

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MEDTRONIC, INC.,
Petitioner

v.

MOSKOWITZ FAMILY LLC,
Patent Owner.

Case IPR2026-00216
Patent No. 10,016,284

PETITIONER'S REPLY TO PRELIMINARY RESPONSE

Table of Contents

I.	MOSKOWITZ’S ATTEMPTED ANTEDATING OF PALMATIER DOES NOT WARRANT DENIAL OF INSTITUTION	1
A.	Insufficient Evidence of Conception and Lack of Corroboration.....	1
B.	The Diligence Showing Contains Critical Gaps	2
C.	Institution Is Required to Develop the Factual Record.....	4
II.	MOSKOWITZ FAILS TO IDENTIFY ANY INCONSISTENT POSITIONS WARRANTING DENIAL	5

LIST OF EXHIBITS

Exhibit No.	Document	Previously Submitted
Ex. 1001	U.S. Patent No. 10,016,284 to Moskowitz et al. (“the ’284 patent”)	X
Ex. 1002	Declaration of Brad Culbert	X
Ex. 1003	Curriculum Vitae of Brad Culbert	X
Ex. 1004- Ex. 1005	RESERVED	
Ex. 1006	U.S. Patent Application Publication No. 2008/0249569 A1 to Waugh et al. (“Waugh”)	X
Ex. 1007- Ex. 1012	RESERVED	
Ex. 1013	U.S. Patent Application Publication No. 2005/0278026 to Gordon et al. (“Gordon”)	X
Ex. 1014- Ex. 1019	RESERVED	
Ex. 1020	Phulchand Prithvi Raj, <i>Intervertebral Disc: Anatomy-Physiology-Pathophysiology-Treatment</i> , 8(1) PAIN PRACT. 18 (2008)	X
Ex. 1021	Fabio Galbusera et al., <i>Ageing and degenerative changes of the intervertebral disc and their impact on spinal flexibility</i> , 23(3) EUR. SPINE J. 324 (2014)	X
Ex. 1022	Dil Patel et al., <i>Interbody options in lumbar fusion</i> , 5(1) J. SPINE SURG. S19 (2019)	X
Ex. 1023	RESERVED	

Exhibit No.	Document	Previously Submitted
Ex. 1024	U.S. Patent No. 9,585,766 to Robinson (“Robinson”)	X
Ex. 1025- Ex. 1039	RESERVED	
Ex. 1040	Second Amended Complaint, <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Minn. filed Jan. 29, 2026), Dkt. 48.	X
Ex. 1041	Answer to Second Amended Complaint, <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Minn. filed Feb. 19, 2026), Dkt. 57.	X
Ex. 1042	Sotera Stipulation, <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Minn. filed Feb. 20, 2026), Dkt. 58.	X
Ex. 1043	RESERVED	
Ex. 1044	RESERVED	
Ex. 1045	Administrative Office of the United States Courts, U.S. District Court – Judicial Caseload Profile (June 30, 2025), https://www.uscourts.gov/sites/default/files/document/fcms_na_distprofile0630.2025.pdf	X
Ex. 1046	RESERVED	
Ex. 1047	U.S. Patent No. 6,342,074 to Simpson (“Simpson”)	X
Ex. 1048- Ex. 1052	RESERVED	
Ex. 1053	Anne Polikeit et al., <i>The importance of the endplate for interbody cages in the lumbar spine</i> , 12(6) EUR. SPINE J. 556 (2003)	X

Exhibit No.	Document	Previously Submitted
Ex. 1054- Ex. 1055	RESERVED	
Ex. 1056	File History for U.S. Patent No. 10,016,284	X
Ex. 1057	U.S. Patent No. 9,445,919 to Palmatier et al. (“Palmatier”)	X
Ex. 1058	U.S. Pub. No. 2011/0319997 to Glerum et al. (“Glerum”)	X
Ex. 1059	RESERVED	
Ex. 1060	Senthil Eswaran et al., <i>The micro-mechanics of cortical shell removal in the human vertebral body</i> , 31 COMPUT. METHODS APPL. MECH. ENGRG. 3025 (2007)	X
Ex. 1061	Vivek Palepu et al., <i>Biomechanics of Disc Degeneration</i> , ADV. ORTHOP (2012)	X
Ex. 1062	Kai-Uwe Lewandrowski, <i>Surgical Technique of Endoscopic Transforaminal Decompression and Fusion with a Threaded Expandable Interbody Fusion Cage and A Report of 24 Cases</i> , 7(2) J. SPINE 1 (2018)	X
Ex. 1063	Erik Emstad et al., <i>The VariLift(®) Interbody Fusion System: expandable, standalone interbody fusion</i> , 8 MED. DEVICES (AUKL.) 219 (2015)	X
Ex. 1064	Gstoettner Michaela et al., <i>Footprint mismatch in lumbar total disc arthroplasty</i> , 17(11) EUR. SPINE J. 1470 (2008)	X
Ex. 1065	Thomas Steffen et al., <i>Cages: designs and concepts</i> , 9 EUR. SPINE J. S89 (2000)	X

