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MERCK, SHARP & DOHME LLC,
Petitioner

v.

HALOZYME, INC.,
Patent Owner

Case PGR2025-00024
U.S. Patent No. 12,060,590

PATENT OWNER'S UPDATED EXHIBIT LIST

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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2001	Declaration of Barbara Triggs-Raine, Ph.D. in support of Patent Owner Discretionary Denial Brief (WITHDRAWN)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. 18/068,218, June 13, 2025
2004	"Halozyme Therapeutics to Present Data on PEGPH20 at the Upcoming 2011 EORTC-NCIASCO Annual Meeting," Halozyme Therapeutics, Inc. Press Release, October 24, 2011
2005	LinkedIn profiles of Michael Shepard, Robert Connor, Ge (Gina) Wei, and Qiping Zhao
2006	Sequence listing of U.S. Patent Application No. 18/068,218
2007	Gifre, L., et al., "Trends in recombinant protein use in animal production," *Microb Cell Fact* 16:40 (2017)
2008	"Recombinant Drugs," Smithsonian Institution, accessible at https://www.si.edu/spotlight/birth-of-biotech/recombinant-drugs (last accessed February 27, 2025)
2009	Naz, R., "Antisperm Contraceptive Vaccines: Where We Are and Where We Are Going?," *American Journal of Reproductive Immunology* 66:5-12 (2011)
2010	Primakoff, P., et al., "Fully effective contraception in male and female guinea pigs immunized with the sperm protein PH-20," *Nature* 335:543-546 (October 6, 1988)

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2014	*Intentionally Left Blank*
2015	File History of U.S. Patent No. 7,872,107
2016	Pils, B., *et al.*, "Variation in structural location and amino acid conservation of functional sites in protein domain families," *BMC Bioinformatics* 6 (August 25, 2005)
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2019	Atmuri, V., *et al.*, "Hyaluronidase 3 (*HYAL3*) knockout mice do not display evidence of hyaluronan accumulation," *Matrix Biology* 27 (2008)
2020	Hemming, R., *et al.*, "Mouse Hyal3 encodes a 45- to 56-kDa glycoprotein whose overexpression increases hyaluronidase 1 activity in cultured cells," *Glycobiology* 18(4):280-289 (2008)

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2024	Petition for Post-Grant Review, *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00003 (P.T.A.B.), November 12, 2024
2025	Petition for Post-Grant Review, *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00009 (P.T.A.B.), December 27, 2024
2026	Petition for Post-Grant Review, *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00006 (P.T.A.B.), December 10, 2024
2027	Petition for Post-Grant Review, *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00030 (P.T.A.B.), February 4, 2025
2028	Petition for Post-Grant Review, *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00017 (P.T.A.B.), January 17, 2025
2029	Declaration of Michael Hecht, Ph.D. (Exhibit 1003), *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00004 (P.T.A.B.), November 26, 2024

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2030	Declaration of Michael Hecht, Ph.D. (Exhibit 1003), *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00003 (P.T.A.B.), November 12, 2024
2031	Declaration of Michael Hecht, Ph.D. (Exhibit 1003), *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00009 (P.T.A.B.), December 27, 2024
2032	Declaration of Michael Hecht, Ph.D. (Exhibit 1003), *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00006 (P.T.A.B.), December 10, 2024
2033	Declaration of Michael Hecht, Ph.D. (Exhibit 1003), *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00030 (P.T.A.B.), February 4, 2025
2034	Declaration of Michael Hecht, Ph.D. (Exhibit 1003), *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00017 (P.T.A.B.), January 17, 2025
2035	Lokeshwar, V., *et al.*, "Regulation of Hyaluronidase Activity by Alternative mRNA Splicing," *The Journal of Biological Chemistry* 277(37):33654-33663 (2002)
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2037	Petition for Post-Grant Review, *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00033 (P.T.A.B.), March 7, 2025
2038	Declaration of Michael Hecht, Ph.D. (Exhibit 1003), *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00039 (P.T.A.B.), March 28, 2025
2039	Petition for Post-Grant Review, *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00039 (P.T.A.B.), March 28, 2025

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2055	Second Declaration of Barbara Triggs-Raine, Ph.D. in Support of Patent Owner's Preliminary Response (WITHDRAWN)
2056	Petition for Post-Grant Review, *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00042 (P.T.A.B.), April 15, 2025
2057	Declaration of Michael Hecht, Ph.D. (Exhibit 1003), *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00042 (P.T.A.B.), April 15, 2025
2058	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
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2061	Declaration of Michael Hecht, Ph.D. (Exhibit 1003), *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00046 (P.T.A.B.), April 29, 2025
2062	Petition for Post-Grant Review, *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00050 (P.T.A.B.), May 7, 2025
2063	Declaration of Michael Hecht, Ph.D. (Exhibit 1003), *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00050 (P.T.A.B.), May 7, 2025

