

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MEDTRONIC, INC., AND MEDTRONIC VASCULAR, INC.
Petitioners,

v.

TELEFLEX INNOVATIONS S.A.R.L.
Patent Owner.

Case IPR2020-01341
Case IPR2020-01342
Patent 8,142,413

**DECLARATION OF PETER T. KEITH
IN SUPPORT OF MOTIONS TO AMEND
U.S. PATENT 8,142,413**

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I, Peter Keith, hereby declare and state as follows:

1. I have been retained by the owner of U.S. Patent No. 8,142,413 (“the ’413 patent”), whom I will refer to in this declaration as “Teleflex,” to provide my independent expert opinions in this matter. I understand that a petition for *inter partes* review (“IPR”) has been filed against certain claims of the ’413 and other Teleflex patents, which I refer to as the “GuideLiner patents.” I submit this declaration in support of Teleflex’s Motion to Amend U.S. Patent No. 8,142,413.

I. PERSONAL BACKGROUND

2. I summarize my educational background and career history in the following paragraphs. My complete qualifications are provided in my curriculum vitae, which is attached to this declaration as Appendix A.

3. I received a Bachelor of Science degree in mechanical engineering with High Distinction from the University of Minnesota in 1987. During my undergraduate training, I began working as an engineering intern in the research and development (R&D) department at SCIMED, which was later acquired by Boston Scientific Corporation. I joined SCIMED full-time after graduation, and I remained with the company until 1996. During this time I rose from engineering intern to full-time R&D engineer to Director of R&D. Throughout my various roles at SCIMED, the focus of my work was on medical devices in the field of interventional cardiology, particularly catheter design.

4. Since 1997, I have served as an independent consultant for early stage medical device companies in the areas of product design and intellectual property development. Many of my consulting clients and/or the products they developed with my assistance were subsequently acquired by large medical technology companies, including St. Jude Medical/Abbott, Johnson & Johnson, Teleflex, Edwards Lifesciences and LivaNova. A number of the products that I have consulted on have been in the field of interventional cardiology, particularly catheters.

5. In addition to my work as an independent consultant, since 2000 I have engaged in a number of entrepreneurial ventures in the field of medical devices. In many of these ventures, I held chief responsibility for product design and development. Several of these products have been in the area of interventional cardiology. I have also done considerable work outside the area of interventional cardiology, including in treatments for orthopedics for extremities such as feet and ankles and treatment of spinal disorders. In 2006, I co-founded Entellus Medical, a company focused on catheter-based treatments for chronic sinusitis. As Chief Technology Officer, I led the product development and research teams. Entellus successfully commercialized a series of ground-breaking products developed under my leadership. Entellus went public in 2015, and was acquired by Stryker in 2018 for over \$600 million.

6. Between my work at SCIMED, my independent consulting, and my entrepreneurial ventures, I have been named as an inventor on over 140 issued U.S. patents, as well as many corresponding patents in foreign countries. Numerous additional patent applications on which I am a named inventor are still pending. Many of these patents concern catheters.

7. I have prior experience with patent litigation involving the technology at issue and the GuideLiner patents. Among other things, I provided expert analysis on behalf of Teleflex in the case of *QXMédical, LLC v. Vascular Solutions LLC, et al.*, No. 0:17-cv-01969 (D. Minn.) (the QXM case). In the QXM case, among the patents asserted were four of the five GuideLiner patents at issue in these IPRs: U.S. Patent Nos. 8,048,032; RE45,380; RE45,760; and RE45,776. U.S. Patent No. RE47,379 had not yet issued when the QXM case was filed, but it is in the same family as the other four patents listed above that were asserted in the QXM case.

8. I also provided expert opinions concerning the GuideLiner patents at issue in these IPRs on behalf of Teleflex in the case of *Vascular Solutions LLC, et al. v. Medtronic, Inc., et al.*, No. 19-cv-01760 (D. Minn.), in connection with Teleflex's Motion for Preliminary Injunction.

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