UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MERCK, SHARP & DOHME LLC,
Petitioner

v.

HALOZYME, INC.,
Patent Owner

Case PGR2025-00050
U.S. Patent No. 12,077,791

PATENT OWNER'S UPDATED EXHIBIT LIST

Mail Stop "PATENT BOARD"
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Patent Owner submits this Updated Exhibit List to accompany service of the public, redacted version of Exhibit 2401.

PATENT OWNER'S UPDATED EXHIBIT LIST

Exhibit No.	Description
2001	Declaration of Barbara Triggs-Raine, Ph.D. in support of Patent Owner Discretionary Denial Brief (WITHDRAWN)
2002	*Curriculum Vitae* of Barbara Triggs-Raine, Ph.D.
2003	Disclaimer in a Patent under 37 C.F.R. § 1.321(a), filed in U.S. Patent Application No. 18/659,215, July 24, 2025
2004	Sequence listing of U.S. Patent Application No. 18/659,215
2005	"2023 Pharma 50: The 50 largest pharma companies in the world," drugdiscoverytrends.com, accessible at https://www.drugdiscoverytrends.com/2023-pharma-50-largest-companies/ (last accessed April 28, 2025)
2006	"Merck Announces Fourth-Quarter and Full-Year 2024 Financial Results," Merck Press Release, February 4, 2025
2007	"Merck & Company, Inc. Common Stock (new) (MRK)," Nasdaq.com, accessible at https://www.nasdaq.com/market-activity/stocks/mrk (last accessed April 28, 2025)
2008	"Halozyme Therapeutics, Inc. Common Stock (HALO)," Nasdaq.com, accessible at https://www.nasdaq.com/market-activity/stocks/halo (last accessed April 28, 2025)

Exhibit No.	Description
2009	"Halozyme reports full year 2024 record revenue of $1.015 billion and Exceeds its Financial Guidance for Royalty Revenue, Adjusted EBITDA and Non-GAAP Diluted EPS," Halozyme.com, accessible at https://ir.halozyme.com/news/news-details/2025/HALOZYME-REPORTS-FULL-YEAR-2024-RECORD-REVENUE-OF-1.015-BILLION-AND-EXCEEDS-ITS-FINANCIAL-GUIDANCE-FOR-ROYALTY-REVENUE-ADJUSTED-EBITDA-AND-NON-GAAP-DILUTED-EPS/default.aspx (last accessed April 28, 2025)
2010	"Commercial Products," Halozyme.com, accessible at https://halozyme.com/commercial-products/ (last accessed April 28, 2025)
2011	"About Us," Halozyme.com, accessible at https://halozyme.com/about-us/#our-focus (last accessed April 28, 2025)
2012	Complaint for Patent Infringement and Declaratory Judgment of Patent Infringement, *Halozyme, Inc. v. Merck Sharp & Dohme Corp.*, Civil Action No. 2:25-cv-03179-ES (D.N.J.), filed April 24, 2025
2013	"Alteogen announces amendment to license agreement with MSD," Alteogen Press Release, February 22, 2025, accessible at https://www.alteogen.com/en/ir_1/?uid=2223&mod=document&pageid=1 (last accessed April 28, 2025)
2014	"Big Pharma's Business Model: Corporate Greed," United States Senate Health, Education, Labor, and Pensions Committee February 6, 2024
2015	"Medicare now negotiating price of drug that costs $7,100 in US vs. $900 in Canada," CNN February 6, 2024
2016	Fact Sheet: President Donald J. Trump Announces Actions to Put American Patients First by Lowering Drug Prices and Stopping Foreign Free-riding on American Pharmaceutical Innovation," The White House May 12, 2025 Last accessed August 12, 2025

Exhibit No.	Description
2017	"Big Pharma Earnings Watch: Merck and Pfizer" February 7, 2025 The Campaign for Sustainable Rx Pricing
2018	Declaration of Tyler C. Liu *(served not filed)*
2019-2067	*Intentionally Left Blank*
2068	Declaration of Melanie A. Simpson, Ph.D. in Support of Patent Owner's Response
2069	*Curriculum Vitae* of Melanie A. Simpson, Ph.D.
2070	Declaration of Gregory A. Petsko, Ph.D. in Support of Patent Owner's Response
2071	*Curriculum Vitae* of Gregory A. Petsko, Ph.D.
2072-2075	*Intentionally Left Blank*
2076	Transcript of the Deposition of Michael Hecht, Ph.D., August 26, 2025
2077	Transcript of the Deposition of Dr. Sheldon Park, August 7, 2025
2078	Transcript of the Deposition of Dr. Sheldon Park, August 21, 2025
2079	Koehl, P. et al., "Structure-based conformational preferences of amino acids," *PNAS*, 96(22):12524-12529 (October 26, 1999)
2080	Pommié, C. et al., "IMGT standardized criteria for statistical analysis of immunoglobulin V-REGION amino acid properties," *Journal of Molecular Recognition*, 17:17-32 (2004)
2081	*Intentionally Left Blank*
2082	Kyte, J. et al., "A Simple Method for Displaying the Hydropathic Character of a Protein,"*Journal of Molecular Biology*, 157:105-132 (1982)

