document, it is my opinion that the website *Cysteine: Pub Chem* was available to the public on September 16, 2004, or shortly thereafter.

[173] https://pubchem.ncbi.nlm.nih.gov/.

[174] https://pubchem.ncbi.nlm.nih.gov/compound/5862.

VVV. *Maltodextrin-dextrose equivalent 10-15: Pub Chem* [Exhibit 1109]

558. Exhibit 1109 is a printout of the website *Maltodextrin-dextrose equivalent 10-15: Pub Chem* developed at the National Library of Medicine (hereafter "Maltodextrin-dextrose"). *Pub Chem* is an open chemistry database at the National Institutes of Health (Bethesda, Maryland).[175] Clicking on the search box of the *PubChem* home page takes the information seeker to the description and information about the chemical. I downloaded Exhibit 1109 from the *PubChem* website dated November 30, 2012.[176] Specifically, the text of Exhibit 1109 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1109 was found within the custody of the host federal agency, a place where an authentic copy of this document would likely be.

559. Exhibit 1109 is a true and correct copy of the website *Maltodextrin-dextrose equivalent 10-15: Pub Chem* in a condition that creates no suspicion about its authenticity. Based on the date recorded in the document, it is my opinion that the website *Maltodextrin-dextrose equivalent 10-15: Pub Chem* was available to the public on November 30, 2012, or shortly thereafter.

[175] https://pubchem.ncbi.nlm.nih.gov/.

[176] https://pubchem.ncbi.nlm.nih.gov/compound/68229136.

WWW. *Thiamine: Pub Chem* [Exhibit 1110]

560. Exhibit 1110 is a printout of the website *Thiamine: Pub Chem* developed at the National Library of Medicine (hereafter "Thiamine"). *Pub Chem* is an open chemistry database at the National Institutes of Health (Bethesda, Maryland).[177] Clicking on the search box of the *PubChem* home page takes the information seeker to the description and information about the chemical. I downloaded Exhibit 1110 from the *PubChem* website dated September 16, 2004.[178] The text of Exhibit 1110 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1110 was found within the custody of the host federal agency, a place where an authentic copy of this document would likely be.

561. Exhibit 1110 is a true and correct copy of the website *Thiamine: Pub Chem* in a condition that creates no suspicion about its authenticity. Based on the date recorded in the document, it is my opinion that the website *Thiamine: Pub Chem* was available to the public on September 16, 2004, or shortly thereafter.

[177] https://pubchem.ncbi.nlm.nih.gov/.

[178] https://pubchem.ncbi.nlm.nih.gov/compound/1130.

XXX. *D-Ribose: Pub Chem* [Exhibit 1111]

562. Exhibit 1111 is a printout of the website *D-Ribose: Pub Chem* developed at the National Library of Medicine (hereafter "D-Ribose"). *Pub Chem* is an open chemistry database at the National Institutes of Health (Bethesda, Maryland).[179] Clicking on the search box of the *PubChem* home page takes the information seeker to the description and information about the chemical. I downloaded Exhibit 1111 from the *PubChem* website dated October 26, 2006.[180] Specifically, the text of Exhibit 1111 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1111 was found within the custody of the host federal agency, a place where an authentic copy of this document would likely be.

563. Exhibit 1111 is a true and correct copy of the website *D-Ribose: Pub Chem* in a condition that creates no suspicion about its authenticity. Based on the date recorded in the document, it is my opinion that the website *D-Ribose: Pub Chem* was available to the public on October 26, 2006, or shortly thereafter.

[179] https://pubchem.ncbi.nlm.nih.gov/.

[180] https://pubchem.ncbi.nlm.nih.gov/compound/10975657.

YYY. *Sucrose: Pub Chem* [Exhibit 1112]

564. Exhibit 1112 is a printout of the website *Sucrose: Pub Chem* developed at the National Library of Medicine (hereafter "Sucrose"). *Pub Chem* is an open chemistry database at the National Institutes of Health (Bethesda, Maryland).[181] Clicking on the search box of the *PubChem* home page takes the information seeker to the description and information about the chemical. I downloaded Exhibit 1112 from the *PubChem* website dated September 16, 2004.[182] Specifically, the text of Exhibit 1112 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1112 was found within the custody of the host federal agency, a place where an authentic copy of this document would likely be.

565. Exhibit 1112 is a true and correct copy of the website *Sucrose: Pub Chem* in a condition that creates no suspicion about its authenticity. Based on the date recorded in the document, it is my opinion that the website *Sucrose: Pub Chem* was available to the public on September 16, 2004, or shortly thereafter.

[181] https://pubchem.ncbi.nlm.nih.gov/.

[182] https://pubchem.ncbi.nlm.nih.gov/compound/5988.

***ZZZ. Definition of "organoleptic"* [Exhibit 1113]**

566. Exhibit 1113 is a printout from the online *Collins English Dictionary Complete and Unabridged*, 13th edition,[183] of the definition for the word "organoleptic." Entering the term "organoleptic" in the search box results in the display of the definition in American English.[184] The text of Exhibit 1113 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1113 was found within the custody of the hosting institution, a place where an authentic copy of this document would likely be.

567. Exhibit 1113 is a true and correct copy of the definition for the word "organoleptic" in a condition that creates no suspicion about its authenticity. Based on the date recorded in the document, it is my opinion that the printout of the definition for the word "organoleptic" was available on November 15, 2018, when the *Collins English Dictionary Complete and Unabridged*, 13th edition, was published online and made available to the public.

[183] https://www.collinsdictionary.com/us/about/.

[184] https://www.collinsdictionary.com/us/dictionary/english/organoleptic.

AAAA. ACS press release [Exhibit 1114]

568. Attached hereto as Exhibit 1114 is an official press release titled "Sniffing Out Which Plant-Based Burgers Smell the Most Like Real Beef" written by the American Chemical Society (hereafter "ACS") and issued on August 23, 2021. The press release occurred in conjunction with the ACS Fall 2021 meeting, a hybrid event held virtually and in-person on August 22-26, 2021, in Atlanta, Georgia.[185]

569. Exhibit 1114 is a true and correct copy of the press release.[186] Specifically, the text of Exhibit 1114 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to Exhibit 1114 compared to what is currently accessible on the internet.

570. Exhibit 1114 also includes a header that reads "ACS – Discover Chemistry – News Releases – 2021" and a footer that includes the URL (or web address) from which it was obtained. Further, Exhibit 1114 was found within the custody of the issuing professional organization (i.e., the American Chemical

185 https://www.acs.org/content/acs/en/about/governance/committees/divisional-activities/mppg/future-themes/fall-2021.html.

186 https://www.acs.org/content/acs/en/pressroom/newsreleases/2021/august/sniffing-out-which-plant-based-burgers-smell-the-most-like-real-beef.html.

Society), a place where, if authentic, a copy of this press release would likely be. Additionally, Exhibit 1114 is in a condition that creates no suspicion about its authenticity.

571. A press release exhibits the following characteristics: the press release is attributed to a creator or author (in this case the American Chemical Society) who affixes a date of creation (in this case August 23, 2021) and publishes the document through a news outlet (in this case the ACS Press Release Office, newsroom@acs.org). The contact information for the American Chemical Society and informs journalists that a formal report of the research described in the press release will be presented at the ACS Fall 2021 meeting.

572. Based on finding a digital copy of Exhibit 1114 on the Internet, it is my opinion that the press release titled "Sniffing Out Which Plant-Based Burgers Smell the Most Like Real Beef" was available to the public on August 23, 2021, as indicated on the first page of the document. It is also my opinion that there is no reason to doubt the authenticity of Exhibit 1114 given its appearance, contents, and the web address from which it was obtained.

BBBB. d'Estries report [Exhibit 1115]

573. Attached hereto as Exhibit 1115 is a report titled *Science Reveals Which Plant-Based Burger Smells Closest to the Real Thing* prepared by Michael d'Estries

(hereafter "d'Estries") for the online publication Treehugger. The d'Estries report was issued on September 3, 2021.

574. I downloaded the Exhibit 1115 from the Treehugger website.[187] Exhibit 1115 is a true and accurate copy of the d'Estries report and was issued as a public, unclassified document. The text of the d'Estries report is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1115 was found within the custody of the issuing entity – a place where, if authentic, a copy of this document would likely be. For these reasons, it is my opinion that Exhibit 1115 was published and accessible to the public on or shortly after September 3, 2021.

CCCC. Wang journal article [Exhibit 1118]

575. Exhibit 1118 is a copy of an article from Volume 345 of the journal *Food Chemistry*. The article, "Reinvestigation of 2-acetylthiazole Formation Pathways in the Maillard Reaction" by Xiao-Yuan Wang, Yun-Jiao Ma, Yu Guo, Xiao-Lin Luo, Ming Du, Liang Dong, Pei Yu, and Xian-Bing Xu (hereafter "Wang"), appears as article 128761 in this issue dated May 30, 2021.

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187 https://www.treehugger.com/science-reveals-plant-based-burger-smells-5200260.

576. I obtained Exhibit 1118 from the King Library at San José State University (San José, California). Exhibit 1118 is a true and correct copy of the Wang article (9 pages). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1118 was found within the custody of a library – a place where, if authentic, a copy of this online open access journal would likely be. Additionally, Exhibit 1118 is in a condition that creates no suspicion about its authenticity. The Wang journal article is available from the publisher's website and the digital repositories *ResearchGate*[188] and *Semantic Scholar*.[189] A printout of the publisher's webpage for the Wang article is attached as Attachment 68a.

577. Attached hereto as Attachment 68b is a true and correct copy of the MARC record for the journal *Food Chemistry* from the King Library at San José State University. I personally identified and retrieved the MARC record that is Attachment 68b.

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188 https://www.researchgate.net/publication/347879071_Reinvestigation_of_2-acetylthiazole_formation_pathways_in_the_Maillard_reaction.

189 https://www.semanticscholar.org/paper/Reinvestigation-of-2-acetylthiazole-formation-in-Wang-Ma/9647ec512151ffe5d934fc7e79332ac20e8cb2e7.

578. As noted in the holdings information (field 362), the King Library at San José State University has received the journal *Food Chemistry* since July 1976 and continues to receive the publication. In view of the MARC record for Exhibit 1118, the Wang article was publicly available on December 2, 2020, as indicated on the publisher's website (see Attachment 68a).

579. The entry in field 008, character 7 of Attachment 68b is "c," which indicates that the journal *Food Chemistry* is a serial publication. Accordingly, the MARC record for Exhibit 1118 corresponds to those issues of the journal *Food Chemistry* from the time of the serial began publication to the present day.

580. Attachment 68b further includes an entry in field 050 ("TX501")—includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system). Attachment 68b further includes two descriptor terms reading "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973) and "Food $x Composition $v Periodicals" (see Attachment 2c, Library of Congress subject heading sh85050191) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 68b was indexed according to its subject matter by virtue of at least two independently sufficient classifications: the field 050 entry and the field 650 entries. Further, as of March 31, 1998, the MARC record attached hereto as Attachment 68b

was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

581. Attachment 68b indicates that the MARC record for the journal *Food Chemistry* obtained from *WorldCat*, the public view of the OCLC bibliographic database, is available in 23 editions.[190] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 68b indicates that a cataloger in the King Library at San José State University used OCLC record number 38873912 (first field 035) to create the local MARC record dated March 31, 1998 (field 008, 980331).

