

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SYNAFFIX B.V.,
Petitioner,

v.

HANGZHOU DAC BIOTECH CO., LTD.,
Patent Owner.

Case No. IPR2022-01531
U.S. Patent No. 10,131,682

**Patent Owner's Sur-Reply
to Petition for *Inter Partes* Review
of U.S. Patent No. 10,131,682**

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. CLAIM CONSTRUCTION	1
A. The “Y” Term.....	1
1. The DRP decision does not dictate post-institution construction of “Y”	1
2. <i>Becton</i> applies, as confirmed by the context of the ’682 patent	3
3. Synaffix’s other arguments are without merit	6
B. “Cell-Binding Agent”.....	11
III. GROUND 1 (MORALES-SANFRUTOS/STRAUS).....	12
A. Claim 1	13
1. Dondoni is not relevant to alleged anticipation by Morales-Sanfrutos.....	14
2. Simple vinyl and alkyne groups are not “Y” functional groups that independently enable reactions with a CBA.....	16
3. Morales-Sanfrutos and Straus do not disclose a CBA.....	17
B. Claim 2	18
C. Claims 3, 6, 24-25, and 33	18
IV. GROUND 2 (HARRIS).....	19
A. Claims 1 and 30-31.....	19
B. Claims 20-21 and 29	21
V. GROUND 3 (SINGH/HARRIS)	21
A. Claims 1 and 30-31.....	22
B. Claim 2	25
C. Claims 3-8, 10-12, 14-17, 20-21, 24, 26, and 29	26
VI. GROUND 4 (SINGH/HARRIS/BHAKTA).....	26
VII. GROUND 5 (SINGH/HARRIS/SNOW)	27

TABLE OF AUTHORITIES

Page(s)

Cases

<i>3M Innovative Props. Co. v. Avery Dennison Corp.</i> , 350 F.3d 1365 (Fed. Cir. 2003)	10
<i>3M Innovative Props. Co. v. Tredegar Corp.</i> , 725 F.3d 1315 (Fed. Cir. 2013)	10
<i>Ariosa Diagnostics v. Verinata Health, Inc.</i> , 805 F.3d 1359 (Fed. Cir. 2015)	20, 21, 23, 25, 26, 28
<i>Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP</i> , 616 F.3d 1249 (Fed. Cir. 2010)	3, 5
<i>Bot M9 LLC v. Sony Interactive Entertainment LLC</i> , 2023 WL 5606978 (Fed. Cir. Aug. 30, 2023)	4
<i>Fanduel, Inc. v. Interactive Games LLC</i> , 966 F.3d 1334 (Fed. Cir. 2020)	2, 3
<i>Google LLC v. EcoFactor, Inc.</i> , 92 F.4th 1049 (Fed. Cir. 2024)	3, 4
<i>H. Lundbeck A/S v. Lupin Ltd.</i> , 87 F.4th 1361 (Fed. Cir. 2023)	10
<i>Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.</i> , 821 F.3d 1359 (Fed. Cir. 2016)	17
<i>Omega Eng’g, Inc. v. Raytek Corp.</i> , 334 F.3d 1314 (Fed. Cir. 2003)	11
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005)	11
<i>Powell v. Home Depot U.S.A., Inc.</i> , 663 F.3d 1221 (Fed. Cir. 2011)	4

<i>Regeneron Pharms., Inc. v. Mylan Pharms. Inc.</i> , 130 F.4th 1372 (Fed. Cir. 2025)	4, 5, 6
<i>Rembrandt Diagnostics, LP v. Alere, Inc.</i> , 76 F.4th 1376 (Fed. Cir. 2023)	20, 21, 26, 28
<i>Salazar v. Procter & Gamble Co.</i> , 414 F.3d 1342 (Fed. Cir. 2005)	10
<i>Studiengesellschaft Kohle, m.b.H. v. Dart Indus., Inc.</i> , 726 F.2d 724 (Fed. Cir. 1984)	16
<i>Trivascular, Inc. v. Samuels</i> , 812 F.3d 1056 (Fed. Cir. 2016)	2, 3, 11

Statutes

35 U.S.C. § 312(a)(3).....	1, 17
----------------------------	-------

EXHIBIT LIST

No.	Exhibit
2001	Declaration of Lawrence Nathan Tumey, Ph.D.
2002	<i>Curriculum vitae</i> of Lawrence Nathan Tumey, Ph.D.
2003	Maeda, H., et al., <i>Polymeric drugs for efficient tumor-targeted drug delivery based on EPR-effect</i> , European Journal of Pharmaceutics and Biopharmaceutics (2009) 71:3, 409-419.
2004	Adair, J.R., et al., <i>Antibody–Drug Conjugates – A Perfect Synergy</i> , Expert Opinion on Biological Therapy (2012) 12:9, 1191-1206
2005	Kovtun, Y.V., et al., <i>Antibody-Maytansinoid Conjugates Designed to Bypass Multidrug Resistance</i> , Cancer Research (2010) 70 (6): 2528–2537.
2006	Goldmacher, V., et al., <i>Antibody–Drug Conjugates: Using Monoclonal Antibodies For Delivery Of Cytotoxic Payloads To Cancer Cells</i> , Therapeutic Delivery (2011) 2:3, 397-416.
2007	Ducry, L., et al., <i>Antibody-Drug Conjugates: Linking Cytotoxic Payloads to Monoclonal Antibodies</i> , Bioconjugate Chemistry (2010) 21:1, 5–13.
2008	Carter P.J., Senter P.D., <i>Antibody-Drug Conjugates for Cancer Therapy</i> , Cancer Journal (2008) 14:3, 154-169.
2009	Daugherty, A.L., et al., <i>Formulation and Delivery Issues for Monoclonal Antibody Therapeutics</i> , Advanced Drug Delivery Reviews (2006) 58:5-6, 686-706.
2010	Pappanaicken, R.K., et al., <i>Evaluation of Ketone-Oxime Method for Delivering Therapeutic On-Demand Cleavable Immunoconjugates</i> , Bioconjugate Chemistry (2008) 19:6, 1313-1318.
2011	Jeffrey, S.C., et al., <i>Expanded Utility of the β-Glucuronide Linker: ADCs That Deliver Phenolic Cytotoxic Agents</i> , ACS Medicinal Chemistry Letters (2010) 1, 277-80.

No.	Exhibit
2012	Mather, B., et al., <i>Michael Addition Reactions in Macromolecular Design for Emerging Technologies</i> , Progress in Polymer Science (2006), 31:5, 487-531.
2013	Lopez-Jaramillo, F., et al., <i>Vinyl Sulfone: A Multi-Purpose Function in Proteomics</i> , Integrative Proteomics InTech (2012) 16:301-326.
2014	Acchione, M., et al., <i>Impact of Linker and Conjugation Chemistry on Antigen Binding, Fc Receptor Binding and Thermal Stability of Model Antibody-Drug Conjugates</i> , mAbs (2012) 4:3, 362-372.
2015	Hamblett, K., et al., <i>Effects of Drug Loading on the Antitumor Activity of a Monoclonal Antibody Drug Conjugate</i> , Clinical Cancer Research (2004) 10:20, 7063-7070.
2016	Junutula, J., et al., <i>Site-specific Conjugation of a Cytotoxic Drug to an Antibody Improves the Therapeutic Index</i> , Nature Biotechnology (2008) 26, 925–932.
2017	Casi, G., <i>Antibody-Drug Conjugates: Basic Concepts, Examples, and Future Perspectives</i> , Journal of Controlled Release (2012) 161:2, 422-428.
2018	Li, L., et al., <i>Vinyl Sulfone Bifunctional Derivatives of DOTA Allow Sulfhydryl- or Amino-Directed Coupling to Antibodies. Conjugates Retain Immunoreactivity and Have Similar Biodistributions</i> , Bioconjugate Chemistry (2002) 13:1, 110–115.
2019	Ballini, R., et al., <i>Conjugate Additions of Nitroalkanes to Electron-Poor Alkenes: Recent Results</i> , Chemical Reviews (2005) 105:3, 933–972.
2020	Gallagher, S., et al., <i>Immunoblotting and Immunodetection</i> , Current Protocols in Cell Biology (2011) 52:6.2.1-6.2.28.
2021	Springer Nature, <i>Citation Details</i> , Retrieved May 24, 2023, from https://citations.springernature.com/item?doi=10.1007/BF00493477
2022	'682 Patent File History, Non-Final Office Action dated August 15, 2017
2023	U.S. Patent No. 5,094,848 (Brixner)