Exhibit No.	Description
2083	*Assay Guidance Manual*, Eli Lilly & Company and the National Center for Advancing Translational Sciences
2084	"The Central Role of Enzymes as Biological Catalysts," NCBI Bookshelf, National Institutes of Health (accessible at https://www.ncbi.nlm.nih.gov/books/NBK9921/, last accessed September 22, 2025)
2085	French, S. et al., "What is a Conservative Substitution?", *Journal of Molecular Evolution*, 19:171-175 (1983)
2086	El-Safory, N. et al., "Hyaluronidases, a group of glycosidases: Current and future perspectives," *Carbohydrate Polymers*, 81:165-181 (2010)
2087	Lu, J. et al., "Hyaluronidase: structure, mechanism of action, diseases and therapeutic targets," *Molecular Biomedicine*, 6:50-77 (2025)
2088	Stern, R. et al., "Mammalian Hyaluronidases," Hyaluronan Index (2000)
2089	Gmachl, M. et al., "The human sperm protein PH-20 has hyaluronidase activity," *FEBS Letters*, 336(3):545-548 (December 1993)
2090	Gmachl, M. et al., "Bee venom hyaluronidase is homologous to a membrane protein of mammalian sperm," *PNAS USA*, 90:3569-3573 (April 1993)
2091	Davies, G. et al., "Structures and mechanisms of glycosyl hydrolases," *Current Biology*, 3:853-859 (1995)
2092	Marković-Housley, Z. et al., "Crystal Structure of Hyaluronidase, a Major Allergen of Bee Venom," *Structure*, 8:1025-1035 (October 2000)
2093	U.S. Patent No. 8,343,487 B2 to Baker et al., issued January 1, 2013

Exhibit No.	Description
2094	Thermo Scientific Multidrop® 384 User Manual, Rev. 3.4, Thermo Fisher Scientific (October 2008)
2095	*Intentionally Left Blank*
2096	Frost, G. et al., "A Microtiter-Based Assay for Hyaluronidase Activity Not Requiring Specialized Reagents," *Analytical Biochemistry*, 251:263-269 (1997)
2097	U.S. Patent Application Publication No. 2005/0260186 A1 to Bookbinder et al., published November 24, 2005
2098	Delpech, B. et al., "Enzyme-Linked Hyaluronectin: A Unique Reagent for Hyaluronan Assay and Tissue Location and for Hyaluronidase Activity Detection," *Analytical Biochemistry*, 229:35-41 (1995)
2099	Takahashi, T. et al., "A fluorimetric Morgan-Elson assay method for hyaluronidase activity," *Analytical Biochemistry*, 322:257-263 (2003)
2100-2062	*Intentionally Left Blank*
2163	National Medal of Science in Medicine Citation for Gregory Petsko, 2022 (accessible at https://nationalmedals.org/laureate/gregory-petsko/?amp=1, last accessed September 19, 2025)
2164	Petsko, G., et al., *Protein Structure and Function*, New Science Press (2004)
2165	U.S. Patent Application Publication No. 2010/0143457 A1 to Wei et al., published June 10, 2010
2166	Petsko Patent Analysis Data
2167	*Intentionally Left Blank*

Exhibit No.	Description
2168	Profile of Gregory A. Petsko, American Academy of Arts and Sciences (accessible at https://www.amacad.org/person/gregory-petsko, last accessed September 22, 2025)
2169	"BLAST Topics," National Institutes of Health (accessible at https://blast.ncbi.nlm.nih.gov/doc/blast-topics, last accessed September 22, 2025)
2170	Chain, E. et al., "Identity of Hyaluronidase and Spreading Factor," *British Journal of Experimental Pathology*, 21(6):324-338 (1940)
2171-2173	*Intentionally Left Blank*
2174	Errata from Park Deposition (introduced during Park deposition and marked by court reporter as "Park 2068")
2175	Mutational Analysis Table, 2024-11-7, Native Excel File (introduced during Park deposition and marked by court reporter as "Park 2069")
2176	Mutational Analysis Table, 2024-11-7, PDF File (introduced during Park deposition and marked by court reporter as "Park 2070")
2177	E-mail Correspondence dated August 14, 2025
2178	1LOH pdb file
2179	1FCV pdb file
2180	2PE4 pdb file
2181	8SMN pdb file
2182	I309L Swiss Model
2183	I309N Swiss Model
2184	I309E Swiss Model
2185	I309G Swiss Model