582. The *WorldCat* database indicates that the journal *Food Chemistry* as cataloged in *WorldCat* is currently available from 570 libraries. Based on finding a copy of Exhibit 1118 in the King Library at San José State University and MARC record in its online library catalog attached as Attachment 68b, it is my opinion that the Wang article published in the journal *Food Chemistry* was available in the King Library at San José State University on December 2, 2020 (see Attachment 68a).

[190] https://www.worldcat.org/title/38873912.

DDDD. Boelens journal article [Exhibit 1119]

583. Exhibit 1119 is a copy of an article from Volume 18 of the online open access journal *Perfumer and Flavoris*. The article, "Volatile Character-Impact Sulfur Compounds and Their Sensory Properties" by Mans H. Bolens and Leo J. van Gemert (hereafter "Boelens"), appears beginning on page 29 in this issue dated May/June 1993.

584. I obtained Exhibit 1119 from the publisher's website. A printout of the publisher's webpage for the Boelens article is attached as Attachment 69a. Exhibit 1119 is a true and correct copy of the Boelens article (pages 29-39). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1119 was found within the custody of its publisher – a place where, if authentic, a copy of this online open access journal would likely be. Additionally, Exhibit 1119 is in a condition that creates no suspicion about its authenticity.

585. Attached hereto as Attachment 69b is a true and correct copy of the MARC record for the online open access journal *Perfumer and Flavorist* from the Library of Congress. The ownership is indicated by the library's name at the top of the screen. I personally identified and retrieved the MARC record that is Attachment 69b.

586. As noted in the holdings information (field 362), the Library of Congress has received the online open access journal *Perfumer and Flavorist* since 1980 and continues to receive the publication.[191] In view of the MARC record for Exhibit 1119, the Boelens article was publicly available on May 31, 1993.[192]

587. The entry in field 008, character 7 of Attachment 68b is "c," which indicates that the online open access journal *Perfumer and Flavoritst* is a serial publication. Accordingly, the MARC record for Exhibit 1119 corresponds to those issues of the online open access journal *Perfumer and Flavorist* from the time of the serial adopted the current title to the present day.

588. Attachment 69b further includes an entry in field 050 ("TP983")—includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification

[191] The publication was originally titled *Perfumer & Flavorist International* (1976-1979) and adopted the current title, *Perfumer and Flavorist* in 1980.

[192] The *Perfumer and Flavorist* was published bimonthly and, therefore, new issues were available approximately 60 days. Based on the frequency of publication (see Attachment 69b, field 310) and my years of experience working with serials, it is my opinion that issues would be published by the end of the month. Therefore, a public availability date of May 31, 1993, is reasonable.

system) and an entry in field 082 ("668/.54/05")— includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 69b further includes two descriptor terms reading "Perfume $v Periodicals" (see Attachment 69c, Library of Congress subject heading sh2010105517) and "Flavoring essences $v Periodicals" (see Attachment 13c, Library of Congress subject heading sh85049035 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 69b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entries. Further, as of September 25, 1980, the MARC record attached hereto as Attachment 69b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

589. Attachment 69b indicates that the MARC record for the journal *Perfumer and Flavorist* obtained from *WorldCat*, the public view of the OCLC

bibliographic database, is available in 7 editions.[193] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 69b indicates that a cataloger in the Library of Congress created OCLC record number 6751162 (field 040) on September 25, 1980 (field 008, 800925) and contributed it to the OCLC bibliographic database.

590. The *WorldCat* database indicates that the online open access journal *Perfumer and Flavorist* as cataloged in *WorldCat* is currently available from 396 libraries. Based on finding a copy of Exhibit 1119 from the publisher and MARC record from the Library of Congress online library catalog attached as Attachment 69b, it is my opinion that the Boelens article published in the online open access journal *Perfumer and Flavorist* was available in the Library of Congress on May 31, 1993.

EEEE. Klue blog entry [Exhibit 1120]

591. Exhibit 1120 is a blog entry, "Beyond Meat vs. Impossible Foods: The Very Real Battle Between the Biggest 'Fake-Meat' Competitors," prepared by Adam McQueen for Klue (hereafter "Klue").[194] The WayBack Machine indicates that the Klue blog was present on the Internet as early as March 31, 2022 (see

[193] https://www.worldcat.org/title/6751162.

[194] https://klue.com/blog/beyond-meat-vs-impossible-foods-the-very-real-battle-between-the-biggest-fake-meat-competitors.

Attachment 70a). I downloaded Exhibit 1120 from the Klue Labs website. Specifically, the text of Exhibit 1120 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1120 was found within the custody of a digital repository, a place where an authentic copy of this press release would likely be.

592. A blog entry exhibits the following characteristics: the blog entry is attributed to a creator or author (in this case Adam McQueen) who affixes a date of creation (in this case March 31, 2022) and publishes the document through an outlet (in this case Klue Labs).

593. Based on finding a digital copy of Exhibit 1120 from the Klue Labs website, it is my opinion that the blog titled "Beyond Meat vs. Impossible Foods: The Very Real Battle Between the Biggest 'Fake-Meat' Competitors" was available to the public on March 31, 2022, as indicated on the WayBack Machine capture. It is also my opinion that there is no reason to doubt the authenticity of Exhibit 1120 given its appearance, contents, and the web address from which it was obtained.

FFFF. *Heme, Health, and the Plant-Based Diet* [Exhibit 1121]

594. Attached hereto as Exhibit 1121 is a blog entry titled "Heme, Health, and the Plant-Based Diet" prepared by Pat Brown, CEO and founder of Impossible™ Foods, and published on its blog on March 2, 2018.

595. Exhibit 1121 is a true and accurate copy of the website and was issued as a public document on the Impossible™ Foods blog.[195] Specifically, the text of Exhibit 1121 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1121 was found within the custody of a digital repository, a place where an authentic copy of this document would likely be.

596. A blog entry exhibits the following characteristics: the blog entry is attributed to a creator or author (in this case Pat Brown, Chief Visionary Officer) who affixes a date of creation (in this case March 2, 2018) and publishes the document through a news outlet (in this case Impossible™ Foods, Inc.).

597. Based on finding a digital copy of Exhibit 1121 on the Internet, it is my opinion that the blog entry titled "Heme, Health, and the Plant-Based Diet" was available to the public on March 2, 2018, as indicated on the first page of the document. It is also my opinion that there is no reason to doubt the authenticity of Exhibit 1121 given its appearance, contents, and the web address from which it was obtained.

[195] https://impossiblefoods.com/blog/heme-health-the-essentials

GGGG. Saha journal article [Exhibit 1122]

598. Exhibit 1122 is a copy of an article published in Volume 47, Number 6 of the Journal of *Food Science and Technology Chemistry*. The article, "Hydrocolloids as Thickening and Gelling Agents in Food: A Critical Review" by Dipjyoti Sahaand Suvendu Bhattacharya (hereafter "Saha"), appears beginning on page 587 in this issue dated December 2010.

599. I obtained Exhibit 1122 from the King Library at San José State University. Exhibit 1122 is a true and correct copy of the Saha article (pages 587-597). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1122 was found within the custody of a library – a place where, if authentic, a copy of this online open access journal would likely be. Additionally, Exhibit 1122 is in a condition that creates no suspicion about its authenticity. The Saha journal article is also available through the publisher, the National Library of Medicine[196] and the digital repository *ResearchGate.*[197] A printout of the publisher's webpage for the Saha article is attached as Attachment 72a.

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[196] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3551143/.

[197] https://www.researchgate.net/publication/236189281_Hydrocolloids_as_thickening_and_gelling_agents_in_food_A_critical_review.

600. Attached hereto as Attachment 72b is a true and correct copy of the MARC record for the *Journal of Food Science and Technology* from the King Library at San José State University. I personally identified and retrieved the MARC record that is Attachment 72b.

601. As noted in the holdings information (field 362), the King Library at San José State University has received the *Journal of Food Science and Technology* since April 1964 and continues to receive the publication. In view of the MARC record for Exhibit 1122, the Saha article was publicly available on November 6, 2010, as indicated on the National Library of Medicine website.

602. The entry in field 008, character 7 of Attachment 72b is "c," which indicates that the *Journal of Food Science and Technology* is a serial publication. Accordingly, the MARC record for Exhibit 1122 corresponds to those issues of the *Journal of Food Science and Technology* from the time of the serial began publication to the present day.

603. Attachment 72b further includes an entry in field 050 ("TX341 $b .J58")— includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO651S")— includes a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field

070 ("389.8 $b J823")— includes a subject matter classification number consistent with the National Agricultural Library classification system (analogous to the Dewey Decimal classification system). Attachment 72b further includes three descriptor terms reading "Nutrition $v Periodicals" (see Attachment 9c, Library of Congress subject heading sh2008108541), "Food industry and trade $v Periodicals" (see Attachment 5b, Library of Congress subject heading sh200810391), and "Food" (see Attachment 5e, Library of Congress subject heading sh85050184) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 72b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 070 entry, and the field 650 entries. Further, as of December 24, 1974, the MARC record attached hereto as Attachment 72b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

604. Attachment 72b indicates that the MARC record for the *Journal of Food Science and Technology* obtained from *WorldCat*, the public view of the

OCLC bibliographic database, is available in 15 editions.[198] As previously noted, the library that created the record is recorded in field 040 with a unique library code. Attachment 72b indicates that a cataloger at the Library of Congress created OCLC record number 1800339 (first field 035) on December 24, 1974 (field 008, 741224).

605. The *WorldCat* database indicates that the *Journal of Food Science and Technology* as cataloged in *WorldCat* is currently available from 1,151 libraries. Based on finding a copy of Exhibit 1122 in the King Library at San José State University and MARC record in its online library catalog attached as Attachment 72b, it is my opinion that the Saha article published in the *Journal of Food Science and Technology* was available in the King Library at San José State University on November 6, 2010.

HHHH. Flour, Soy, Defatted [Exhibit 1126]

606. Exhibit 1126 is a printout of the website *Flour, Soy, Defatted* (hereafter "FDA2") developed at the U.S. Food and Drug Administration (Silver Spring, Maryland). This document is part of the main website designed for the public, researchers, and scientists.[199] Clicking on the search box of the UDSA home page takes the information seeker to the description and information about food, and

[198] https://www.worldcat.org/title/1800339.

[199] https://www.fda.gov/.

selecting the section titled "Foundation foods" results in a selection of related documents including *Flour, Soy, Defatted*[200] (document 16117). I downloaded Exhibit 1126 from the UDSA dated October 30, 2020. Specifically, the text of Exhibit 1126 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1126 was found within the custody of the host federal agency, a place where an authentic copy of this document would likely be.

607. Exhibit 1126 is a true and correct copy of the document titled *Flour, Soy, Defatted* from the USDA website in a condition that creates no suspicion about its authenticity. Based on the date recorded in the document, it is my opinion that the document titled *Flour, Soy, Defatted* was available to the public on October 30, 2020.