No.	Exhibit
2024	'682 Patent File History, Applicant Remarks and Response to Non-Final Office Action dated August 15, 2017
2025	Non-Final Office Action dated March 8, 2018
2026	WO1997/41897 (Lees)
2027	'682 Patent File History, Applicant Remarks and Response to Non-Final Office Action dated March 8, 2018
2028	'682 Patent File History, Final Office Action dated July 10, 2018
2029	WO2012/145112 (Fishkin)
2030	Widdison, W.C., et al., <i>Semisynthetic Maytansine Analogues for the Targeted Treatment of Cancer</i> , Journal of Medicinal Chemistry (2006) 49:14, 4392-4408.
2031	'682 Patent File History, Applicant Remarks and Response to Final Office Action dated July 10, 2018
2032	'682 Patent File History, Notice of Allowance
2033	'682 Patent Reexamination File History, IDS Form Signed by Examiner on September 10, 2020 Showing List of Considered References
2034	WO2009/134976 (Singh '976)
2035	Drawing by Dr. Ravi Chari in the November 14, 2024 Deposition
2036	Drawing by Dr. Ravi Chari in the November 14, 2024 Deposition
2037	Transcript of the November 14, 2024 Deposition of Dr. Ravi Chari
2038	Declaration of Lawrence Nathan Tumey, Ph.D., in Support of Patent Owner's Response to Petition for <i>Inter Partes</i> Review of U.S. Patent No. 10,131,682
2039	Declaration of June Ann Munford
2040	Appendix to Declaration of June Ann Munford
2041	Springer Nature, <i>Citation Details</i> , Retrieved Dec. 4, 2024, from https://citations.springernature.com/item?doi=10.1007/BF00493477

No.	Exhibit
2042	Dictionary of Science & Technology (2007) at 266.
2043	Encyclopedia of Chemistry (2005) at 113.
2044	McGraw-Hill Dictionary of Scientific and Technical Terms (2003) at 865.
2045	A Dictionary of Science (2010) at 339.
2046	Transcript of the April 16, 2025 Deposition of Dr. Ravi Chari
2047	Declaration of Lawrence Nathan Tumey, Ph.D., in Support of Patent Owner's Sur-Reply to Petition for <i>Inter Partes</i> Review of U.S. Patent No. 10,131,682

I. INTRODUCTION

Synaffix's Reply (Paper 36) confirms its failure to prove unpatentability in its Petition (Paper 2). 35 U.S.C. § 312(a)(3). For reasons provided in Patent Owner DAC's Response ("POR") (Paper 31) and below, the Board should affirm the patentability of the claims.

II. CLAIM CONSTRUCTION

Claim term "Y" should be construed in accordance with its plain meaning—a "functional group that enables reaction ... with a cell-binding agent" ("CBA"): Y must independently enable the reaction. Synaffix fails to identify any clear and unmistakable lexicography or disclaimer/disavowal to justify departure from that plain meaning.

A. The "Y" Term

Synaffix conflates the construction of Y with Q/T/Z. Reply, 1. The parties do not dispute that each of Q and T is S(O), S(O)₂, or -P(=O)(OM)-, and DAC accepts that Z, which enables linkage to a drug, could be vinyl. However, for reasons stated in the POR and below, "Y" should be construed differently from "Z", and the claim language plainly requires that Y (not Z) be a functional group that enables reaction with a CBA.

1. The DRP decision does not dictate post-institution construction of "Y"

The DRP's decision was based on limited pre-institution record and

arguments, and the Board has followed the DRP's directive and instituted review. Synaffix's reliance on "SOP 4" is inapposite.¹

It is well-established that after instituting review, the Board "is not bound by any findings made in its Institution Decision." *Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1068 (Fed. Cir. 2016). The Federal Circuit has "encouraged the Board to 'change its view of the merits after further development of the record' post-institution. *Fanduel, Inc. v. Interactive Games LLC*, 966 F.3d 1334, 1340 (Fed. Cir. 2020) (quoting *TriVascular*, 812 F.3d at 1068). Here, the DRP's pre-institution decision based on limited record cannot be binding on the post-institution proceedings, nor law of the case as Synaffix asserts.

Nonetheless, DAC's proposed construction of "Y" is consistent with the DRP's analysis. The DRP found the "second version of the disclaimer" in the Board's initial decision—"interpret[ing] claim 1 to exclude compounds in which the sole terminal group is vinyl sulfone without one or more adjacent Q and T groups"—to be erroneous. Paper 23 at 11, 13. The DRP concluded that compounds 75 and 138 of the '682 patent fall within claim 1. *Id.*, 15. DAC's proposed construction of "Y" does not exclude such compounds from claim 1. EX2038, ¶¶147-148.

Additionally, in its analysis, the DRP repeatedly observed that during

¹ Synaffix cites SOP 4, but the quoted language is found in <https://www.uspto.gov/patents/ptab/decisions/delegated-rehearing-panel>.

prosecution “Z” was mapped to vinyl, but never once found “Y” mapped to vinyl. Paper 23 at 13-15. DAC’s construction is consistent with those prosecution statements that mapped “Z” to vinyl, and “Y” to a reactive functional group, such as the NHS ester or vinylsulfone, which independently enables reaction with a CBA. EX2038, ¶¶128-136, 145-149.

Although the DRP also states that, when the linker contains a vinylsulfone, “we determine that the vinyl group should be mapped to Y or Z, and the sulfone group should be mapped to Q or T,” and “such mapping satisfies the ‘enable reaction’ and ‘enable linkage’ requirements of claim 1,” the DRP did not separately construe or analyze “Y” based on the specification or prosecution history. Paper 23 at 16. As to “Y,” the Board is “encouraged” to determine the construction “after further development of the record” post-institution. *Fanduel*, 966 F.3d at 1340; *TriVascular*, 812 F.3d at 1068.

2. *Becton* applies, as confirmed by the context of the ’682 patent

Synaffix wrongly argues that *Becton* does not apply, citing inapplicable cases. Those cases merely hold that “there is a ‘presumption’ that separately listed claim limitations may indicate separate and distinct physical structure, but that presumption may always be rebutted in the context of a particular patent.” *Google LLC v. EcoFactor, Inc.*, 92 F.4th 1049, 1058 (Fed. Cir. 2024) (citing *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1253-54 (Fed. Cir.

2010)); accord *Powell v. Home Depot U.S.A., Inc.*, 663 F.3d 1221, 1231-32 (Fed. Cir. 2011). Here, the context of the '682 patent supports (rather than rebuts) a construction that the separately listed claim elements Y and Q are separate and distinct. See POR, 7-28. “[W]here a claim lists elements separately, the clear implication of the claim language is that those elements are distinct components of the patented invention.” *Regeneron Pharms., Inc. v. Mylan Pharms. Inc.*, 130 F.4th 1372, 1379 (Fed. Cir. 2025) (collecting cases).

