Declaration previously submitted in conjunction with Medtronic, Inc. and Medtronic Vascular, Inc.'s Petition for *Inter Partes* Review in IPR2020-00129, et seq.



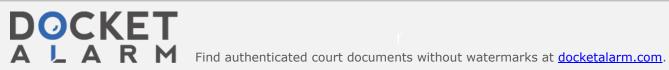
UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD
MEDTRONIC, INC. AND MEDTRONIC VASCULAR, INC.,
Petitioners,
v.
TELEFLEX INNOVATIONS S.À.R.L.,
Patent Owner.
Case No.: IPR2020-00129 U.S. Patent No. RE45,380

DECLARATION OF RICHARD A. HILLSTEAD, PH.D., FAHA



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	A.	Itou discloses a suction catheter 2 with flexibility that increases along its longitudinal axis in a proximal to distal direction	



	B.	Itou's tubular structure is reinforced
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	D.	Itou in combination with Kataishi discloses to a POSITA a proximal opening with two inclined slopes
	E.	Modifying Itou, in combination Berg's plurality of segments of selected flexural modulus in the device's shaft, to have regions of distinct flexural moduli in which the first flexural modulus is 1,000 to 15,000 psi, a second flexural modulus is about 2,000 to 49,000 psi, and a third portion flexural modulus that is about 13,000 to 49,000 psi
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TABLE OF EXHIBITS

No.	Description
1201	U.S. Patent No. RE45,380 ("the '380 patent")
1207	U.S. Patent No. 7,736,355 ("Itou")
1208	U.S. Patent No. 7,604,612 ("Ressemann")
1209	U.S. Patent No. 5,439,445 ("Kontos")
1210	New Method to Increase a Backup Support of a 6 French Guiding Coronary Catheter, Catheterization and Cardiovascular Interventions 63: 452-456 (2004) ("Takahashi")
1215	Excerpt from Grossman's Cardiac Catheterization, Angiography, and Intervention (6th edition) (2000) (chapters 1, 4, 11, 23-25).
1224	Boston Scientific, Summary of Safety and Effectiveness Data, TAXUS TM Express ^{2TM} Drug-Eluting Coronary Stent System (March 4, 2004)
1225	U.S. Publication Application No. 2005/0015073 ("Kataishi")
1226	U.S. Patent No. 5,489,278 ("Abrahamson")
1232	The sliding rail system (monorail): description of a new technique for intravascular instrumentation and its application to coronary angioplasty, Z. Kardio. 76:Supp. 6, 119-122 (1987) ("Bonzel")
1233	U.S. Publication Application No. 2004/0236215 (Mihara)
1235	U.S. Publication Application No. 2004/0010280 ("Adams '280")
1240	Excerpt of McGraw-Hill Dictionary of Scientific and Technical Terms (5th edition) (1994) (defining "flexural modulus")
1244	U.S. Patent No. 5,961,510 ("Fugoso")
1246	U.S. Patent No. 6,042,578 ("Dinh")
1247	WO 97/37713 ("Truckai")
1248	Terumo Heartrail II product literature
1250	U.S. Patent No. 5,980,486 ("Enger")
1251	U.S. Patent No. 5,911,715 ("Berg")



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