IIII. Textured Soy Protein Commodity Fact Sheet [Exhibit 1127]

608. Exhibit 1127 is a printout of the website *Textured Soy Protein Commodity Fact Sheet* (hereafter "USAID") developed at the U. S. Agency for International Development (USAID) (Washington, DC). This document is the archive for documents available from June 2012 through September 2017. Clicking on the USAID home page takes the information seeker through the following steps

[200] https://fdc.nal.usda.gov/fdc-app.html#/food-details/1104705/nutrients.

to find the document: (1) "What We Do;" (2) "Agriculture and Food Security;" (3) "Food Assistance;" (4) "Resources;" and, (5) "Textured Soy Protein Commodity Fact Sheet." I downloaded Exhibit 1127 from the USAID dated September 30, 2016. Specifically, the text of Exhibit 1127 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1127 was found within the custody of the host federal agency, a place where an authentic copy of this document would likely be.

609. Exhibit 1127 is a true and correct copy of the document titled *Textured Soy Protein Commodity Fact Sheet* from the USAID website in a condition that creates no suspicion about its authenticity. Based on the date recorded in the document, it is my opinion that the document titled *Textured Soy Protein Commodity Fact Sheet* was available to the public on September 30, 2016.

JJJJ. Prosante™ Textured Soy Flour [Exhibit 1128]

610. Exhibit 1128 is a printout of the website *Prosante™ Textured Soy Flour* (hereafter "Cargill") developed at Cargill, Incorporated (Wayzata, Minnesota). This document is part of the main website designed for the public, researchers, and scientists.[201] Entering the term for the food (Prosante™) and clicking on the search

[201] https://www.cargill.com/home.

box of the Cargill home page takes the information seeker to the description and information about this product. A companion sell sheet titled *Textured Soy Flour* appears on the website and is dates April 2016. The document identified as Exhibit 1128 appears as the second entry on the list. I downloaded Exhibit 1128 from the Cargill website. Specifically, the text of Exhibit 1128 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1128 was found within the custody of the host federal agency, a place where an authentic copy of this document would likely be.

611. Exhibit 1128 is a true and correct copy of the document titled *Flour, Soy, Defatted* from the Cargill website in a condition that creates no suspicion about its authenticity. Based on the date recorded in the document, it is my opinion that the document titled *Flour, Soy, Defatted* was available to the public on April 30, 2016.

KKKK. Mottram 1995 article [Exhibit 1129]

612. Attached hereto as Exhibit 1129 is a copy of the journal article, "Volatile Compounds from the Reaction of Cysteine, Ribose, and Phospholipid in Low-Moisture Systems" by Donald S. Mottram and Frank B. Whitfield (hereafter "Mottram 1995"). The Mottram 1995 article was published in Volume 43, Number

4 of the *Journal of Agricultural and Food Chemistry*. The Mottram 1995 article appears beginning on page 984 of this issue dated April 1, 1995.

613. I obtained Exhibit 1129 from the University of Wisconsin – Madison Libraries. Exhibit 1129 is a true and correct copy of the Mottram 1995 article (pages 984-988). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Mottram 1995 article is also available from the publisher, the American Chemical Society[202] and through the Food and Agriculture Organization of the United Nations (AGRIS).[203] Exhibit 1129 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Exhibit 1129 is a true and correct copy in a condition that creates no suspicion about its authenticity.

614. Attached hereto as Attachment 73a is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update and enhance the MARC record to meet current cataloging rules. The most

[202] https://pubs.acs.org/doi/abs/10.1021/jf00052a027.

[203] https://agris.fao.org/agris-search/search.do?recordID=US1997052526.

recent enhancement to Attachment 73a occurred on March 13, 2015, as shown in field 005 field ("20150313"). I personally identified and retrieved the MARC record that is Attachment 73a.

615. Based on finding a print copy of Exhibit 1129 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 73a, it is my opinion that the Mottram 1995 article published in the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after May 1, 1995, as shown by the date stamp on third page of Exhibit 1129. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked.

616. Attachment 73a also shows that Exhibit 1129 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

617. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the *Journal of Agricultural and Food Chemistry* since April 1953 and continues to receive the publication. In view of the

MARC record for Exhibit 1129, the Mottram 1995 article was publicly available on or shortly after May 1, 1995, because the serial title had been received, cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

618. Attached hereto as Attachment 73b is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 73b, that library code is "NRC," which means that the MARC record for this serial was cataloged at the University of North Carolina – Raleigh Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of North Carolina – Raleigh Libraries created OCLC record number 1800249 on December 24, 1974, as shown in the "Entered" field ("19741224"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 73b occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 73b. The "BLvl" entry in Attachment 73b is "s," which indicates that the *Journal of Agricultural and Food Chemistry* is a serial publication. Field 310 of Attachment 73b reads "Weekly, $b <2012-." Accordingly, the MARC record for Exhibit 1129

corresponds to the *Journal of Agricultural and Food Chemistry* from the time the serial title began and includes the date of the Mottram 1995 article.

619. Attachment 73b includes an entry in field 050 ("S583")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO534D"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("630.2405"), a subject matter consistent with the Dewey Decimal classification system. Attachment 73b further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 73b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of December 24, 1974, the MARC record attached hereto as Attachment 73b was accessible through any library with access to the OCLC bibliographic database or

the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

620. Attachment 73b indicates that the *Journal of Agricultural and Food Chemistry* as cataloged at the University of North Carolina – Raleigh Libraries is currently available from 596 libraries. In view of the above, this issue of the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after May 1, 1995, because by that date it had been cataloged and indexed at the University of North Carolina – Raleigh Libraries, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1129 was published and accessible to the public on or shortly after May 1, 1995.

LLLL. Kang article [Exhibit 1130]

621. Attached hereto as Exhibit 1130 is a copy of the journal article, "Gelation and Gel Properties of Soybean Glycinin in a Transglutaminase-Catalyzed System" by Il Jun Kang, Jun, Yasuki Matsumura, Koji Ikura, Masao Motoki, Hiroko Sakamoto, and Tomohiko Mori (hereafter "Kang"). The Kang article was published in Volume 42, Number 1 of the *Journal of Agricultural and Food Chemistry*. The Kang article appears beginning on page 159 of this issue dated January 1994.

622. I obtained Exhibit 1130 from the University of Wisconsin – Madison Libraries. Exhibit 1130 is a true and correct copy of the Kang article (pages 159-165). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Kang article is also available from the publisher, the American Chemical Societ,[204] and through the Food and Agriculture Organization of the United Nations (AGRIS).[205] Exhibit 1130 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Exhibit 1130 is a true and correct copy in a condition that creates no suspicion about its authenticity.

623. Attached hereto as Attachment 74a is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's name at the top of the screen. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 74a occurred on March 13, 2015, as shown in

[204] https://pubs.acs.org/doi/10.1021/jf00037a028.

[205] https://agris.fao.org/agris-search/search.do?recordID=US9508796.

field 005 field ("20150313"). I personally identified and retrieved the MARC record that is Attachment 74a.

624. Based on finding a print copy of Exhibit 1130 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 74a, it is my opinion that the Kang article published in the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after February 7, 1994, as shown on page 4 of Exhibit 1130. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked.

625. Attachment 74a also shows that Exhibit 1130 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields.

626. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the *Journal of Agricultural and Food Chemistry* since April 1953 and continues to receive the publication. In view of the MARC record for Exhibit 1130, the Kang article was publicly available on or shortly

after February 7, 1994, because the serial title had been received, cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

627. Attached hereto as Attachment 74b is a true and correct copy of the MARC record for the *Journal of Agricultural and Food Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 74b, that library code is "NRC," which means that the MARC record for this serial was cataloged at the University of North Carolina – Raleigh Libraries. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of North Carolina – Raleigh Libraries created OCLC record number 1800249 on December 24, 1974, as shown in the "Entered" field ("19741224"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 74b occurred on November 9, 2021, as shown in the "Replaced" field ("20211109"). I personally identified and retrieved the MARC record that is Attachment 74b. The "BLvl" entry in Attachment 74b is "s," which indicates that the *Journal of Agricultural and Food Chemistry* is a serial publication. Field 310 of Attachment 74b reads "Weekly, $b <2012-." Accordingly, the MARC record for Exhibit 1130

corresponds to the *Journal of Agricultural and Food Chemistry* from the time the serial title began and includes the date of the Kang article.

628. Attachment 74b includes an entry in field 050 ("S583")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO534D"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("630.2405"), a subject matter consistent with the Dewey Decimal classification system. Attachment 74b further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Food $x Analysis $v Periodicals" (see Attachment 2b, Library of Congress subject heading sh2008103973), and "Plants $x Nutrition $v Periodicals" (see Attachment 12c, Library of Congress subject heading sh85102868 and Attachment 2d, Library of Congress subject heading sh85099890) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 74b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of December 24, 1974, the MARC record attached hereto as Attachment 74b was accessible through any library with access to the OCLC bibliographic database or

the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

629. Attachment 74b indicates that the *Journal of Agricultural and Food Chemistry* as cataloged at the University of North Carolina – Raleigh Libraries is currently available from 596 libraries. In view of the above, this issue of the *Journal of Agricultural and Food Chemistry* was publicly available on or shortly after February 7, 1994, because by that date it had been cataloged and indexed at the University of North Carolina – Raleigh Libraries, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1130 was published and accessible to the public on or shortly after February 7, 1994.

MMMM. Nio article [Exhibit 1131]

630. Attached hereto as Exhibit 1131 is a copy of the journal article, "Gelation Mechanism of Protein Solution by Transglutaminase" by Noriki Nio, Masao Motoki, and Koichi Takinami (hereafter "Nio"). The Nio article was published in Volume 50, Issue 4 of the journal *Agricultural and Biological Chemistry*. The Nio article appears beginning on page 851 of this issue dated April 1, 1986.

631. I obtained Exhibit 1131 from the University of Wisconsin – Madison Libraries. Exhibit 1131 is a true and correct copy of the Nio article (pages 851-855). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Nio article is also available from the publisher, Oxford University Press.[206] Exhibit 1131 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Exhibit 1131 is a true and correct copy in a condition that creates no suspicion about its authenticity.

632. Attached hereto as Attachment 75a is a true and correct copy of the MARC record for the journal *Agricultural and Biological Chemistry* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's code (uwmadisondb) in the fourth field 035. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 75a occurred on August 29, 2007, as shown in field 005 field ("20070829"). I personally identified and retrieved the MARC record that is Attachment 75a.

206 https://academic.oup.com/bbb/article-abstract/50/4/851/5967071?redirectedFrom=fulltext.

633. Based on finding a print copy of Exhibit 1131 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 75a, it is my opinion that the Nio article published in the journal *Agricultural and Biological Chemistry* was publicly available on or shortly after June 20, 1986, as shown by the date stamp on the cover of Exhibit 1131. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 75a also shows that Exhibit 1131 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Biochemistry $v Periodicals" (see Attachment 21d, Library of Congress subject heading sh2007101985), and "Chemistry, Organic $v Periodicals" (see Attachment 75c, Library of Congress subject heading sh2008100337) in the 650 fields.

634. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the journal *Agricultural and Biological Chemistry* since 1961 and continues to receive the publication.[207] In view of the

[207] The publication was originally titled *Journal of the Agricultural Chemical Society of Japan* (October 1924-April 1926), changed the title to *Agricultural and Biological Chemistry* (May 1926-December 1960), changed the title *Agricultural and*

MARC record for Exhibit 1131, the Nio article was publicly available on or shortly after June 20, 1986, because the serial title had been received, cataloged, and indexed in the University of Wisconsin–Madison Libraries and made part of its online catalog database.