Synaffix's cited cases are inapposite. In *Google*, the Federal Circuit specifically found that “the claim language supports a broader reading of the [disputed] limitation” and the specification “contemplates an embodiment” in which the claimed elements are not separate. *Google*, 92 F.4th at 1058. In *Powell*, the Federal Circuit found that “the specification teaches that [one claim element] may also function as [another claim element]” and “does not suggest that the claim terms require separate structures.” *Powell*, 663 F.3d at 1231-32. Likewise, in the non-precedential decision *Bot M9 LLC v. Sony Interactive Entertainment LLC*, 2023 WL 5606978 (Fed. Cir. Aug. 30, 2023), the Federal Circuit found the particular patent's intrinsic record rebuts the *Becton* presumption.

In contrast, the intrinsic record of the '682 patent consistently supports a construction that the Y and Q elements are separate and distinct. POR, 7-28.

First, the claims each recite a chemical formula comprising distinct and

separate elements, such as Y and Q, and define the Y and Q elements separately. EX2038, ¶¶106-111. “Y” is a functional group that enables reaction with a CBA, such as a reactive NHS ester or vinylsulfone. *Id.*, ¶¶108-111, 139-141. “Q” is a spacer element that is not part of Y. *Id.* As in *Becton* and *Regeneron*, the plain claim language establishes “a ‘clear implication’ that [the claimed elements] are distinct components of the claimed [formula].” *Regeneron*, 130 F.4th at 1379 (quoting *Becton*, 616 F.3d at 1254). The claim language plainly requires a formula with Q embedded in the linker, and separately Y on one end of the linker, defining Y as “a functional group that enables reaction” with a CBA, independent of Q. EX1002, 1:22-2:13.

Second, the specification consistently describes the Y conjugation moiety separately from the Q spacer element, confirming that Y and Q are separate and distinct. EX2038, ¶¶117-124, 142-144. Here, as in *Becton*, the specification “confirms that [Q] is a separate element from [Y].” *Becton*, 616 F.3d at 1254. And “[n]othing in the specification indicates’ that [Q] ‘might’ also satisfy the distinct [Y element].” *Regeneron*, 130 F.4th at 1382 (quoting *Becton*, 616 F.3d at 1255).

Third, the prosecution history confirms that Y and Q are separate elements independent of each other. For example, when discussing the rejection over Lees, the Applicant mapped “Y” to the entire reactive NHS ester group, and “Q (or T)” to a separate sulfone. EX2038, ¶¶129-131. Nothing in the prosecution history suggests

that the reactive “Y” functional group that enables reaction with a CBA may be divided and mapped partly to Q.

3. Synaffix's other arguments are without merit

Synaffix cannot dispute the claim language plainly requires Y to be “a functional group that enables reaction” with a CBA. A functional group that does not independently enable the reaction would not meet the requirement for “Y.” DAC's proposed construction that Y independently enables reaction is consistent with the plain meaning of the claims. Unable to dispute that plain meaning of “Y,” Synaffix turns to “Z,” arguing that Y is broader than Z, when the intrinsic evidence shows the opposite.

First, the claim language defines Y and Z differently. The claims require Y to enable **reaction with** a CBA. EX2038, ¶¶111, 139-141. The claims do not require Z to enable any reaction, but define Z as a functional group that enables **linkage to** a drug. A reaction is the chemical process by which chemicals react, whereas a linkage is a covalent connection between atoms. EX2038, ¶¶63-66. As Dr. Tumey noted, Z may be an unsaturated vinyl group with the potential to form a saturated ethylene linkage to a drug. *Id.* Z is broader than Y because Z can be a reactive or nonreactive functional group. *Id.*; EX1063, 15:11-16:3.

Second, the specification confirms that Z is broader than Y. The specification provides different examples for “Y” and “Z.” *Compare* EX1001, 8:61-67, with *id.*,

9:1-7. The examples for “Y” are each reactive functional groups that independently enable reaction with a CBA in buffer solutions without requiring other reagents. EX1001, 8:61-67; EX2038, ¶¶63-66, 143-144; EX2046, 89:2-97:19. In contrast, the examples for “Z” include not only functional groups that enable reaction (*e.g.*, maleimido and haloacetyl), but also functional groups that do not enable reaction by themselves, but having structural features that can form a covalent linkage to a drug (*e.g.*, hydroxy, amino, and carboxy). EX1001, 9:1-7; EX2038, ¶¶63-66. As Dr. Tumey noted, the Y group that “enables a reaction” with a CBA is “one in which all of the reactivity is intrinsically present in the two reactants,” whereas the Z group that “enables a linkage” to a drug is “a more broad term that it encompasses other reaction conditions wherein perhaps a catalyst, perhaps other reagents, activating reagents ... may be required to form that linkage.” EX1063, 15:11-16:3, 18:7-21.

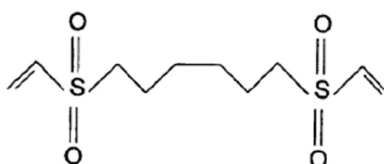
Synaffix's argument based on Formulas I-IV is without merit. The claim scope is defined by the claim language, not the specification. Each claim sets forth its own requirements for the claimed formula. For example, claim 1 recites Formula I and requires that “when Q or T is ***-S(O)₂-***, m and n are not 0.”² EX1002, 1:22-2:13. Claim 3 recites Formula II and requires that “when Q or T is ***-S(O)-***, m and n are not 0.” EX1002, 2:14-4:2. Considering these and other differences

² Emphases are added in this Sur-Reply unless otherwise specified.

between the claims, a linker outside the scope of claim 1 may indeed form a conjugate that falls within the scope of claim 3.

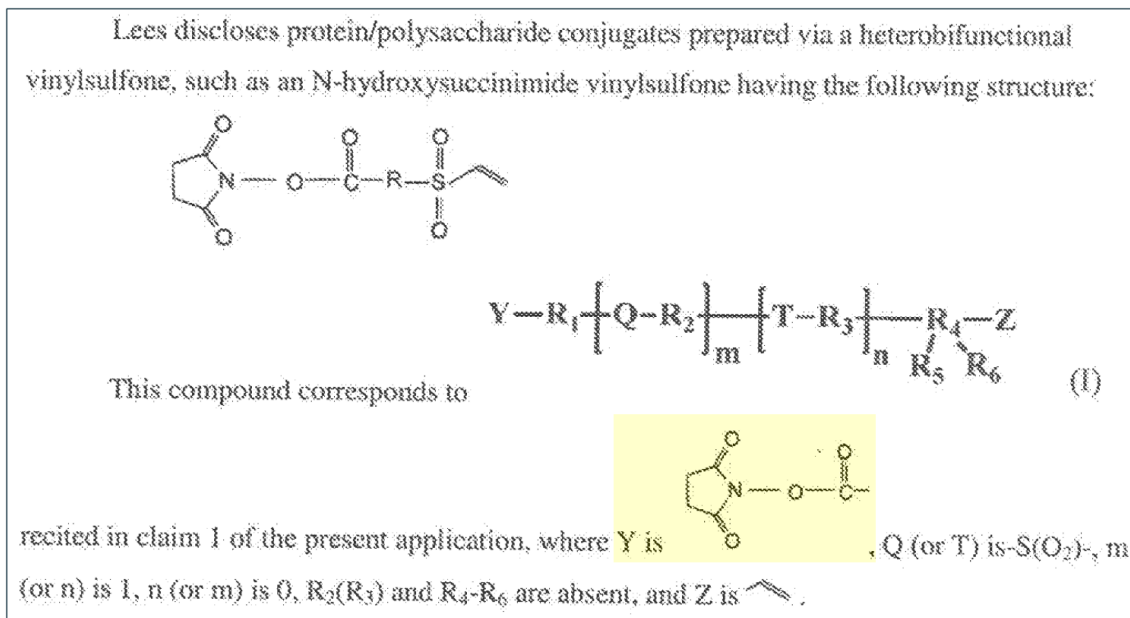
Structure	Formula
$Y-R_1-\text{---}Q-R_2-\text{---}_m-\text{---}T-R_3-\text{---}_n-\text{---}R_4-Z$ $\begin{matrix} \diagup & \diagdown \\ R_5 & R_6 \end{matrix}$	I
$\text{Cb} \left(R_1-\text{---}Q-R_2-\text{---}_m-\text{---}T-R_3-\text{---}_n-\text{---}R_4-\text{Drug} \right)_q$ $\begin{matrix} \diagup & \diagdown \\ R_5 & R_6 \end{matrix}$	II
$\text{Cb} \left(R_1-\text{---}Q-R_2-\text{---}_m-\text{---}T-R_3-\text{---}_n-\text{---}R_4-Z \right)_q$ $\begin{matrix} \diagup & \diagdown \\ R_5 & R_6 \end{matrix}$	III
$Y-R_1-\text{---}Q-R_2-\text{---}_m-\text{---}T-R_3-\text{---}_n-\text{---}R_4-\text{Drug}$ $\begin{matrix} \diagup & \diagdown \\ R_5 & R_6 \end{matrix}$	IV