Exhibit No.	Description
2064	Declaration of Michael Hecht, Ph.D. (Exhibit 1003), *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00053 (P.T.A.B.), June 6, 2025
2065	Petition for Post-Grant Review, *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00053 (P.T.A.B.), June 6, 2025
2066	Petition for Post-Grant Review, *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00052 (P.T.A.B.), June 27, 2025
2067	Declaration of Michael Hecht, Ph.D. (Exhibit 1003), *Merck Sharp & Dohme LLC v. Halozyme Inc.*, Case No. PGR2025-00052 (P.T.A.B.), June 27, 2025
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	Declaration of Gary N. Cherr, Ph.D. in Support of Patent Owner's Response
2073	*Curriculum Vitae* of Gary N. Cherr, Ph.D.
2074	Declaration of James J. Moon, Ph.D. in Support of Patent Owner's Response
2075	*Curriculum Vitae* of James J. Moon, Ph.D.
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

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2099	Takahashi, T. et al., "A fluorimetric Morgan-Elson assay method for hyaluronidase activity," *Analytical Biochemistry*, 322:257-263 (2003)
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2171	Tollner, T. et al., "Macaque Sperm Release ESP13.2 and PSP94 During Capacitation: The Absence of ESP13.2 Is Linked to Sperm-Zona Recognition and Binding," *Molecular Reproduction and Development*, 69:325-337 (2004)
2172	Yudin, A. et al., "Characterization of the active site of monkey sperm hyaluronidase," *Reproduction*, 121:735-743 (2001)
2173	Yudin, A. et al., "PH-20 but Not Acrosin Is Involved in Sperm Penetration of the Macaque Zona Pellucida," *Molecular Reproduction and Development*, 53:350-362 (1999)
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	L307G Swiss Model
2183	L307K Swiss Model
2184	L307N Swiss Model

Exhibit No.	Description
2185	L307Q Swiss Model
2186	L307S Swiss Model
2187	L307T Swiss Model
2188	L307 V Swiss Model
2189	L307W Swiss Model
2190	L307Y Swiss Model
2191	PH20 Swiss Model
2192	N47A_N131A_ L307W Swiss Model
2193	N47A_N131A_N219A_ L307W Swiss Model
2194	N131A_N219A_ L307W Swiss Model
2195	N47A_N219A_L307T Swiss Model
2196	N47A_N131A_ L307T Swiss Model
2197	N47A_N131A_N219A_ L307T Swiss Model
2198	N131A_N219A_ L307T Swiss Model
2199	N47A_N219A_L307S Swiss Model
2200	N47A_N131A_ L307S Swiss Model
2201	N47A_N131A_N219A_ L307S Swiss Model
2202	Declaration of Tyler C. Liu (*served not filed*)
2203	N131A_N219A_ L307S Swiss Model
2204	N47A_N219A_L307W Swiss Model
2205	Orangutan_ L307W Swiss Model

Exhibit No.	Description
2206	Orangutan_ L307T Swiss Model
2207	Orangutan_ L307S Swiss Model
2208	Chimpanzee_L307W Swiss Model
2209	Chimpanzee_L307T Swiss Model
2210	Chimpanzee_L307S Swiss Model
2211	Gibbon_L307W Swiss Model
2212	Gibbon_L307T Swiss Model
2213	Gibbon_L307S Swiss Model
2214-2399	*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)
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)

Exhibit No.	Description
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)
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

Exhibit No.	Description
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
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)

Exhibit No.	Description
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)
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)

Exhibit No.	Description
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)
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

Exhibit No.	Description
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
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

Exhibit No.	Description
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,

STERNE, KESSLER, GOLDSTEIN & FOX PLLC

/Eldora L. Ellison/

Eldora L. Ellison, Ph.D.
Registration No. 39,967
Lead Attorney for Patent Owner

Date: February 16, 2026

1101 K Street, NW, 10th Floor
Washington, DC 20005
(202) 371-2600

Case PGR2025-00024
U.S. Patent No. 12,060,590

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

I certify that the above-captioned **PATENT OWNER'S UPDATED EXHIBIT LIST** was served in its entirety on February 16, 2026, upon the following parties via electronic mail:

Jeffrey P. Kushan (Lead Counsel)	jkushan@sidley.com
Leif Peterson (Back-up Counsel)	leif.peterson@sidley.com
Sue Wang (Back-up Counsel)	sue.wang@sidley.com
Katherine A. Helm (Back-up Counsel)	khelm@dechert.com
Blaine Hackman (Back-up Counsel)	Blaine.Hackman@dechert.com
Amy Mahan (Back-up Counsel)	amy.mahan@sidley.com
Christine M. Engen (Back-up Counsel)	christine.engen@sidley.com
Amit Bhatla (Back-up Counsel)	abhatla@sidley.com
Brian M. Goldberg (Back-up Counsel)	Brian.Goldberg@dechert.com
Mark Stewart (Back-up Counsel)	mark.stewart@merck.com
	HalozymePGRs@sidley.com

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX PLLC

/Eldora L. Ellison/

Eldora L. Ellison, Ph.D.
Registration No. 39,967
Lead Attorney for Patent Owner

Date: February 16, 2026

1101 K Street, NW, 10th Floor
Washington, DC 20005
(202) 371-2600