635. Attached hereto as Attachment 75b is a true and correct copy of the MARC record for the journal *Agricultural and Biological Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 75b, that library code is "NYG," which means that the MARC record for this serial was cataloged at the New York State Library (Albany, New York). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the New York State Library created OCLC record number 5458841 on October 2, 1979, as shown in the "Entered" field ("19791002"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 75b occurred on August 9, 2022, as shown in the "Replaced" field ("20220809"). I personally identified and retrieved the MARC record that is Attachment 75b. The "BLvl" entry in Attachment 75b is "s,"

Biological Chemistry (January 1961-December 1991), and adopted the current title, *Bioscience, Biotechnology, and Biochemistry*, in January 1992.

which indicates that the journal *Agricultural and Biological Chemistry* is a serial publication. Field 310 of Attachment 75b reads "Monthly." Accordingly, the MARC record for Exhibit 1131 corresponds to the journal *Agricultural and Biological Chemistry* and includes the date of the Nio article.

636. Attachment 75b includes an entry in field 050 ("QH345 $b .A35")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b AG382"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), and an entry in field 082 ("574.192"), a subject matter consistent with the Dewey Decimal classification system. Attachment 75b further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Biochemistry $v Periodicals" (see Attachment 21d, Library of Congress subject heading sh2007101985), and "Chemistry, Organic $v Periodicals" (see Attachment 75c, Library of Congress subject heading sh2008100337) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 75b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of October 2, 1979, the MARC record

attached hereto as Attachment 75b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

637. Attachment 75b indicates that the journal *Agricultural and Biological Chemistry* as cataloged at the New York State Library is currently available from 284 libraries. In view of the above, this issue of the journal *Agricultural and Biological Chemistry* was publicly available on or shortly after June 20, 1986, because by that date it had been cataloged and indexed at the New York State Library, made part of the OCLC bibliographic database, and received at the University of Wisconsin–Madison Libraries. For these reasons, it is my opinion that Exhibit 1131 was published and accessible to the public on or shortly after June 20, 1986.

NNNN. Hargrove article [Exhibit 1133]

638. Attached hereto as Exhibit 1133 is a copy of the journal article, "Characterization of Recombinant Soybean Leghemoglobin A and Apolar Distal Histidine Mutants" by Mark S. Hargrove, Jennifer K.Barry, Eric Allen Brucker, Michael B. Berry, George N. Phillips Jr., John S. Olson, Raúl Arredondo-Peter, Jeanenne M. Dean, Robert V. Klucas, and Gautam Sarath (hereafter "Hargrove").

The Hargrove article was published in Volume 266, Number 5 of the *Journal of Molecular Biology*. The Hargrove article appears beginning on page 1032 of this issue dated March 14, 1997.

639. I obtained Exhibit 1133 from the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). Exhibit 1133 is a true and correct copy of the Hargrove article (pages 1032-1042). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Hargrove article is also available from the publisher, Elsevier[208] and through the National Library of Medicine.[209] Exhibit 1133 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Exhibit 1133 is a true and correct copy in a condition that creates no suspicion about its authenticity.

640. Attached hereto as Attachment 76a is a true and correct copy of the MARC record for the *Journal of Molecular Biology* at the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). The library ownership

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[208] https://www.sciencedirect.com/science/article/abs/pii/S0022283696908335?via%3Dihub

[209] https://pubmed.ncbi.nlm.nih.gov/9086279/.

is indicated by the presence of the library's code (LHL) in field 049. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 76a occurred on October 28, 2019, as shown in field 005 field ("20191028"). I personally identified and retrieved the MARC record that is Attachment 76a.

641. Based on finding a copy of Exhibit 1133 in the Linda Hall Library of Science, Engineering & Technology and MARC record in its online library catalog attached as Attachment 76a, it is my opinion that the Hargrove article published in the *Journal of Molecular Biology* was publicly available on or shortly after March 26, 1997, as indicated on shown on page 2 of Exhibit 1133. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 76a also shows that Exhibit 1133 was catalogued with three descriptor terms reading "Biology $v Periodicals" (see Attachment 76b, Library of Congress subject heading sh2007101986), "Biochemistry $v Periodicals" (see Attachment 21d, Library of Congress subject heading sh2007101985), and "Molecular biology $v Periodicals" (see Attachment 76c, Library of Congress subject heading sh2008107896) in the 650 fields.

642. As noted in the holdings information (362 field), the Linda Hall Library of Science, Engineering & Technology has received the *Journal of Molecular*

Biology since April 1959 and continues to receive the publication. In view of the MARC record for Exhibit 1133, the Hargrove article was publicly available on or shortly after March 26, 1997, because the serial title had been received, cataloged, and indexed in the Linda Hall Library of Science, Engineering & Technology and made part of its online catalog database.

643. Attached hereto as Attachment 76d is a true and correct copy of the MARC record for the *Journal of Molecular Biology* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 76d, that library code is "DLC," which means that the MARC record for this serial was cataloged at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 1452923 on November 12, 1974, as shown in the "Entered" field ("19741112"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 76d occurred on July 13, 2022, as shown in the "Replaced" field ("20220713"). I personally identified and retrieved the MARC record that is Attachment 76d. The "BLvl" entry in Attachment 76d is "s," which indicates that the *Journal of Molecular Biology* is a serial publication. Field 310 of Attachment 76d reads "Twenty-four no. a year, $b <2013-." Accordingly, the MARC record for

Exhibit 1133 corresponds to the *Journal of Molecular Biology* from the time the serial title began publication and includes the date of the Hargrove article.

644. Attachment 76d includes an entry in field 050 ("QH301 $b .J73")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO773")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("574.8/8/05")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 76d further includes six descriptor terms reading "Biology $v Periodicals" (see Attachment 76b, Library of Congress subject heading sh2007101986), "Biochemistry $v Periodicals" (see Attachment 21d, Library of Congress subject heading sh2007101985), and "Molecular biology $v Periodicals" (see Attachment 76c, Library of Congress subject heading sh2008107896), "Bacteriology" (see Attachment 76e, Library of Congress subject heading sh85010864), "Biochemistry" (see Attachment 76f, Library of Congress subject heading sh85014171), and "Biology" (see Attachment 76g, Library of Congress subject heading sh85014203) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 76d was indexed according to its subject matter by virtue of at least

four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of November 12, 1974, the MARC record attached hereto as Attachment 76d was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

645. Attachment 76d indicates that the *Journal of Molecular Biology* as cataloged at the Library of Congress is currently available from 780 libraries. In view of the above, this issue of the *Journal of Molecular Biology* was publicly available on or shortly after March 26, 1997, because by that date it had been cataloged and indexed at the Library of Congress, made part of the OCLC bibliographic database, and received at the Linda Hall Library of Science, Engineering & Technology. For these reasons, it is my opinion that Exhibit 1133 was published and accessible to the public on or shortly after March 26, 1997.

OOOO. Lund article [Exhibit 1134]

646. Attached hereto as Exhibit 1134 is a copy of the journal article, "Influence of Time, Temperature, Moisture, Ingredients, and Processing Conditions on Starch Gelatinization" by Daryl B. Lund (hereafter "Lund"). The Lund article was published in Volume 20, Issue 4 of the journal *Critical Reviews in Food Science*

and Nutrition. The Lund article appears beginning on page 249 of this issue dated 1984.

647. I obtained Exhibit 1134 from the University of Wisconsin – Madison Libraries. Exhibit 1134 is a true and correct copy of the Lund article (pages 249-273). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Lund article is also available through the National Library of Medicine[210] and the digital repository ResearchGate.[211] Exhibit 1134 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Exhibit 1134 is a true and correct copy in a condition that creates no suspicion about its authenticity.

648. Attached hereto as Attachment 77a is a true and correct copy of the MARC record for the journal *Critical Reviews in Food Science and Nutrition* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's code (uwmadisondb) in the fourth field 035. The library continues to update and enhance the MARC record to meet current cataloging rules.

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[210] https://pubmed.ncbi.nlm.nih.gov/6386335/.

[211] https://www.researchgate.net/publication/261639255_Influence_of_time_temperature_moisture_ingredients_and_processing_conditions_on_starch_gelatinization.

The most recent enhancement to Attachment 77a occurred on April 9, 2015, as shown in field 005 field ("20150409"). I personally identified and retrieved the MARC record that is Attachment 77a.

649. Based on finding a print copy of Exhibit 1134 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 77a, it is my opinion that the Lund article published in the journal *Critical Reviews in Food Science and Nutrition* was publicly available on or shortly after August 15, 1984, as shown on the cover. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 77a also shows that Exhibit 1134 was catalogued with two descriptor terms reading "Food industry and trade $v Periodicals" (see Attachment 5b, Library of Congress subject heading sh2008103991) and "Nutrition $v Periodicals" (see Attachment 5c, Library of Congress subject heading sh2008108541) in the 650 fields.

650. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the journal *Critical Reviews in Food Science and Nutrition* since June 1980 and continues to receive the publication.[212]

[212] The publication was originally titled *CRC Critical Reviews in Food Technology* (February 1970-April 1975, then changed the title to *CRC Critical Reviews in Food*

In view of the MARC record for Exhibit 1134, the Lund article was publicly available on or shortly after August 15, 1984, because the serial title had been received, cataloged, and indexed in the University of Wisconsin – Madison Libraries and made part of its online catalog database.

651. Attached hereto as Attachment 77b is a true and correct copy of the MARC record for the journal *Critical Reviews in Food Science and Nutrition* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 77b, that library code is "DLC," which means that the MARC record for this serial was cataloged at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 12330732 on July 31, 1985, as shown in the "Entered" field ("19850731"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 77b occurred on August 10, 2022, as shown in the "Replaced" field ("20220810"). I personally identified and retrieved the MARC record that is Attachment 77b. The "BLvl" entry in Attachment 77b is "s," which

Science and Nutrition (June 1975-December 1979), and adopted the current title, *Trends in Food Science & Technology*, in January 1980.

indicates that the journal *Critical Reviews in Food Science and Nutrition* is a serial publication. Field 310 of Attachment 77b reads "Twenty-two issues a year, $b <2019-." Accordingly, the MARC record for Exhibit 1134 corresponds to the journal *Critical Reviews in Food Science and Nutrition* from the time the serial title adopted the current title and includes the date of the Lund article.

652. Attachment 77b includes an entry in field 050 ("TP368 $b .C46")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b C555F"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("664/.005"), a subject matter consistent with the Dewey Decimal classification system. Attachment 77b further includes four descriptor terms reading "Food industry and trade $v Periodicals" (see Attachment 5b, Library of Congress subject heading sh2008103991), "Nutrition $v Periodicals" (see Attachment 5c, Library of Congress subject heading sh2008108541), "Food $v Periodicals" (see Attachment 5e, Library of Congress subject heading sh85050184), and "Nutrition" (see Attachment 5f, Library of Congress subject heading sh85093451) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 77b was indexed according to its subject matter by virtue of at least four independently sufficient

classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of July 31, 1985, the MARC record attached hereto as Attachment 77b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

653. Attachment 77b indicates that the journal *Critical Reviews in Food Science and Nutrition* as cataloged at the Library of Congress is currently available from 237 libraries. In view of the above, this issue of the journal *Critical Reviews in Food Science and Nutrition* was publicly available on or shortly after August 15, 1984, because by that date it had been cataloged and indexed at the Library of Congress, made part of the OCLC bibliographic database, and received at the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1134 was published and accessible to the public on or shortly after August 15, 1984.