Notably, the example Synaffix relies on to support its argument (reproduced below) is a compound expressly disclosed in Lees. *Compare* Reply, 7, with EX2026, 23. Synaffix's construction would lead to the nonsensical result that claim 1 would be anticipated by Lees, a reference both the Examiner and the Applicant specifically considered during prosecution. EX1018, 42-43, 62.



Third, the prosecution history supports DAC's construction. When discussing the rejection of claim 1 over Lees, both the Examiner and the Applicant

mapped Z to vinyl, and Y to the *entire* reactive NHS ester (EX1018, 42-43, 62, excerpted below), which independently enables reaction with a CBA. POR, 23-25; EX2038, ¶¶129-131. Synaffix completely sidesteps this clear prosecution history supporting DAC's construction.



Synaffix instead relies on a rejection of claim 20 during reexamination. Reply, 8-10. There, the Examiner mapped vinyl to Y (EX1019, 9-10), and the patentee noted the “alleged[]” mapping without agreeing to it (*id.*, 63, 75). The patentee instead stated that claim 20, as amended, recites a list of functional groups (*id.*, 75), each a reactive functional group that independently enables reaction with a CBA. See EX1001, 8:61-67; *supra* at p.7. The patentee then stated that “Y ... does not encompass a vinyl group.” EX1019, 75. If any, this statement makes clear that Y does not include a vinyl group. Those statements, which describe the Examiner's

“alleged[.]” mapping of Y and the Y groups recited by the claim, do **not** constitute a clear and unmistakable disclaimer to broaden the plain and ordinary meaning of “a functional group that enables reaction ... with a [CBA]” to include an unreactive vinyl group. *See, e.g., H. Lundbeck A/S v. Lupin Ltd.*, 87 F.4th 1361, 1374 (Fed. Cir. 2023) (“[T]he examiner’s unilateral remarks alone do not affect the scope of the claim.”) (quoting *Salazar v. Procter & Gamble Co.*, 414 F.3d 1342, 1347 (Fed. Cir. 2005)); *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1332 (Fed. Cir. 2013) (“[W]e rest on the statements made by the patentee over conflicting statements of an examiner because it is the patentee’s words that define the claim.”); *3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1373-74 (Fed. Cir. 2003) (“An applicant’s silence in response to an examiner’s characterization of a claim does not reflect the applicant’s clear and unmistakable acquiescence to that characterization if the claim is eventually allowed on grounds unrelated to the examiner’s unrebutted characterization.”).

In the above formula of WO ‘497, the portion allegedly corresponding to Y in formula (IV) recited in claim 20 of the present patent, is a vinyl group (-=).

On the other hand, claim 20 of the present patent, as amended, recites that “when (i) Q is -S(O₂)-, m is 1, and n is 0, or (ii) T is -S(O₂)-, n is 1 and m is 0, Y is an N-hydroxysuccinimide (NHS) ester, p-nitrophenyl ester, dinitrophenyl ester, pentafluorophenyl ester, pyridyldisulfide, nitropyridyldisulfide, maleimide, haloacetate, carboxylic acid chloride, hydrazide or hydroxylamine,” which does not encompass a vinyl group.

Unable to find other support from prosecution history, Synaffix maintains its reliance on a reexamination rejection of claim 3. Reply, 10-11. But as discussed in the POR (at 26, *see* EX2038, ¶¶134-136, 149), the patentee's vague and ambiguous remarks during reexamination concerning claim 3—which does not even recite Y—are at best “amenable to multiple reasonable interpretations” and cannot constitute a clear and unmistakable disclaimer to alter the plain-and-ordinary meaning of Y. *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324-25 (Fed. Cir. 2003); *accord Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1063-64 (Fed. Cir. 2016).

B. “Cell-Binding Agent”

The specification's lexicography governs the construction of “cell-binding agent.” POR, 28-29; EX1001, 14:39-44. Synaffix's attempt to distinguish between “cell-binding molecule” and “cell-binding agent” misses the point. Reply, 12. The specification clearly defines and consistently uses “cell-binding” to refer to “molecule that binds to, complexes with or reacts with a moiety of a cell population sought to be therapeutically or otherwise biologically modified.” EX1001, 14:39-44. Synaffix's proposed construction of “cell-binding agent” as any “agent that binds to cells” would render this claim term overly broad and disconnected from the context of the '682 patent. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc).

III. GROUND 1 (MORALES-SANFRUTOS/STRAUS)

Morales-Sanfrutos and Straus do not anticipate the challenged claims.³ Synaffix's own expert admits unequivocally that vinylsulfone, not vinyl, is the functional group that enables the Michael addition reaction with horseradish peroxidase ("HRP") in Morales-Sanfrutos. POR, 3-4; EX2046, 12:22-13:11, 18:16-20:18. Synaffix's new reference, Dondoni, describes a completely different reaction—a photoinduced reaction that requires UV light and a photoinitiator to activate an otherwise unreactive vinyl group. EX2047, ¶¶1-2, 5-17, 23-28.⁴ Dondoni does not alter the undisputed fact that in Morales-Sanfrutos the functional group that enables the Michael addition reaction with HRP is vinylsulfone. *Id.* For at least this reason, Morales-Sanfrutos does not anticipate the challenged claims.

³ Synaffix submits five documents from EPO opposition proceedings on European Patent 2922818. Reply, 13, fn.2. The EPO proceedings involved different claims, set of references, arguments, and legal standards. Even where the same references are cited in the EPO proceedings and here, the EPO relied on different portions of the references to analyze different claims. The EPO's decision is not relevant here.

⁴ The Board has authorized DAC to file an expert declaration with its Sur-Reply to address Synaffix's new Dondoni reference and related arguments. Paper 40.