Exhibit No.	Description
2186	I309H Swiss Model
2187	I309M Swiss Model
2188	I309Q Swiss Model
2189	I309R Swiss Model
2190	I309S Swiss Model
2191	PH20 Swiss Model
2192	*Intentionally Left Blank*
2193	N47A_N219A_I309N Swiss Model
2194	N47A_N131A_I309N Swiss Model
2195	N47A_N131A_N219A_I309N Swiss Model
2196	N131A_N219A_I309N Swiss Model
2197	Orangutan_I309N Swiss Model
2198	Chimpanzee_I309N Swiss Model
2199	Gibbon_I309N Swiss Model
2200	I309T Swiss Model
2201-2399	*Intentionally Left Blank*
2400	Merck & Co., Inc. Form 10-Q, Securities and Exchange Commission, November 5, 2025
2401	E-mail Correspondence between Counsel for Petitioner and Patent Owner, January 6, 2026 (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)

Exhibit No.	Description
2402	MERCK_PGR00006 - 30November2023 Merck 031988 Master Agreement - executed 4932-6153-3216 1_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2403	MERCK_PGR00056 - MSA - Term 4 - Dechert LLP_Signed_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2404	MERCK_PGR00467 - Mark Stewart Offer Letter_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2405	MERCK_PGR00052 - Hecht Engagement Letter (7-19)_Signed (Redacted)_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2406	MERCK_PGR00086 - Park Engagement Letter with signature - sjp (redacted)_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2407	"Executive team," MSD, accessible at http://www.msd.com/company-overview/leadership/executive-team/ (last accessed January 5, 2026)
2408	"Executive team," Merck, accessible at http://www.merck.com/company-overview/leadership/executive-team/ (last accessed January 5, 2026)
2409	"Board of directors," MSD, accessible at http://www.msd.com/company-overview/leadership/board-of-directors/ (last accessed January 5, 2026)
2410	"Board of directors," Merck, accessible at http://www.merck.com/company-overview/leadership/ board-of-directors/ (last accessed January 5, 2026)
2411	"Contact us," MSD, accessible at http://www.msd.com/contact-us/ (last accessed January 5, 2026)

Exhibit No.	Description
2412	"Contact us," Merck, accessible at http://www.merck.com/contact-us/ (last accessed January 5, 2026)
2413	"Who we are," MSD, accessible at http://www.msd.com/company-overview/ (last accessed January 5, 2026)
2414	"Who we are," Merck, accessible at http://www.merck.com/company-overview/ (last accessed January 5, 2026)
2415	Merck & Co., Inc. Form 10-K, Securities and Exchange Commission, February 25, 2025
2416	USPTO OED Practitioner Search - Mark J. Stewart, October 30, 2025
2417	Petition for *Inter Partes* Review, *Merck Sharp & Dohme LLC v. The Johns Hopkins University*, IPR2024-00240 (P.T.A.B.), November 30, 2023
2418	Petition for *Inter Partes* Review, *Merck Sharp & Dohme LLC v. The Johns Hopkins University*, IPR2024-00622 (P.T.A.B.), March 4, 2024
2419	Petition for *Inter Partes* Review, *Merck Sharp & Dohme LLC v. The Johns Hopkins University*, IPR2024-00623 (P.T.A.B.), March 4, 2024
2420	Petition for *Inter Partes* Review, *Merck Sharp & Dohme LLC v. The Johns Hopkins University*, IPR2024-00624 (P.T.A.B.), March 4, 2024
2421	Petition for *Inter Partes* Review, *Merck Sharp & Dohme LLC v. The Johns Hopkins University*, IPR2024-00625 (P.T.A.B.), March 4, 2024

Exhibit No.	Description
2422	Petition for *Inter Partes* Review, *Merck Sharp & Dohme LLC v. The Johns Hopkins University*, IPR2024-00647 (P.T.A.B.), March 13, 2024
2423	Petition for *Inter Partes* Review, *Merck Sharp & Dohme LLC v. The Johns Hopkins University*, IPR2024-00648 (P.T.A.B.), March 13, 2024
2424	Petition for *Inter Partes* Review, *Merck Sharp & Dohme LLC v. The Johns Hopkins University*, IPR2024-00649 (P.T.A.B.), March 13, 2024
2425	Petition for *Inter Partes* Review, *Merck Sharp & Dohme LLC v. The Johns Hopkins University*, IPR2024-00650 (P.T.A.B.), March 13, 2024
2426	MERCK_PGR00035 - 20250813 Payment Remittance_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2427	MERCK_PGR00042 - Dechert T360 Halozyme - 202500327_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2428	MERCK_PGR00045 - FW_ Attn_ Accounts Receivable Dept - PAYMENT REMITTANCE DETAIL (Nov 2025)_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2429	MERCK_PGR00049 - Halozyme - 202000447 - Invoices 5_1_2024-12_22_2025_1 of 3_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2430	MERCK_PGR00465 - Mark Stewart Payroll Statement for Dec 12 2025_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2431	MERCK_PGR00001 - Workday - Ginkel Organization Screen Shot (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)