PPPP. Nicola article [Exhibit 1135]

654. Attached hereto as Exhibit 1135 is a copy of the journal article, "Structural Rearrangements Due to Ligand Binding and Haem Replacement in Myoglobin and Leghaemoglobins" by Nicos A. Nicola and Sydney J. Leach

(hereafter "Nicola"). The Nicola article was published in Volume 78, Issue 1 of the *European Journal of Biochemistry*. The Nicola article appears beginning on page 133 of this issue dated August 1977.

655. I obtained Exhibit 1135 from the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). Exhibit 1135 is a true and correct copy of the Nicola article (pages 133-140). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Nicola article is also available from the publisher, Wiley,[213] and through the National Library of Medicine.[214] Exhibit 1135 was found within the custody of a library – a place where an authentic copy of this journal would likely be. Exhibit 1135 is a true and correct copy in a condition that creates no suspicion about its authenticity.

656. Attached hereto as Attachment 78a is a true and correct copy of the MARC record for the *European Journal of Biochemistry* at the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). The library

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213 https://febs.onlinelibrary.wiley.com/doi/full/10.1111/j.1432-1033.1977.tb11722.x.

214 https://pubmed.ncbi.nlm.nih.gov/913393/.

ownership is indicated by the presence of the library's code (LHL) in field 049. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 78a occurred on October 29, 2019, as shown in field 005 field ("20191029"). I personally identified and retrieved the MARC record that is Attachment 78a.

657. Based on finding a copy of Exhibit 1135 in the Linda Hall Library of Science, Engineering & Technology and MARC record in its online library catalog attached as Attachment 78a, it is my opinion that the Nicola article published in the *European Journal of Biochemistry* was publicly available on or shortly after September 13, 1977, as indicated on shown on the cover. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 78a also shows that Exhibit 1135 was catalogued with a descriptor term reading "Biochemistry $v Periodicals" (see Attachment 21d, Library of Congress subject heading sh2007101985) in the 650 field.

658. As noted in the holdings information (362 field), the Linda Hall Library of Science, Engineering & Technology has received the *European Journal of Biochemistry* since March 1967 and continues to receive the publication. In view of the MARC record for Exhibit 1135, the Nicola article was publicly available on or shortly after September 13, 1977, because the serial title had been received,

cataloged, and indexed in the Linda Hall Library of Science, Engineering & Technology and made part of its online catalog database.

659. Attached hereto as Attachment 78b is a true and correct copy of the MARC record for the *European Journal of Biochemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 78b, that library code is "MUL," which means that the MARC record for this serial was cataloged as part of the Minnesota Union List of Serials at the University of Minnesota Libraries (Minneapolis, Minnesota). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the University of Minnesota Libraries created OCLC record number 1568454 on August 24, 1975, as shown in the "Entered" field ("19750824"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 78b occurred on December 30, 2020, as shown in the "Replaced" field ("20201230"). I personally identified and retrieved the MARC record that is Attachment 78b. The "BLvl" entry in Attachment 78b is "s," which indicates that the *European Journal of Biochemistry* is a serial publication. Field 310 of Attachment 78b reads "Twice monthly, $b <1990-2004." Accordingly, the MARC record for Exhibit 1135 corresponds to the *European Journal of*

Biochemistry from the time the serial title began publication and includes the date of the Nicola article.

660. Attachment 78b includes an entry in field 050 ("QP501 $b .E87")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system)and an entry in field 060 ("W1 $b EU68")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system). Attachment 78b further includes a descriptor term reading "Biochemistry $v Periodicals" (see Attachment 21d, Library of Congress subject heading sh2007101985) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 78b was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 060 entry, and the field 650 entries. As of August 24, 1975, the MARC record attached hereto as Attachment 78b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

661. Attachment 78b indicates that the *European Journal of Biochemistry* as cataloged at the University of Minnesota Libraries is currently available from 493 libraries. In view of the above, this issue of the *European Journal of Biochemistry* was publicly available on or shortly after September 13, 1977, because by that date it had been cataloged and indexed at the University of Minnesota Libraries, made part of the OCLC bibliographic database, and received at the Linda Hall Library of Science, Engineering & Technology. For these reasons, it is my opinion that Exhibit 1135 was published and accessible to the public on or shortly after September 13, 1977.

QQQQ. Whistler article [Exhibit 1136]

662. Attached hereto as Exhibit 1136 is a copy of an excerpt from the book titled *Food Chemistry,* 2nd revised and expanded edition, edited by Owen R. Fennema. The excerpt is Chapter 3, "Carbohydrates" by Roy L. Whistler and James R. Daniel (hereafter "Whistler") and issued by Marcel Dekker, Inc., with a 1985 copyright date. The book is Volume 15 in the *Food Science and Technology* series. Exhibit 1136 is a true and correct copy of the Whistler chapter (pages 69-137), which I obtained from the University of Washington Libraries (Seattle, Washington). The text in Exhibit 1136 is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible

alterations to the document. Exhibit 1136 is a true and correct copy in a condition that creates no suspicion about its authenticity.

663. Attached hereto as Attachment 79a is a true and correct copy of the MARC record for this monograph from the University of Washington Libraries online catalog.[215] The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on March 24, 2022, as shown in the "Replaced" field ("20220324"). I personally identified and retrieved the library catalog record which is Attachment 79a.

664. Based on finding a print copy of the Whistler book in the University of Washington Libraries and MARC record in its online library catalog attached as Attachment 79a, it is my opinion that the book *Food Chemistry*, 2nd revised and expanded edition, was publicly available on or shortly after March 6, 1985, as shown in field 008 ("850306"). The International Standard Book Number (ISBN) on Exhibit 1136 (0-8247-7271-7) matches the ISBN in the first field 020 of Attachment 79a. Therefore, Exhibit 1136 is the same book as the one that the cataloger at the

[215] https://orbiscascade-washington.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991285418900014 52&context=L&vid=01ALLIANCE_UW:UW&lang=en&search_scope=UW_EVERYTHING&adaptor=Local%20Search%20Engine&tab=UW_default&query=any,contains,0824772717.

University of Washington Libraries used to create the MARC record that is Attachment 79a.

665. Attached hereto as Attachment 79b is a true and correct copy of the MARC record for the Whistler book titled *Food Chemistry*, 2nd revised and expanded edition, obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 79b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 79b, that library code is "DLC," which means that the MARC record for this book was created at the Library of Congress as part of the Cataloging in Publication (CIP) Program.[216] A cataloger prepares basic information about the forthcoming book which is included on the verso of the title page (also called the copyright page). The information is provided to save time needed for the cataloging process at the library after the book is purchased. The CIP data includes the author (field 100), title and subtitle (field 245), edition statement (field 250), ISBN (field 022), suggested subject headings (field 650), classification numbers for the Library of Congress classification number (field 050), and the Dewey Decimal classification number (field 082). These data elements are included in the MARC record that the Library of Congress contributes to the OCLC bibliographic database.

[216] https://www.loc.gov/publish/cip/

666. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 11841380 on March 6, 1985, as shown in the "Entered" field ("19850306"). The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment 79b occurred on March 24, 2022, as shown in the "Replaced" field ("20220324"). I personally identified and retrieved the MARC record that is Attachment 79b.

667. Attachment 79b further includes an entry in field 050 ("TX541 $b .F65 1985")— includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b FO509P v.15. 1985")— includes a subject matter classification number consistent with the National Library of Medicine classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("664/.001/54")— includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 79b further includes two descriptor terms reading "Food $x Analysis" (see Attachment 79c, Library of Congress subject heading sh85050185) and "Food $x Composition" (see Attachment 2c, Library of Congress subject heading sh85050191) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 79c was indexed according to its subject matter by

virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. Further, as of March 6, 1985, the MARC record attached hereto as Attachment 79b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired this book, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

668. Further supporting my opinion that Exhibit 1136 was publicly accessible to ordinarily skilled and interested researchers in the field is the fact that the Whistler book titled *Food Chemistry*, 2nd revised and expanded edition, was registered with the U. S. Copyright Office as item TX0001651193 on September 4, 1985 and indicated a publication date of May 15, 1985 (see Attachment 79d, U. S. Copyright Office Public Catalog). As noted above, this would have provided a person interested in the relevant subject matter with keyword searching capabilities and other tools to locate this book.

669. Attachment 79c indicates that the Whistler book as cataloged at the Library of Congress is currently available from 275 libraries. In view of above, the whistler book was publicly available on or shortly after May 15, 1985, because by that date it had been cataloged and indexed at the Library of Congress, made part of the OCLC bibliographic database, an received at the University of Washington

Libraries. For these reasons, it is my opinion that Exhibit 1136 was published and accessible to the public on or shortly after May 15, 1985.

RRRR. Batt article [Exhibit 1137]

670. Attached hereto as Exhibit 1137 is a copy of the journal article, "Expression of Recombinant Bovine ß-lactoglobulin in *Escherichia coli*" by Carl A. Batt, Laurel D. Rabson, Dominic W.S. Wong, and John E. Kinsella (hereafter "Batt"). The Batt article was published in Volume 54, Issue 4 of the journal *Agricultural and Biological Chemistry*. The Batt article appears beginning on page 949 of this issue dated April 1990.

671. I obtained Exhibit 1137 from the University of Wisconsin – Madison Libraries. Exhibit 1137 is a true and correct copy of the Batt article (pages 949-955). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Batt article is also available from the publisher, Oxford University Press,[217] and through the National Library of Medicine.[218] Exhibit 1137 was found within the custody of a library – a place where

[217] https://academic.oup.com/bbb/article-abstract/54/4/949/5963123?redirectedFrom=fulltext.

[218] https://pubmed.ncbi.nlm.nih.gov/1368553/.

an authentic copy of this journal would likely be. Exhibit 1137 is a true and correct copy in a condition that creates no suspicion about its authenticity.

672. Attached hereto as Attachment 80a is a true and correct copy of the MARC record for the journal *Agricultural and Biological Chemistry* at the University of Wisconsin – Madison Libraries. The library ownership is indicated by the presence of the library's code (uwmadisondb) in the fourth field 035. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 80a occurred on August 29, 2007, as shown in field 005 field ("20070829"). I personally identified and retrieved the MARC record that is Attachment 80a.

673. Based on finding a print copy of Exhibit 1137 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog attached as Attachment 80a, it is my opinion that the Batt article published in the journal *Agricultural and Biological Chemistry* was publicly available on or shortly after June 18, 1990, as shown by the date stamp on the cover of Exhibit 1137. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 80a also shows that Exhibit 1137 was catalogued with three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment 12b, Library of Congress subject heading sh2009114118), "Biochemistry $v Periodicals" (see

Attachment 21d, Library of Congress subject heading sh2007101985), and "Chemistry, Organic $v Periodicals" (see Attachment 75c, Library of Congress subject heading sh2008100337) in the 650 fields.