Furthermore, Dondoni's photoinduced reaction does not establish that vinyl alone independently enables reaction with a CBA in the context of the '682 patent. EX2047, ¶¶18-22. Similarly, the copper-catalyzed alkyne-azide reactions on which Synaffix relies to map alkyne to Y do not establish that the terminal alkyne group in Morales-Sanfrutos independently enables reaction with a CBA in the context of the '682 patent. Those reactions all require additional catalysts or reagents (*e.g.*, copper catalyst, UV light, photoinitiator) to enable the reaction. Neither vinyl alone nor alkyne is a "Y" group that enables reaction with a CBA. In any event, as discussed in the POR (at 42-44), Morales-Sanfrutos does not disclose any alkyne group that reacted with the HRP. For this additional reason, Morales-Sanfrutos does not anticipate claim 1.

Furthermore, Morales-Sanfrutos and Straus do not disclose any CBA under either DAC's or Synaffix's construction of CBA.

Synaffix's analysis of dependent claim 2 requires mapping Y to vinyl, so that it could map a propargylamine to Z. POR, 48-49. This mapping fails under DAC's construction of Y, as discussed above. Moreover, as the Board noted in its Institution Decision (at 41-42), Synaffix's analyses of claims 1 and 2 are internally inconsistent as to the "Z" element. Synaffix has failed to show anticipation of claim 2.

A. Claim 1

Morales-Sanfrutos does not disclose any compound that falls within the scope

of claim 1 under DAC's proposed construction of "Y."

1. Dondoni is not relevant to alleged anticipation by Morales-Sanfrutos

Synaffix's own expert, Dr. Chari, admits unequivocally and consistently that vinylsulfone, not vinyl alone, is the functional group that enables the Michael addition reaction with HRP in Morales-Sanfrutos. POR, 3-4; EX2046, 12:22-13:11, 18:16-20:18. Synaffix now cites a new reference, Dondoni (EX1064), as allegedly teaching vinyl as a functional group that enables reaction with a CBA.

Dondoni describes a photoinduced reaction that requires both UV light and a photoinitiator to activate a simple vinyl group attached to a sugar molecule that does not contain any sulfone group. EX2047, ¶¶5-12. Dondoni's photoinduced reaction yielded a product with *three* sugar residues added to bovine serum albumin (BSA) after a disulfide bridge in BSA was cleaved apart under the photoinduced reaction condition to expose additional cysteine residues. *Id.* Despite trying different reaction conditions, Dondoni was unable to selectively attach only one sugar residue to the single, free cysteine residue without cleavage of the disulfide bridge. *Id.* The authors also observed that after 2 hours of UV irradiation, seven sugar residues were added to BSA, indicating the cleavage of additional disulfide bridges. *Id.* Dondoni does not provide any data to show whether the BSA retained its protein structure or folding after the photoinduced reaction as a result of disulfide cleavage. *Id.*

Dondoni's photoinduced reaction is a completely different reaction from the Michael addition reaction of Morales-Sanfrutos. EX2047, ¶¶13-17, 23-28. The Michael addition reaction involves reaction of linkers having more complex functional groups (such as vinylsulfone and fluorophore) in aqueous buffers without requiring additional reagents to activate the reaction. EX2047, ¶¶13-17. Both Synaffix's and DAC's experts agree that vinylsulfone, not vinyl, is the functional group that enables reaction with the HRP in Morales-Sanfrutos. *Id.*, ¶¶13-15. Morales-Sanfrutos does not disclose any functional group other than vinylsulfone that enables reaction with the HRP, nor any reaction other than the Michael addition reaction to react with the HRP. *Id.*, ¶16. Vinylsulfone is the **only** reactive functional group that independently enables reaction with the HRP disclosed in Morales-Sanfrutos. *Id.*, ¶¶16-17.

A POSA would not have found Dondoni's photoinduced reaction relevant to Morales-Sanfrutos' Michael addition reaction involving vinylsulfone due to several fundamental differences in reaction mechanisms, reaction conditions, structural differences in the reactants, and the potential of Dondoni's photoinduced reaction to denature proteins. EX2047, ¶¶23-28. For example, HRP contains a heme moiety that absorbs UV light and would interfere with Dondoni's photoinduced reaction and cause undesirable side reactions. *Id.*, ¶27. As such, Synaffix's reliance on Dondoni for Ground 1 is misplaced, as Dondoni does not and cannot alter the undisputed fact

that in Morales-Sanfrutos the functional group that enables the Michael addition reaction is vinylsulfone, not vinyl alone.

As a matter of law, Synaffix cannot rely on Dondoni to show anticipation of by Morales-Sanfrutos—these references disclose unrelated, different reactions, involving different compounds, reaction mechanisms, conditions, and products/side products. Petitioner's reliance on Dondoni for "a very specific teaching, not for any light [Dondoni] shed on what [Morales-Sanfrutos] would have meant to those skilled in the art," is improper and "contrary to settled law." *Studiengesellschaft Kohle, m.b.H. v. Dart Indus., Inc.*, 726 F.2d 724, 727 (Fed. Cir. 1984).

2. Simple vinyl and alkyne groups are not "Y" functional groups that independently enable reactions with a CBA

Even assuming Dondoni is relevant to the anticipation challenge (it is not), Dondoni's photoinduced reaction does not establish that vinyl alone independently enables reaction with a CBA. EX2047, ¶¶18-22. Dondoni does not show that vinyl alone can independently enable reaction with a CBA as required by the '682 patent. *Id.*, ¶¶19-20, 22. Dondoni's photoinduced reaction requires activation of the unreactive vinyl group by UV light and a photoinitiator (DPAP), confirming that vinyl alone is not independently reactive. *Id.* In contrast, all the "Y" functional groups described and claimed in the '682 patent possess intrinsic reactivity to enable reaction with a CBA. *Id.*, ¶21.

Likewise, the copper-catalyzed alkyne-azide reactions Synaffix relies on to map alkyne to Y (and vinyl to Z), in order to support its alternative theory of anticipation, do not establish that an alkyne group independently enables reaction with a CBA. Dr. Chari confirms that copper catalysts are required in all the new references submitted with Synaffix's Reply.⁵ EX2046, 59:16-61:10. Additionally, as discussed in the POR (at 42-44), Morales-Sanfrutos does not disclose any reaction between a terminal alkyne with the HRP. Synaffix's alternative mapping of Morales-Sanfrutos' compounds fails to show anticipation. Neither vinyl nor alkyne is a "Y" group that enables reaction with a CBA in the context of the '682 patent.

3. Morales-Sanfrutos and Straus do not disclose a CBA

For reasons stated in the POR (at 44-48), Morales-Sanfrutos and Straus do not disclose that HPR is a CBA under either party's construction of "CBA." Synaffix's new expert declaration does not prove otherwise. As Dr. Baker acknowledges, Straus discloses fixation techniques under which the cells are dead and no longer

⁵ The Board should exercise its discretion to disregard these new references Synaffix submitted with the Reply regarding azide-alkyne reactions. Synaffix could have, but failed to, submit these references with its Petition as required by 35 U.S.C. § 312(a)(3). *See, e.g., Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1366, 1370 (Fed. Cir. 2016).

viable. EX1075, ¶23. A POSA would understand from the context of the '682 patent that a cell-binding agent targets and binds to living cells under *in vitro*, *in vivo*, or *ex vivo* conditions. EX1063, 33:20-34:8. As discussed in the POR (at 42-44), Morales-Santrutos discloses HRP as a reporter, not a cell-binding agent. The obscure, decades-old, and rarely cited Straus reference cannot be used to fill the gap in Morales-Santrutos' disclosure to support Synaffix's anticipation arguments.