Exhibit No.	Document	Previously Submitted
Ex. 1066	Thomas Lowe et al., <i>A Biomechanical Study of Regional Endplate Strength and Cage Morphology as It Relates to Structural Interbody Support</i> , 29(21) SPINE 2389 (2004)	X
Ex. 1067	RESERVED	
Ex. 1068	Patent Owner's Infringement Claim Charts, Exhibit C1, <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Minn.), served October 30, 2025.	X
Ex. 1069	Patent Owner's Infringement Claim Charts, Exhibit C2, <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Minn.), served October 30, 2025.	X
Ex. 1070	Plaintiff's Responses to Defendants' First Set Of Interrogatories (Nos. 1-12), served January 5, 2026.	X
Ex. 1071	Transcript of Motions Hearing before Magistrate Judge Douglas L. Micko, <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Minn.), held March 6, 2026.	X
Ex. 1072	RESERVED	
Ex. 1073	Time to Trial in Delaware District, Docket Navigator	X
Ex. 1074	U.S. Patent No. 12,011,367 to Moskowitz et al. ("the '367 patent")	X
Ex. 1075	Declaration of Jamie Hartman	X
Ex. 1076	Patent Owner's Infringement Claim Charts, Exhibit C1, <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Minn.), served January 30, 2026.	X

Exhibit No.	Document	Previously Submitted
Ex. 1077	Patent Owner's Infringement Claim Charts, Exhibit C2, <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Minn.), served January 30, 2026.	X

I. MOSKOWITZ’S ATTEMPTED ANTEDATING OF PALMATIER DOES NOT WARRANT DENIAL OF INSTITUTION

Patent Owner Moskowitz’s Preliminary Response (“POPR”) does not dispute that Medtronic’s Palmatier-based grounds anticipate or render obvious all challenged claims. Instead, Moskowitz contends that Palmatier is not prior art because the challenged claims were allegedly conceived before Palmatier’s December 19, 2011 filing date and constructively reduced to practice in Moskowitz’s October 25, 2012 provisional application. (POPR, 4-74.) Moskowitz’s proffer—consisting largely if not exclusively of the uncorroborated testimony of a single co-inventor (Dr. Nathan Moskowitz, Ex. 2024)—falls far short of carrying Patent Owner’s evidentiary burden and implicates a range of factual disputes that cannot be resolved on this preliminary record. The Director instituted review in related IPR2026-00162, where Moskowitz raised a similar challenge based on the same evidence. The same result is warranted to provide a full and fair opportunity for the parties to develop a complete record for a final written decision.

A. Insufficient Evidence of Conception and Lack of Corroboration

Moskowitz fails to show that the inventors had formed a “definite and permanent idea” of the complete invention, as required for conception. *Burroughs Wellcome Co. v. Barr Lab’ys, Inc.*, 40 F.3d 1223, 1228 (Fed. Cir. 1994) (internal citation omitted). Moskowitz relies on a “modified wedge” design attached with Eric Sugalski’s May 3, 2011 e-mail as evidence of conception. (See POPR, 8-68;

Ex. 2027, 10.) But the “modified wedge” design was one of many ideas floated for consideration. (Ex. 2024, ¶31; Ex. 2027, 1 (“5 Sketch-level concepts of alternative expanding fusion devices”).) There is no evidence, other than Dr. Moskowitz’s uncorroborated testimony, that the inventors “had formed a definite and permanent understanding of the structure and operation” of the “modified wedge” design. (Ex. 2024, ¶41.) After the May 3, 2011 e-mail, there was no discussion of the “modified wedge” design before Palmatier’s December 19, 2011 filing and all discussion and development centered on other designs (*see, e.g.*, Ex. 2031). Moskowitz’s evidence thus shows a “research plan” for an expandable implant, not a “settled idea” of the “modified wedge” design as the invention. *Burroughs*, 40 F.3d at 1228.

Moreover, the exhibits (*e.g.*, emails) cited by Dr. Moskowitz are plainly insufficient to establish prior conception because they lack corroboration from anyone other than Dr. Moskowitz. Indeed, Moskowitz is “stuck in a catch-22 of corroboration: [Moskowitz] attempts to corroborate [Dr. Moskowitz’s] testimony with [] emails and [] drawings, but the emails and drawings can only provide that corroboration with help from [Dr. Moskowitz’s] testimony.” *Apator Miitors ApS v. Kamstrup A/S*, 887 F.3d 1293, 1296 (Fed. Cir. 2018). Moskowitz’s “unwitnessed emails and drawings, alone, cannot corroborate [Dr. Moskowitz’s] testimony of conception.” *See id.* at 1296-97.