674. As noted in the holdings information (362 field), the University of Wisconsin – Madison Libraries has received the journal *Agricultural and Biological Chemistry* since 1961 and continues to receive the publication.[219] In view of the MARC record for Exhibit 1137, the Batt article was publicly available on or shortly after June 18, 1990, because the serial title had been received, cataloged, and indexed in the University of Wisconsin–Madison Libraries and made part of its online catalog database.

675. Attached hereto as Attachment 80b is a true and correct copy of the MARC record for the journal *Agricultural and Biological Chemistry* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 80b, that library code is "NYG," which means that the MARC record for this serial

[219] The publication was originally titled *Journal of the Agricultural Chemical Society of Japan* (October 1924-April 1926), changed the title to *Agricultural and Biological Chemistry* (May 1926-December 1960), changed the title *Agricultural and Biological Chemistry* (January 1961-December 1991), and adopted the current title, *Bioscience, Biotechnology, and Biochemistry*, in January 1992.

was cataloged at the New York State Library (Albany, New York). As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the New York State Library created OCLC record number 5458841 on October 2, 1979, as shown in the "Entered" field ("19791002"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 80b occurred on August 9, 2022, as shown in the "Replaced" field ("20220809"). I personally identified and retrieved the MARC record that is Attachment 80b. The "BLvl" entry in Attachment 80b is "s," which indicates that the journal *Agricultural and Biological Chemistry* is a serial publication. Field 310 of Attachment 80b reads "Monthly." Accordingly, the MARC record for Exhibit 1137 corresponds to the journal *Agricultural and Biological Chemistry* and includes the date of the Batt article.

676. Attachment 80b includes an entry in field 050 ("QH345 $b .A35")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b AG382"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), and an entry in field 082 ("574.192"), a subject matter consistent with the Dewey Decimal classification system. Attachment 80b further includes three descriptor terms reading "Agricultural chemistry $v Periodicals" (see Attachment

12b, Library of Congress subject heading sh2009114118), "Biochemistry $v Periodicals" (see Attachment 21d, Library of Congress subject heading sh2007101985), and "Chemistry, Organic $v Periodicals" (see Attachment 75c, Library of Congress subject heading sh2008100337) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 80b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of October 2, 1979, the MARC record attached hereto as Attachment 80b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

677. Attachment 80b indicates that the journal *Agricultural and Biological Chemistry* as cataloged at the New York State Library is currently available from 284 libraries. In view of the above, this issue of the journal *Agricultural and Biological Chemistry* was publicly available on or shortly after June 18, 1990, because by that date it had been cataloged and indexed at the New York State Library, made part of the OCLC bibliographic database, and received at the University of Wisconsin–Madison Libraries. For these reasons, it is my opinion that

Exhibit 1137 was published and accessible to the public on or shortly after June 18, 1990.

SSSS. Jamieson article [Exhibit 1138]

678. Attached hereto as Exhibit 1138 is a copy of the journal article, "Cloning and Nucleotide Sequence of the Bovine β-lactoglobulin Gene" by Andrew C. Jamieson, Mark A. Vandeyar, Young C. Kang, John E. Kinsella, and Carl A. Batt (hereafter "Jamieson"). The Jamieson article was published in Volume 61, Issue 1 of the journal *Gene*. The Jamieson article appears beginning on page 85 of this issue dated 1987.

679. I obtained Exhibit 1138 from the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). Exhibit 1138 is a true and correct copy of the Jamieson article (pages 85-90). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Jamieson article is also available from the publisher, Elsevier,[220] and through the National Library of Medicine.[221] Exhibit 1138 was found within the custody of a library – a place where an authentic copy of this journal would likely

[220] https://www.sciencedirect.com/science/article/abs/pii/0378111987903672.

[221] https://pubmed.ncbi.nlm.nih.gov/3443305/,

be. Exhibit 1138 is a true and correct copy in a condition that creates no suspicion about its authenticity.

680. Attached hereto as Attachment 81a is a true and correct copy of the MARC record for the journal *Gene* at the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). The library ownership is indicated by the presence of the library's code (LHL) in field 049. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 81a occurred on October 29, 2019, as shown in field 005 field ("20191029"). I personally identified and retrieved the MARC record that is Attachment 81a.

681. Based on finding a copy of Exhibit 1138 in the Linda Hall Library of Science, Engineering & Technology and MARC record in its online library catalog attached as Attachment 81a, it is my opinion that the Jamieson article published in the journal *Gene* was publicly available on or shortly after February 6, 1987, as indicated on shown on the cover. This date stamp has the general appearance of date stamps that libraries have long affixed to periodicals to show when an issue was received, verified, and checked. Attachment 81a also shows that Exhibit 1138 was catalogued with three descriptor terms reading "Genetic engineering $v Periodicals" (see Attachment 10b, Library of Congress subject heading sh2008117864), "Molecular cloning $v Periodicals" (see Attachment 10c, Library of Congress

subject heading sh85086580 and Attachment 1c, Library of Congress subject heading sh85099890), and "Recombinant DNA $v Periodicals" (see Attachment 10d, Library of Congress subject heading sh85111851 and Attachment 1c, Library of Congress subject heading sh85099890) in the 650 fields.

682. As noted in the holdings information (362 field), the Linda Hall Library of Science, Engineering & Technology has received the journal *Gene* since 1976 and continues to receive the publication. In view of the MARC record for Exhibit 1138, the Jamieson article was publicly available on or shortly after February 6, 1987, because the serial title had been received, cataloged, and indexed in the Linda Hall Library of Science, Engineering & Technology and made part of its online catalog database.

683. Attached hereto as Attachment 81b is a true and correct copy of the MARC record for the journal *Gene* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 81b, that library code is "DLC," which means that the MARC record for this serial was cataloged at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 3424642 on November 16, 1977, as shown in the "Entered" field ("19771116"). The library continues to update this MARC record and enhanced the MARC record to meet

current cataloging rules. The most recent enhancement to Attachment 81b occurred on August 9, 2022, as shown in the "Replaced" field ("20220809"). I personally identified and retrieved the MARC record that is Attachment 81b. The "BLvl" entry in Attachment 81b is "s," which indicates that the journal *Gene* is a serial publication. Field 310 of Attachment 81b reads "Biweekly, $b <15 July 1992-." Accordingly, the MARC record for Exhibit 1138 corresponds to the journal *Gene* from the time the serial title began publication and includes the date of the Jamieson article.

684. Attachment 81b includes an entry in field 050 ("QH442 $b .G43")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b GE184M")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("575.1")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 81b further includes four descriptor terms reading "Genetic engineering $v Periodicals" (see Attachment 10b, Library of Congress subject heading sh2008117864), "Molecular cloning $v Periodicals" (see Attachment 10c, Library of Congress subject heading sh85086580 and Attachment 2d, Library of Congress subject heading sh85099890),

"Recombinant DNA $v Periodicals" (see Attachment 10d, Library of Congress subject heading sh85111851 and Attachment 2d, Library of Congress subject heading sh85099890), and "Genetic recombination" (see Attachment 10f, Library of Congress subject heading sh85053867) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 81b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. As of November 16, 1977, the MARC record attached hereto as Attachment 81b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

685. Attachment 81b indicates that the journal *Gene* as cataloged at the Library of Congress is currently available from 407 libraries. In view of the above, this issue of the journal *Gene* was publicly available on or shortly after February 6, 1987, because by that date it had been cataloged and indexed at the Library of Congress, made part of the OCLC bibliographic database, and received at the Linda Hall Library of Science, Engineering & Technology. For these reasons, it is my

opinion that Exhibit 1138 was published and accessible to the public on or shortly after February 6, 1987.

TTTT. Weed article [Exhibit 1139]

686. Attached hereto as Exhibit 1139 is a copy of the journal article, "Is Hemoglobin and Essential Structural Component of Human Erythrocyte Membranes?" by Robert I. Weed, Claude F. Reed, and George Berg (hereafter "Weed"). The Weed article was published in Volume 42, Number 4 of *The Journal of Clinical Investigation*. The Weed article appears beginning on page 581 of this issue dated April 1963.

687. I obtained Exhibit 1139 from the Linda Hall Library of Science, Engineering & Technology (Kansas City, Missouri). Exhibit 1139 is a true and correct copy of the Weed article (pages 581-588). Specifically, the text of the article is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. The Weed article is also available through the National Library of Medicine[222] and the publisher.[223] The publisher's website indicates a publication date of April 1, 1963. Exhibit 1139 was found within the custody of a library – a

[222] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC289318/.

[223] https://www.jci.org/articles/view/104747.

place where an authentic copy of this journal would likely be. Exhibit 1139 is a true and correct copy in a condition that creates no suspicion about its authenticity.

688. Attached hereto as Attachment 82a is a true and correct copy of the MARC record for *The Journal of Clinical Investigation* at the Linda Hall Library of Science, Engineering & Technology. The library ownership is indicated by the presence of the library's code (LHL) in field 049. The library continues to update and enhance the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 82a occurred on November 25, 2014, as shown in field 005 field ("20141125"). I personally identified and retrieved the MARC record that is Attachment 82a.

689. Based on finding a print copy of Exhibit 1139 in the Linda hall Library of Science, Engineering & Technology and MARC record in its online library catalog attached as Attachment 82a, it is my opinion that the Weed article published in *The Journal of Clinical Investigation* was publicly available on or shortly after April 1, 1963, as indicated on the publisher's website. Attachment 82a also shows that Exhibit 1139 was catalogued with a descriptor term reading "Medicine, Experimental $v Periodicals" (see Attachment 82b, Library of Congress subject heading sh2010101354) in the 650 field.

690. As noted in the holdings information (362 field), the Linda Hall Library of Science, Engineering & Technology has received *The Journal of Clinical*

Investigation since October 1924 and continues to receive the publication. In view of the MARC record for Exhibit 1139, the Weed article was publicly available on or shortly after April 1, 1963, because the serial title had been received, cataloged, and indexed in the Linda Hall Library of Science, Engineering & Technology and made part of its online catalog database.

691. Attached hereto as Attachment 82c is a true and correct copy of the MARC record for *The Journal of Clinical Investigation* obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code or name. For Attachment 82c, that library code is "NSD," which means that the MARC record for this serial was cataloged as part of the National Serials Data Program at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 1445593 on July 14, 1975, as shown in the "Entered" field ("19750714"). The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to Attachment 82c occurred on November 29, 2022, as shown in the "Replaced" field ("20221129"). I personally identified and retrieved the MARC record that is Attachment 82c. The "BLvl" entry in Attachment 82c is "s," which indicates that *The Journal of Clinical Investigation* is a serial publication. Field 310 of Attachment 82c reads "Twenty-four issues a year, $b <2021-."

Accordingly, the MARC record for Exhibit 1139 corresponds to *The Journal of Clinical Investigation* from the time the serial title began and includes the date of the Weed article.