B. Claim 2

Synaffix's analysis of claim 2 requires mapping Y to vinyl, and fails under DAC's construction of Y. Pet. 32. Dr. Chari only relied on Compound 2 of Morales-Sanfrutos for his analysis of claim 2. EX1003, ¶87 (last three sentences); *see also* EX2046, 63:4-14, 64:2-8, 66:22-67:15, 68:5-11, 86:20-88:25. Dr. Chari mapped the propargylamine group of Compound 2 of Morales-Sanfrutos to "Z" in order to meet claim 2's requirement that Z comprises an "amino" group. As such, Dr. Chari mapped the vinyl on the other end of Compound 2 to "Y." Morales-Sanfrutos does not anticipate claim 2 under DAC's construction of "Y". Additionally, Synaffix applies inconsistent analyses for claims 1 and 2. The Board should reject the new theories and new evidence presented in the Reply concerning claim 2.

C. Claims 3, 6, 24-25, and 33

Synaffix does not separately address these claims in its Reply. For reasons stated above and in the POR (at 37-49), these claims are patentable.

IV. GROUND 2 (HARRIS)

Synaffix's arguments for Ground 2 require mapping Y to vinyl, so that it could map the adjacent sulfone to Q. Synaffix fails to show Harris renders the claims unpatentable under DAC's construction. Even applying Synaffix's construction, Harris' broad disclosures neither anticipate nor render obvious the claims.

A. Claims 1 and 30-31

Each of claims 1 and 30-31 requires that m and n be not zero, meaning Q and T must both be present. Synaffix's unpatentability arguments require mapping vinyl to Y, so that it could map the adjacent sulfone to Q. POR, 53-57, 60. Synaffix fails to show anticipation or obviousness over Harris under DAC's construction. *Id.* It does not even attempt to demonstrate otherwise in its Reply.

Harris' broad disclosures do not anticipate under either party's construction. Synaffix wrongly argues that a POSA would "at once envisage" the claimed compounds from Harris' "R-(OCH₂CH₂)_n-Y" because this genus allegedly "amounts to at most 8 combinations." Reply, 22. Not so. Synaffix ignores that regarding this genus, Harris states that R can be "a group that may be the *same or different* from Y," including "H-, H₃C-, CH₂=CH-SO₂-, Cl-CH₂-CH₂-SO₂-, or a *polymer activating group other than* CH₂=CH-SO₂-, Cl-CH₂-CH₂-SO₂-, *such as is referred to with respect to the above patents and published patent applications.*" EX1007, 19:24-30. This genus thus encompasses a broad variety of "R" groups. EX2038, ¶¶209-

211. Even Dr. Chari admitted that Harris' disclosure is broad. EX2037, 35:11-36:7, 40:15-22, 43:7-44:1. Harris' broad genus does not anticipate the claims.

Synaffix's belated reliance on "PEG *bis* vinyl sulfone" (Reply, 22-23)—a PEG linker with vinylsulfone on either end—should be rejected. *Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1364, 1367-68 (Fed. Cir. 2015); *Rembrandt Diagnostics, LP v. Alere, Inc.*, 76 F.4th 1376, 1383 (Fed. Cir. 2023). Even if considered, at least one of the two vinylsulfones must be mapped to Y under DAC's construction, and the remaining vinylsulfone would not meet the claims' requirement that Q and T both be present.

Synaffix's new theory based on Harris' heterobifunctional linkers—a PEG linker with an active sulfone group on one end and a non-sulfone, amino-reactive group on the other end—to support its challenge of claim 1 fails even under its own construction. Reply, 23. The claim requires Q and T both be present. Harris' heterobifunctional linkers with only one (not two) active sulfone moiety cannot meet the claim's requirements for Q/T under either party's construction.⁶

Synaffix argues that Harris' "homobifunctional linkers having two sulfones (e.g., Harris' PEG *bis* vinyl sulfone)" would meet claims 30-31. Reply, 24. Again,

⁶ Synaffix's arguments regarding cell-binding agent also fail for reasons provided in the POR (at 56, citing EX2038, ¶¶212-213).

Synaffix's arguments are premised on its construction that divides a vinylsulfone and maps it to Y and Q. Under DAC's construction, Harris' linkers with two sulfones, one of which is part of an active sulfone moiety (such as vinylsulfone) that must be mapped to Y, cannot meet the claims' requirements for Q/T.

Lastly, Synaffix's Petition only presents cursory and conclusory obviousness arguments, failing to particularly state the basis for obviousness. Pet. 39-40. 42-44. Its Reply (at 24-25) similarly fails. Synaffix provides *no* analysis on the differences between the prior art and the claim, whether the claims would have been obvious in view of such differences, nor how or why a POSA would have modified any specific structures in Harris to achieve any claimed compound.

B. Claims 20-21 and 29

For similar reasons stated above for claims 1 and 30-31 and in the POR (at 53-59), Synaffix fails to demonstrate anticipation or obviousness of these claims.

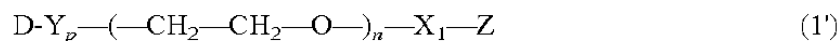
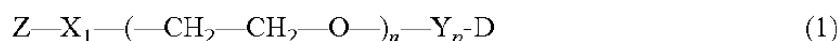
V. GROUND 3 (SINGH/HARRIS)

Synaffix fails to show that a POSA would have been motivated to incorporate the sulfone in a reactive vinylsulfone *conjugation moiety* of Singh into the linker as a spacer element. Synaffix's hindsight-driven, unsupported expert testimony and arguments should be given little weight, or disregarded as untimely. *Ariosa*, 805 F.3d at 1364, 1367-68; *Rembrandt*, 76 F.4th at 1383.

A. Claims 1 and 30-31

As noted above, each of these claims requires Q and T both be present. Synaffix's obviousness arguments at best assert that a POSA would have *substituted* the reactive functionality “Z” in Singh (EX1008, ¶¶14, 16, 134, reproduced below) to incorporate vinylsulfone at the end of the linker. See EX2046, 99:7-17; 100:22-101:8.

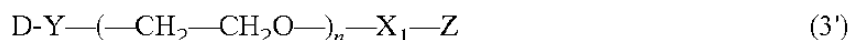
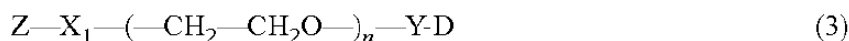
[0014] Accordingly, the present invention provides a compound of formula (1) or a specific compound of formula (1'):



wherein:

Z represents a reactive functionality that can form an amide or a thioether bond with a cell-binding agent;

[0016] Another aspect of the present invention is a compound of formula (3) or a specific compound of formula (3'):



wherein:

Z represents a reactive functionality that can form an amide or a thioether bond with a cell-binding agent;

Even *assuming* a POSA would have made such substitution, the resulting compounds do not fall within the claim scope under DAC's construction—Synaffix must map vinyl to the claimed “Y,” so that it could map the adjacent sulfone to “Q”. POR, 44-61. Synaffix thus fails to show obviousness.

In its Reply (at 26), Synaffix admits that the “expressly drawn linkers” of Singh each include maleimide or haloacetamide reactive groups, without any vinylsulfone, which Dr. Chari confirmed (EX2046, 98:15-23). Synaffix again argues “**substitution** of vinyl sulfones for the maleimides/halo acetamides depicted in Singh’s expressly-drawn molecules” (*id.*), while admitting that “Harris’ linkers are **very similar** to those of Singh” (*id.*, 27). This raises the question why a POSA would have made the substitution at all. POR, 64. Indeed, Dr. Chari confirms that in Singh “PEG was enough” for solubility. EX2046, 111:9-14; *see also* POR, 61.