Exhibit No.	Description
2432	MERCK_PGR00002 - Workday - Lally Organization Screen Shot (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2433	MERCK_PGR00003 - Workday - Majchrzak Organization Screen Shot (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2434	MERCK_PGR00004 - Workday - Stewart Organization Screen Shot (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2435	MERCK_PGR00005 - Workday - Su Organization Screen Shot (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2436	MERCK_PGR00036 - 20250903 Payment Remittance_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2437	MERCK_PGR00037 - 20251001 Payment Remittance_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2438	MERCK_PGR00038 - 20251203 Payment Remittance_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2439	MERCK_PGR00040 - 20251215 Payment Remittance_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2440	MERCK_PGR00046 - FW_ Attn_ Accounts Receivable Dept - PAYMENT REMITTANCE DETAIL (Oct 2025)_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2441	MERCK_PGR00047 - FW_ Attn_ Accounts Receivable Dept - PAYMENT REMITTANCE DETAIL (Sept 2025)_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2442	MERCK_PGR00048 - Halozyme - 202000447 - Invoice IN00125072310 Review History (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2443	MERCK_PGR00050 - Halozyme - 202000447 - Invoices 5_1_2024-12_22_2025_2 of 3_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)

Exhibit No.	Description
2444	MERCK_PGR00051 - Halozyme - 202000447 - Invoices 5_1_2024-12_22_2025_3 of 3_Redacted (CONFIDENTIAL – PROTECTIVE ORDER MATERIAL)
2445	By-Laws of Merck & Co., Inc., Effective as of November 19, 2024
2446	U.S. Supreme Court Amicus Curiae Brief by the Intellectual Property Owners Association, *Jack Daniel's Properties, Inc. v. VIP Products LLC*, Case No. 22-148
2447	Board of Directors – Intellectual Property Owners Association, accessible at https://ipo.org/index.php/board-of-directors (last accessed February 15, 2026)
2448	ChIPs Speaker Bio Information
2449	LinkedIn Profile Page
2450	Form PTO-158, Office of Enrollment and Discipline, United States Patent & Trademark Office
2451	Jennifer Zachary's March 16, 2018 Job Offer Letter
2452	Form 13F Cover Page, Merck & Co., Inc., September 2025
2453	Form 13F Cover Page, Merck Sharp & Dohme LLC, September 2025
2454	Form 10-Q, Merck & Co. Inc., Quarterly Report for Quarter Ended June 30, 2025
2455	*Intentionally Left Blank*
2456	Exhibit 24.1 to Merck & Co. Inc.'s Form 10-K for the Fiscal Year Ended December 31, 2024
2457	Sarbanes-Oxley Act of 2002
2458	Jennifer Zachary Biography, Merck.com

Exhibit No.	Description
2459	Rules of Professional Conduct of the New Jersey Bar
2460	Jennifer Zachary Biography, MSD.com
2461	USPTO Office of Enrollment and Discipline Practitioner Search for Mark J. Stewart, February 13, 2026
2462	Schedule 13D, Harpoon Therapeutics, Inc., January 17, 2024
2463	Schedule 14A Proxy Statement, Merck & Co., Inc., 2025
2464	Form 13F, Information Required of Institutional Investment Managers Pursuant to Section 13(f) of the Securities Exchange Act of 1934 and Rules Thereunder, accessible at https://www.sec.gov/pdf/form13f.pdf (last accessed February 15, 2026)
2465	USPTO Office of Enrollment and Discipline Practitioner Search for "Merck," February 15, 2026
2466	Form 8-K, Merck & Co. Inc., February 3, 2026
2467	Exhibit 99.1 to Form 8-K, Merck & Co. Inc., February 3, 2026
2468	Exhibit 99.2 to Form 8-K, Merck & Co. Inc., February 3, 2026

Respectfully submitted,

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e))

I certify that the above-captioned **PATENT OWNER'S UPDATED EXHIBIT LIST** and the public, redacted version of Exhibit 2401 were served in their entireties on February 20, 2026, upon the following parties via electronic mail:

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