692. Attachment 82c includes an entry in field 050 ("R11 $b .J67")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), an entry in field 060 ("W1 $b JO588H"), a subject matter consistent with the National Library of Medicine (analogous to the Dewey Decimal classification system), an entry in field 082 ("616/.005"), a subject matter consistent with the Dewey Decimal classification system. Attachment 82c further includes a descriptor term reading "Medicine, Experimental $v Periodicals" (see Attachment 82b, Library of Congress subject heading sh2010101354) in the 650 field. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 82c was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entry. As of July 14, 1975, the MARC record attached hereto as Attachment 82c was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that subscribed to the serial, which means that the corresponding publication was publicly available on

or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

693. Attachment 82c indicates that *The Journal of Clinical Investigation* as cataloged at the Library of Congress is currently available from 680 libraries. In view of the above, this issue of *The Journal of Clinical Investigation* was publicly available on or shortly after April 1, 1963, because by that date it had been cataloged and indexed at the Library of Congress, made part of the OCLC bibliographic database, and received at the Linda Hall Library of Science, Engineering & Technology. For these reasons, it is my opinion that Exhibit 1139 was published and accessible to the public on or shortly after April 1, 1963.

UUUU. Evers article [Exhibit 1141]

694. Attached hereto is Exhibit 1141 is a copy of a conference paper published in *Phenolic, Sulfur, and Nitrogen Compounds in Food Flavors* edited by George Charalambous and Ira Katz found in the Kurt F. Wendt Engineering Library at the University of Wisconsin – Madison. The conference paper titled "Furans Substituted at the Three Position with Sulfur" by William J. Evers, Howard H. Heinsohn, Jr., Bernard J. Mayers, and Anne Sanderson (hereafter "Evers") appears beginning on page 184. The conference papers were presented at a symposium jointly sponsored by the Divisions of Agricultural and Food Chemistry and Carbohydrate Chemistry at the 170th meeting of the American Chemical Society

that was held on August 25-26, 1975, in Chicago, Illinois. The volume is also identified as ACS Symposium Series 216. Exhibit 1141 is a true and correct copy of the Evers conference paper (pages 184-193). I obtained this copy of the conference paper in the Kurt F. Wendt Engineering Library at the University of Wisconsin – Madison. Specifically, the text of the Evers conference paper is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1141 was found within the custody of a library – a place where, if authentic, a copy of this conference proceedings volume would likely be. Exhibit 1141 is a true and correct copy in a condition that creates no suspicion about authenticity.

695. Attached hereto as Attachment 83a is a true and correct copy of the MARC record for this conference proceedings volume from the University of Wisconsin – Madison Libraries online catalog. The library ownership is indicated by the presence of the library's code (uwmadisondb) in the third field 035. The library continues to update this MARC record and enhanced the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on January 27, 2010, as shown in field 005 ("20100127"). I personally identified and retrieved the library catalog record which is Attachment 83a.

696. Based on finding a print copy of Exhibit 1141 in the University of Wisconsin – Madison Libraries and MARC record in its online library catalog

attached as Attachment 83a, it is my opinion that the book titled *Phenolic, Sulfur, and Nitrogen Compounds in Food Flavors* was publicly available at the University of Wisconsin – Madison Libraries as of May 3, 1976, as shown in field 008 ("760503").

697. Attached hereto as Attachment 83b is a true and correct copy of the MARC record for the book titled *Phenolic, Sulfur, and Nitrogen Compounds in Food Flavors* obtained from the OCLC bibliographic database. I personally identified and retrieved the MARC record that is Attachment 83b. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment 83b, that library code is "DLC," which means that the MARC record for this conference proceedings volume was cataloged at the Library of Congress. As can be seen in the "Entered" field in the MARC record for this exhibit, a cataloger at the Library of Congress created OCLC record number 2213341 on May 3, 1976, as shown in the "Entered" field ("19760503"). The library continues to update this MARC record the MARC record to meet current cataloging rules. The most recent enhancement to the MARC record occurred on August 13, 2022, as shown in the "Replaced" field ("20220813").

698. Attachment 83b further includes an entry in field 050 ("TP418 $b .P46")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal

classification system), an entry in field 060 ("WA712 $b P542 1975")—as described above, a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system), and an entry in field 082 ("664/.06")—as described above, a subject matter classification number consistent with the Dewey Decimal classification system. Attachment 83b also shows that the volume was catalogued with eight descriptor terms reading "Flavoring essences $v Congresses" (see Attachment 83c, Library of Congress subject heading sh2008120691), "Phenols $v Congresses" (Attachment 83d, Library of Congress subject heading sh85100676 and Attachment 11d, Library of Congress subject heading sh85031115), "Flavonoids" (see Attachment 83e, Library of Congress subject heading sh85049031 and Attachment 11d, Library of Congress subject heading sh85031115), "Flavoring essences" (Attachment 13c, Library of Congress subject heading sh85049035), "Food additives" (see Attachment 83f, Library of Congress subject heading sh85050253), "Phenols" (see Attachment 83d, Library of Congress subject heading sh85100676), and "Sulfur" (Attachment 83g, Library of Congress subject heading sh85130365) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment 83b was indexed according to its subject matter by virtue of at least four independently sufficient classifications: the field 050 entry, the field 060 entry, the field 082 entry, and the field 650 entries. Further, as of May 3, 1976, the MARC

record attached hereto as Attachment 83b was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired the conference proceedings volume, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library.

699. Attachment 83b indicates that the book titled *Phenolic, Sulfur, and Nitrogen Compounds in Food Flavors* as cataloged at the Library of Congress is currently available from 243 libraries. In view of the above, the book titled *Phenolic, Sulfur, and Nitrogen Compounds in Food Flavors* was publicly available on or shortly after May 5, 1976, because by that date it had been cataloged and indexed at the Library of Congress, made part of the OCLC bibliographic database, and received in the University of Wisconsin – Madison Libraries. For these reasons, it is my opinion that Exhibit 1141 was published and publicly accessible on or shortly after May 3, 1976.

VVVV. Impossible Foods Announcement [Exhibit 1147]

700. Attached hereto as Exhibit 1147 is an announcement titled "Impossible Foods Hires a Veteran of Apple Ads to Beef Up Its Creative Marketing" prepared by T.L. Stanley, senior editor at the journal *AdWeek*, and published on April 13, 2021.

701. Exhibit 1147 is a true and accurate copy of the announcement and was issued as a public document by *AdWeek* and a similar announcement was distributed through *BusinessWire*[224] and *Twitter*.[225] Specifically, the text of the Impossible Foods Announcement document is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1147 was found within the custody of the issuing entity – a place where, if authentic, a copy of this document would likely be. Exhibit 1147 is a true and correct copy in a condition that creates no suspicion about its authenticity. Based on the date recorded in the document, it is my opinion that the Impossible Foods Announcement was available to the public on April 13, 2021, or shortly thereafter.

VI. CONCLUSION

702. In view of the foregoing, it is my opinion that the publications described above were publicly available no later than the corresponding dates listed in the table below:

[224] https://www.businesswire.com/news/home/20210412005356/en/Impossible-Foods-Hires-Former-Apple-Creative-Leader-Steve-Turner-in-the-All-new-Roleof-Chief-Experience-Officer.

[225] https://twitter.com/adweek/status/1382125200746102785.

Doc.	Publication	Publicly Available No Later Than
1016	Boye et al., *Pulse Proteins: Processing, Characterization, Functional Properties and Applications in Food and Feed*, 43 FOOD RESEARCH INT'L 414-31 (2010)	March 2, 2010
1017	Mottram, Donald S. "Flavour Formation in Meat and Meat Products: A Review." *Food Chemistry*, vol. 62, no. 4 (August 1998): 415-424.	August 17, 1998
1019	Proulx, Amy K., and Manju B. Reddy. "Iron Bioavailability of Hemoglobin from Soy Root Nodules Using a Caco-2 Cell Culture Model." *Food Science and Human Nutrition Publications*. Iowa State University Digital Repository. Ames, IA: Iowa State University, 2006.	January 31, 2006
1024	MacLeod, Glesni, M. Seyyedain-Ardebili, and Stephen S. Chang. "Natural and Simulated Meat Flavors (with particular reference to beef)." *Critical Reviews in Food Science & Nutrition*, vol. 14, issue 4 (August 1981): 309-437.	August 31, 1981
1026	Dwivedi, Basant K., and Maxwell C. Brockmann. "Meat Flavor." *C R C Critical Reviews in Food Technology*, vol. 5, issue 4 (April 1975): 487-535.	May 19, 1975
1027	*Processed Meats*, by A. M. Pearson and T. A. Gillett. 3rd ed. Chapter 3, "Curing" (pp. 53-78). New York: Springer, 1996.	January 2, 1996
1027	Calkins, C. R., and J. M. Hodgen. "A Fresh Look at Meat Flavor." *Meat Science*, vol. 77, issue 1 (September 2007): 63-80.	July 31, 2007
1029	Williamson, C. S., R. K. Foster, S. A. Stanner, and J. L. Buttriss. "Red Meat in the Diet." *Nutrition Bulletin*, vol. 30, issue 4 (December 2005): 323-355.	November 25, 2005
1030	Garrocho-Villegas, Verónica, Sabarinathan Kuttalingam Gopalasubramaniam, and Raúl Arredondo-Peter. "Plant Hemoglobins: What We Know Six Decades After Their Discovery." *Gene*, vol. 398, issues 1-2 (15 August 2007): 78-85.	August 15, 2007

Doc.	Publication	Publicly Available No Later Than
1031	McGorrin, Robert J. Chapter 1, "The Significance of Volatile Sulfur Compounds in Food Flavors" (pp. 3-31). *Volatile Sulfur Compounds in Food*, edited by Michael C. Qian, Xuetong Fan, and Kanjana Mahattanatawee. ACS Symposium Series 1068. Washington, DC: American Chemical Society, 2011.	August 24, 2011
1032	Cerny, Christoph, and Tomas Davidek. "Formation of Aroma Compounds from Ribose and Cysteine during the Maillard Reaction." *Journal of Agricultural and Food Chemistry,* vol. 51, no. 9 (23 April 2003): 2714-2721.	May 8, 2003
1033	Reineccius, Gary. Chapter 5, "Changes in Food Flavor Due to Processing" (pp. 103-137). *Flavor Chemistry and Technology*. 2nd ed. Boca Raton, FL: Taylor & Francis, 2006.	September 24, 2005
1034	Reineccius, Gary. Chapter 9, "Flavoring Materials Made by Processing" (pp. 261-298). Flavor Chemistry and Technology. 2nd ed. Boca Raton, FL: Taylor & Francis, 2006.	September 24, 2005
1035	Verbeke, Wim, and Jacques Viaene. "Ethical Challenges for Livestock Production: Meeting Consumer Concerns about Meat Safety and Animal Welfare." *Journal of Agricultural and Environmental Ethics*, vol. 12, no. 2 (March 2000): 141-151.	June 1, 2000
1036	Pimentel, David, and Marcia Pimentel. "Sustainability of Meat-Based and Plant-Based Diets and the Environment" *The American Journal of Clinical Nutrition,* vol. 78, issue 3 (September 2003): 660S-663S.	September 1, 2003
1037	Pluhar, Evelyn B. "Meat and Morality: Alternatives to Factory Farming." *Journal of Agricultural and Environmental Ethics*, vol. 23, no. 5 (October 2010): 455-468.	December 18, 2009