Any such substitution, even if made, would not have led a POSA to any compound within the scope of claims 1 and 30-31 under DAC’s construction. Such compounds at best contain two vinylsulfones in a linker, **or** one vinylsulfone and one sulfone in a linker-drug compound. Under DAC’s construction, the claimed “Y” must be mapped to a vinylsulfone, and the remaining single vinylsulfone or sulfone would not meet the claims’ requirements that Q and T both be present.

Importantly, under either party’s construction, a POSA would not have been motivated to substitute vinylsulfone for maleimide or haloacetamide in Singh’s expressly drawn linkers. POR, 61-66. In its Reply (at 26-27), Synaffix cites to new portions of the references to fill the gaps on reason to modify or combine references. The Board should not consider such new theories. *Ariososa*, 805 F.3d at 1367-68. Even if considered, Synaffix fails to establish obviousness.

Specifically, Synaffix raises two new theories for reasons to modify Singh: (1) “when dealing with more hydrophobic drugs,” or (2) “when the PEG chain must be kept short,” Reply, 27, both driven by hindsight and unsupported by evidence.

First, Dr. Chari admits that he did not calculate logP (a known measure for solubility and hydrophilicity) and did not provide any data or other evidence to show that vinylsulfone would be more soluble or more hydrophilic than maleimide. EX2046, 114:9-116:2. Even if a POSA were “dealing with more hydrophobic drugs,” as Synaffix now asserts, there is **no** evidence that **substituting** vinylsulfone with maleimide in Singh’s “expressly-drawn” linkers would increase, or decrease, solubility or hydrophilicity.

Second, Synaffix cites Figure 36 of Singh, but Figure 36 (one of many figures in Singh) only reports *in vitro* data of six conjugates. EX2046, 113:20-114:8. Even **assuming** Figure 36 suggested a shorter PEG linker to improve properties, Synaffix presents **no** evidence to show that a POSA would have combined Singh with Harris. Harris teaches that PEG linkers with “45 to 110” ethylene-glycols (much longer than those disclosed in Singh’s Figure 36) were most preferred. EX1007, 21:14-23. A POSA would not have looked to Harris to modify Singh to achieve a shorter linker.

Synaffix also fails to show that a POSA would have selected just the sulfone moiety from Harris’ linker to substitute into Singh’s linker, with any reasonable expectation of success. And Dr. Chari presented **no** evidence that a POSA would

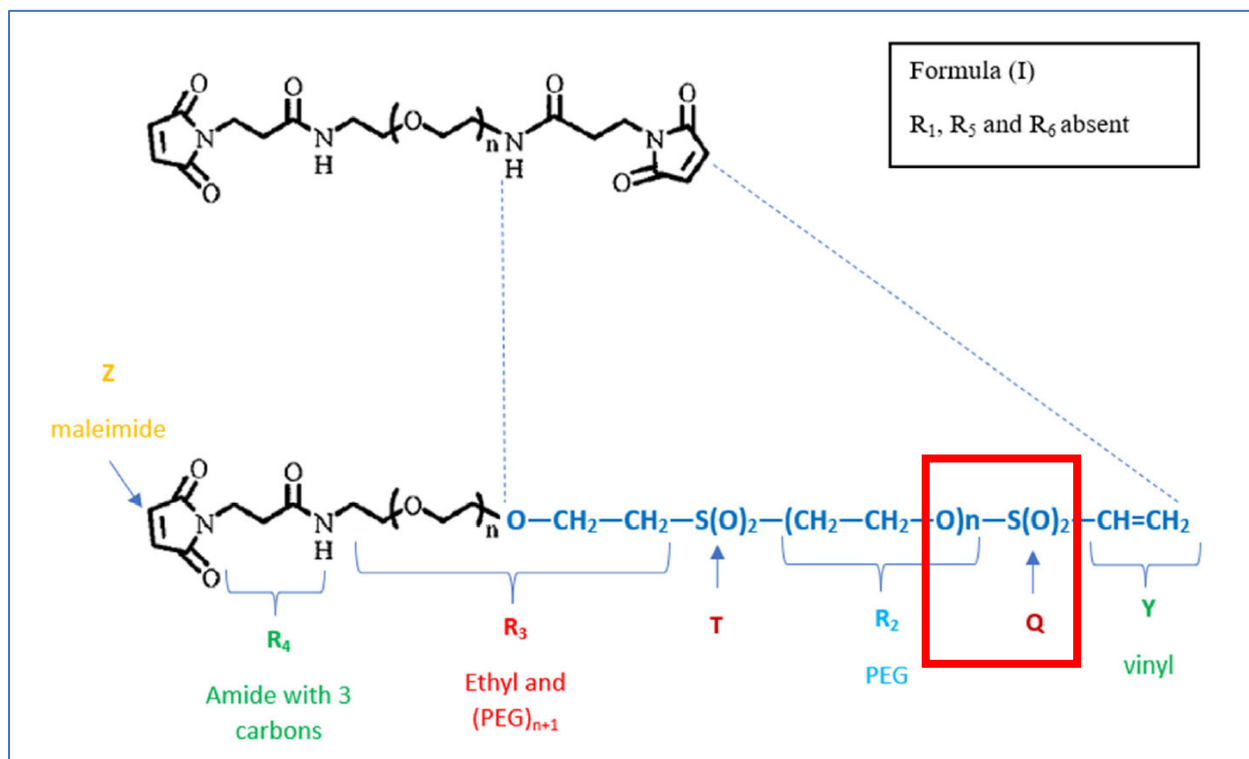
have expected substituting vinylsulfone for maleimide or haloacetamide in Singh would improve drug uptake—neither Singh nor Harris compared these reactive functionalities as to their ability to facilitate drug uptake.

Synaffix's new theories are driven by hindsight and unsupported by evidence.

B. Claim 2

Synaffix presents brand new theory that a POSA would have substituted Harris' *PEG bis-vinyl sulfone linker* for maleimide. *Compare* Reply, 28, with EX2046, 116:17-21 (confirming EX1003, ¶133, is the only analysis for claim 2); Pet. 53 (only analysis for claim 2). The Board should disregard this new theory. *Ariosa*, 805 F.3d at 1367-68. Even if considered, it is without merit.

Synaffix fails to articulate *any* reason a POSA would have been motivated to substitute an entire *linker* of Harris for the maleimide *conjugation moiety* in Singh. This hindsight-driven theory contradicts Synaffix's own argument that Singh teaches "the PEG chain must be kept short." Reply, 27. Moreover, the molecule Synaffix now pieces together contains an unstable sulfonate ester (annotated in red box below, EX1076, ¶31) that Dr. Chari admits has not been used in any linker. EX2046, 118:2-119:21, 122:19-22. Additionally, Synaffix's analysis requires Y to be vinyl only, failing to prove unpatentability under DAC's construction.