B. The Diligence Showing Contains Critical Gaps

Moskowitz cannot demonstrate reasonably continuous diligence throughout the critical period—from just before December 19, 2011, through October 25, 2012. The diligence showing is based on uncorroborated inventor testimony with large unexplained gaps in activity during the critical period, which defeats diligence. *See, e.g., Tesla, Inc. v. Charge Fusion Techs., LLC*, No. IPR2023-00062, 2024 WL 1642657, at *5 (P.T.A.B. Apr. 16, 2024) (finding lack of activity over four weeks as negating diligence); *In re Meyer Mfg. Corp.*, 411 Fed. Appx. 316, 319-20 (Fed. Cir. 2010) (concluding that “an unexplained gap of just over two months” supported the Board's finding of insufficient diligence).

From December 2011 through January 2012, the only documented activity potentially related to the claimed expandable wedge-based implant is Keith Yeager’s preparation of electronic drawings, allegedly delivered January 2, 2012 (Ex. 2045), and Dr. Moskowitz’s alleged review of those drawings (Ex. 2046). (POPR, 70-71.) After that, there is literally no ***documented*** activity pertaining to the claimed expandable wedge-based implant until the filing of the provisional application on October 25, 2012. (*See* Ex. 2024, ¶¶75-118.) Dr. Moskowitz’s bare uncorroborated testimony that he had “discussions” and reviewed prototypes relating to the claimed wedge-based expandable implant is plainly insufficient. (*Id.*) His sporadic engagement in prosecution activity for the ’543 application (the “tool application”; *see* Ex. 2024, ¶90) during that 7-month period stretches the diligence doctrine

beyond its permissible scope. The '543 application is a divisional of U.S. Patent Application No. 11/842,855, filed on August 21, 2007 (Ex. 2026, 15), *years before* the alleged conception of the “modified wedge” design in May 2011. There is no evidence that the tool application concerns an invention that was contemporaneously developed for use with the claimed expandable wedge-based device and that prosecuting the tool application was in any way necessary for *constructively* reducing the expandable wedge-based device to practice. Dr. Moskowitz’s contrary testimony is entirely uncorroborated and cannot show “diligence.” *Perfect Surgical Techniques, Inc. v. Olympus Am., Inc.*, 841 F.3d 1004, 1007 (Fed. Cir. 2016).

C. Institution Is Required to Develop the Factual Record

As noted above, Moskowitz’s evidence falls far short of the high evidentiary burden of proving antedation, and only further confirms that institution is warranted in order for that evidence to be properly developed and tested at trial. *See IQE PLC v. Cornell Research Foundation Inc.*, IPR2024-00609, Paper 9 at 41 (Sep. 13, 2024) (granting institution because “Patent Owner’s arguments [regarding conception/reduction to practice] raise disputed factual issues that are best resolved on a more fully developed record”); *Mylan Pharms. Inc. v. Merck Sharp & Dohme Corp.*, IPR2020-00040, Paper 21 at 42-43 (May 12, 2020) (rejecting a pre-institution antedating challenge while noting that “the better course . . . is to permit the parties to more fully develop the record through trial”). Moskowitz’s cited authority, which

denies institution based on an antedating challenge, does not warrant a different conclusion. (POPR, 4.) The cited decisions are the exception rather than the norm; they are also readily distinguishable. In *Par-Kan Co., LLC v. Unverferth Mfg. Co.*, IPR2024-01426, Paper 10 (PTAB Mar. 19, 2025), corroborated testimony from both an inventor and non-inventor undisputedly established an *actual* reduction to practice before the relevant prior art dates—none of which is true here. The patent owner in *Roofr Inc. v. Eagle View Techs, Inc.*, IPR2023-00437, Paper 14 at 13-15 (PTAB Aug. 1, 2023), made the same evidentiary showing as in *Par-Kan*—far surpassing Moskowitz’s anemic effort here—and the relevant testimony had been tested through discovery and in parallel proceedings in which the district “noted no issues with the evidence.” Moskowitz’s evidence is untested, and unlike here, the patentee in those cases did not have to show conception, which implicates the mental part of the invention, or diligence towards reducing the invention to practice.

II. MOSKOWITZ FAILS TO IDENTIFY ANY INCONSISTENT POSITIONS WARRANTING DENIAL

Moskowitz identifies no authority for its contention that boiler-plate preservation of rights language in the Petition warrants denial of the Petition. (POPR, 75.) Under the Director’s jurisprudence, what matters is whether Medtronic has taken an inconsistent position. Moskowitz shows no inconsistent position by Medtronic and there are none. (Ex. 2063, 20:6-8.)

Respectfully submitted,

Dated: June 2, 2026

By: /Naveen Modi/

Naveen Modi (Reg. No. 46,224)
Counsel for Petitioner

CERTIFICATE OF SERVICE

I certify that I caused to be served on the counsel identified below a true and correct copy of the foregoing Petitioner's Reply to Preliminary Response by electronic means on June 2, 2026:

Eric A. Zelepugas (zelepugas@avantechlaw.com)

Robert A. Conley (conley@avantechlaw.com)

moskowitz_post-grant@avantechlaw.com

By: /Naveen Modi/
Naveen Modi (Reg. No. 46,224)
Counsel for Petitioner