Doc.	Publication	Publicly Available No Later Than
1038	Manley, Charles. Chapter 5, "Process Flavors" (pp. 139-154). *Source Book of Flavors*, edited by Gary Reineccius. 2nd ed. Boca Raton, FL: CRC Press, 1999.	June 25, 1992
1039	McGorrin, Robert J. Chapter 9, "Character-Impact Flavor and Off-Flavor Compounds" (pp. 207-262). *Flavor Fragrance and Odor Analysis*. 2nd ed., edited by Ray Marsili. Boca Raton, FL: CRC Press, 2012.	February 7, 2012
1040	Cha, Jiyoon, Trishna Debnath, and Kwang-Geun Lee. "Analysis of α-dicarbonyl Compounds and Volatiles Formed in Maillard Reaction Model Systems." *Scientific Reports*, vol. 9, no. 1 (29 March 2019): 1-6.	March 29, 2019
1041	Bailey, M. E. Chapter 11, "The Maillard reaction and meat flavor" (pp. 169-184). *The Maillard Reaction in Foods and Nutrition*, edited by G. R. Waller and M. S. Feather. ACS Symposium Series 215. Washington, DC: American Chemical Society, 1983.	March 7, 1983
1042	Fridman, Celia, Halina Lis, Nathan Sharon, and Ephraim Katchalski. "Isolation and Characterization of Soybean Cytochrome c." *Archives of Biochemistry and Biophysics*, vol. 126, no. 1 (July 1968): 299-304.	July 15, 1968
1043	Dreher, J. Glen, Russell L. Rouseff, and Michael Naim. "GC-Olfactometric Characterization of Aroma Volatiles from the Thermal Degradation of Thiamin in Model Orange Juice." *Journal of Agricultural and Food Chemistry*, vol. 51, no. 10 (7 May 2003): 3097-3102.	May 22, 2003
1045	Hofmann, Thomas, and Peter Schieberle. "Evaluation of the Key Odorants in a Thermally Treated Solution of Ribose and Cysteine by Aroma Extract Dilution Techniques." *Journal of Agricultural and Food Chemistry*, vol. 43, no. 8 (August 1995): 2187-2194.	September 8, 1995

Doc.	Publication	Publicly Available No Later Than
1046	Goto, Fumiyuki, Toshihiro Yoshihara, Naoki Shigemoto, Seiichi Toki, and Fumio Takaiwa. "Iron Fortification of Rice Seed by the Soybean Ferritin Gene." *Nature Biotechnology*, vol. 17, issue 3 (March 1999): 282-286.	March 11, 1999
1047	Zhu, Wenqi, and Keith R. Cadwallader. "Streamlined Approach for Careful and Exhaustive Aroma Characterization of Aged Distilled Liquors." *Food Chemistry: X*, vol. 3, Article Number 100038 (30 September 2019).	June 11, 2019
1048	Pearson, A. M., and J. I. Gray. Chapter 13, "Mechanism Responsible for Warmed-Over Flavor in Cooked Meat" (pp. 287-300). *The Maillard Reaction in Foods and Nutrition*, edited by G. R. Waller and M. S. Feather. ACS Symposium Series 215. Washington, DC: American Chemical Society, 1983.	March 7, 1983
1049	Hofmann T., and P. Schieberle. "Quantitative Model Studies on the Effectiveness of Different Precursor Systems in the Formation of the Intense Food Odorants 2-Furfurylthiol and 2-Methyl-3-furanthiol." *Journal of Agricultural and Food Chemistry*, vol. 46, no. 1 (19 January 1998): 235-241.	February 4, 1998
1050	Jahreis, Gerhard, Melanie Brese, Matthias Leiterer, Ulrich Schäfer, and Volker Böhm. "Legume Flours: Nutritionally Important Sources of Protein and Dietary Fiber." *Ernährungs Umschau*, vol. 63, no. 2 (February 2016): 36-42.	March 8, 2016
1051	Hofmann, Thomas, Peter Schieberle, and Werner Grosch. "Model Studies on the Oxidative Stability of Odor-Active Thiols Occurring in Food Flavors." *Journal of Agricultural and Food Chemistry*, vol. 44, no. 1 (18 January 1996): 251-255.	February 6, 1996

Doc.	Publication	Publicly Available No Later Than
1052	*GRAS Notice Number 737: Notification for Soy Leghemoglobin Protein Preparation Derived from Pichia Pastoris.* Impossible Foods Inc., Redwood City, CA.	October 2, 2017
1053	Wolf, W. J., and J. C. Cowan. *Soybeans as a Food Source*. Rev ed. Boca Raton, FL: CRC Press, 1975.	March 21, 1975
1054	Kalman, Douglas S. "Amino Acid Composition of an Organic Brown Rice Protein Concentrate and Isolate Compared to Soy and Whey Concentrates and Isolates." *Food*, vol. 3 (2014): 394-402.	June 30, 2014
1055	Schaich, Karen. Chapter 7, "Lipid Oxidation: Theoretical Aspects" (vol. 1, pp. 269-343). *Bailey's Industrial Oil and Fat Products*. 6th ed. Edited by Fereidoon Shahidi. 6 vols. New York: Wiley, 2005.	March 24, 2005
1056	Klesk, Keith, and Michael Qian. "Aroma Extract Dilution Analysis of Cv. Marion (Rubus spp. hyb) and Cv. Evergreen (R. laciniatus L.) Blackberries." *Journal of Agricultural and Food Chemistry*, vol. 51 (2003): 3436-3441.	May 31, 2003
1057	Krumina-Zemture, Gita, Ilze Beitane, and Ilze Gramatina. "Amino Acid and Dietary Fibre Content of Pea and Buckwheat Flours." *International Scientific Conference Proceedings: Research for Rural Development* (vol. 1, pp. 84-90). Jelgava, Latvia: Latvia University of Agriculture, 2016.	May 19, 2017
1058	Kuck, Gretchen, and Gary Schnitkey. "An Overview of Meat Consumption in the United States." Department of Agricultural and Consumer Economics, University of Illinois, *farmdoc daily*, vol. 11 (12 May 2021): 76.	May 12, 2021
1060	Marchand, Stéphanie, Gilles de Revel, Joseph Vercauteren, and Alain Bertrand. "Possible Mechanism for Involvement of Cysteine in Aroma Production in Wine." *Journal of Agricultural and Food Chemistry*, vol. 50, no. 21 (9 October 2002): 6160-6164.	September 11, 2002

Doc.	Publication	Publicly Available No Later Than
1061	Edelman, P. D., D. C. McFarland, V. A. Mironov, and J. G. Matheny. "Commentary: In Vitro-Cultured Meat Production." *Tissue Engineering*, vol. 11, no. 5-6 (May-June 2005): 659-662.	May 3, 2005
1063	Chiang, Angela. *Protein-protein interaction of soy protein isolate from extrusion processing*. Thesis. Columbia, MO: University of Missouri, Dept. of Food Science, 2007.	May 11, 2009
1064	Splivallo, Richard, Aurélie Deveau, Nayuf Valdez, Nina Kirchhoff, Pascale Frey-Klett, and Petr Karlovsky. "Bacteria Associated with Truffle-Fruiting Bodies Contribute to Truffle Aroma." *Environmental Microbiology*, vol. 17, issue 8 (August 2015): 2647-2660.	September 16, 2015
1066	Mohsen, Sobhy M., Hoda H. M. Fadel, M. A. Bekhit, Amr E. Edris, and Mohamad Y. S. Ahmed. "Effect of Substitution of Soy Protein Isolate on Aroma Volatiles, Chemical Composition and Sensory Quality of Wheat Cookies." *International Journal of Food Science & Technology*, vol. 44, issue 9 (September 2009): 1705-1712.	August 10, 2009
1067	Meng, Yang, and Sylvie Cloutier. Chapter 20, "Gelatin and Other Proteins for Microencapsulation" (pp. 227-239). *Microencapsulation in the Food Industry: A Practical Implementation Guide*, edited by Anilkumar G. Gaonkar, Niraj Vasisht, Atul Khare, and Robert Sobel. Amsterdam, Netherlands: Elsevier Academic Press, 2014.	August 8, 2016
1068	Norton, Layne E., Gabriel J. Wilson, Donald K. Layman, Christopher J. Moulton, and Peter J. Garlick. "Leucine Content of Dietary Proteins is a Determinant of Postprandial Skeletal Muscle Protein Synthesis in Adult Rats." *Nutrition & Metabolism*, vol. 9 (2012): 67.	July 20, 2012

Doc.	Publication	Publicly Available No Later Than
1069	Dürig, Thomas, and Kapish Karan. Chapter 9, "Binders in Wet Granulation" (pp. 317-349). *Handbook of Pharmaceutical Wet Granulation: Theory and Practice in a Quality by Design Paradigm*, edited by Ajit S. Narang and Sherif I. F. Badawy. Amsterdam, Netherlands: Academic Press, 2018.	November 26, 2018
1070	Can Karaca, Asli. Chapter 9, "Nanostructured Proteins" (pp. 181-200). *Food Structure and Functionality*, edited by Charis M. Galanakis. Boston, MA: Academic Press, 2021.	November 19, 2020
1071	Flutto, L. "PECTIN | Properties and Determination." *Encyclopedia of Food Sciences and Nutrition* (vol. 7, pp. 4440-4449). Edited by Benjamin Caballero, Luiz C. Trugo, and Paul M. Finglas. 2nd ed. 10 vols. Amsterdam, Netherlands; Boston, MA: Elsevier Academic, [2003]	October 9, 2002
1072	Green, J. D. "Headspace Analysis" (vol. 4, pp. 229-236). *Encyclopedia of Analytical Science*, 2nd ed., edited by Paul Worsfold, Alan Townshend, and Colin Poole. 10 vols. Boston, MA: Elsevier Academic Press, ©2005.	October 17, 2005
1073	Santana, Maria A., Kaarina Pihakaski-Maunsbach, Niels Sandal, Kjeld A. Marcker and Alison G. Smith. "Evidence That the Plant Host Synthesizes the Heme Moiety of Leghemoglobin in Root Nodules." *Plant Physiology*, vol. 116, no. 4 (April 1998): 1259-1269.	April 23, 1998
1074	dos Santos, Marlise A., and Ana Grenha. Chapter 7, "Polysaccharide Nanoparticles for Protein and Peptide Delivery: Exploring Less-Known Materials." *Advances in Protein Chemistry and Structural Biology*, vol. 98 (2015): 223-261.	March 3, 2015

Doc.	Publication	Publicly Available No Later Than
1075	Urade, Reiko. Chapter 38, "Fortification of Bread with Soy Proteins to Normalize Serum Cholesterol and Triacylglycerol Levels" (pp. 417-217). *Flour and Breads and their Fortification in Health and Disease Prevention*, edited by Victor R. Preedy, Ronald Ross Watson, and Vinood B. Patel. Burlington, VT: Elsevier Science, 2011.	February 5, 2011
1083	Buffo, Roberto A., and Jung H. Han. Chapter 17, "Edible Films and Coatings from Plant Origin Proteins" (pp. 277-300). *Innovations in Food Packaging*, edited by Jun H. Han. San Diego, CA: Elsevier Academic, ©2005.	February 23, 2005
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In signing this Declaration, I recognize that the Declaration will be filed as evidence in a case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross-examination in the case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination within the United States during the time allotted for cross-examination.

I, Sylvia D. Hall-Ellis, do hereby declare that all statements made herein on my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Executed on December 5, 2022

Sylvia D. Hall-Ellis, Ph.D.