C. Claims 3-8, 10-12, 14-17, 20-21, 24, 26, and 29

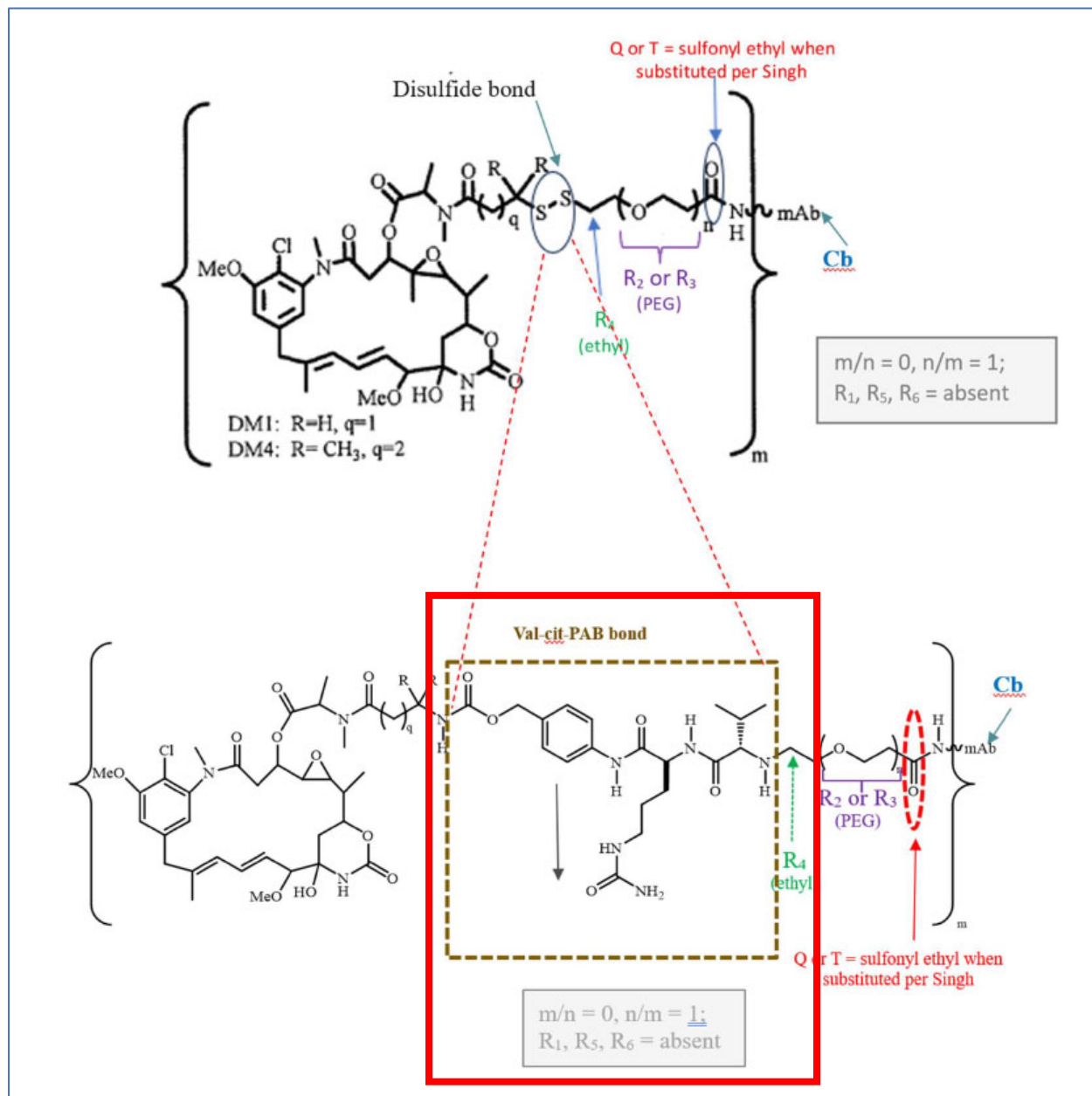
For similar reasons discussed above for claims 1 and 30-31 and in the POR (at 61-66), Synaffix fails to demonstrate obviousness of these claims.

VI. GROUND 4 (SINGH/HARRIS/BHAKTA)

Synaffix belatedly attempts to identify its basis for Ground 4 after it failed to do so. POR, 68-69. The Board should disregard those new theories and arguments given that Synaffix could have presented them in the Petition. *Ariososa*, 805 F.3d at 1367-68; *Rembrandt*, 76 F.4th at 1383. Even if considered, they still fail.

For example, Synaffix fails to show how the molecule it now puts together meets the claims' requirements for R₁, R₄, R₅, and R₆—it incorrectly states that R₄ is ethyl and “R₁, R₅, and R₆ = absent” (annotated below in red box, Reply, 30), when

the R₄/R₅/R₆ portion of the molecule, containing a val-cit-PAB linker, is more than just ethylene. Synaffix fails to prove unpatentability of claims 9 and 13.

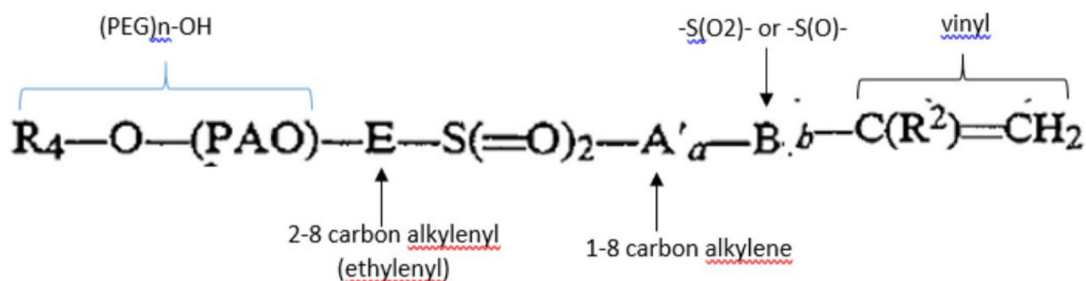


VII. GROUND 5 (SINGH/HARRIS/SNOW)

Synaffix's belated attempt to supply its basis for Ground 5 should be rejected.

Ariosa, 805 F.3d at 1367-68; *Rembrandt*, 76 F.4th at 1383. Even if considered, Synaffix relies on hindsight to piece together molecules that are not suggested by Singh/Harris/Snow.

Synaffix's conclusory arguments fail to cure the defects noted in the POR (at 69-71) and the Board's institution decision. Synaffix provides **no** response to issues DAC raised. *Id.* For example, Synaffix provides **no** reason for a POSA to select the following structure among others disclosed in Snow (EX2038, ¶251):



Snow defines the elements of this structure as broad genus groups, not the limited choices Synaffix depicts above. POR, 70; EX2038, ¶249. Synaffix does not explain how and why a POSA would have selected these specific structural elements. EX2038, ¶250. Snow does not disclose anything about solubility or hydrophilicity. POR, 70-71; EX2038, ¶252. Synaffix's one cursory sentence citing Harris (Reply, 32) does not address these defects, as Harris discloses very different compounds than Snow.

Date: April 25, 2025

By: /Catherine T. Mattes/

Catherine T. Mattes (Reg. No. 68,347)
QUINN EMANUEL URQUHART &
SULLIVAN LLP

295 5th Avenue, 9th Floor

New York, NY 10016

Email: catherinemattes@quinnemanuel.com

Tel: (212) 849-7000

Fax: (212) 849-7100

Counsel for Patent Owner

Hangzhou DAC Biotech Co., Ltd.

CERTIFICATE OF LENGTH (37 C.F.R. § 42.24)

The undersigned hereby certifies that, according to the word-processing system used to prepare the foregoing document, this document has 5,575 words and thus complies with the applicable word limit.

Date: April 25, 2025

By: /Catherine T. Mattes/
Catherine T. Mattes (Reg. No. 68,347)

Counsel for Patent Owner
Hangzhou DAC Biotech Co., Ltd.

CERTIFICATE OF SERVICE (37 C.F.R. §§ 42.6(E), 42.105(A))

The undersigned hereby certifies that the foregoing document was served in its entirety on April 25, 2025 upon the following parties via Electronic Mail:

Michael Houston
Joseph Meara
Jolene Fernandes
FOLEY & LARDNER LLP
3000 K Street, NW, Suite 600
Washington, DC 20008
682IPR@foley.com

Date: April 25, 2025

By: /Catherine T. Mattes/
Catherine T. Mattes (Reg. No. 68,347)

Counsel for Patent Owner
Hangzhou DAC Biotech Co., Ltd.