UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

OMNI MEDSCI, INC.,
Patent Owner.

U.S. Patent No. 9,651,533

IPR Case No.: IPR2019-00916

DECLARATION OF DUNCAN L. MACFARLANE, Ph.D., P.E.

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List of Exhibits

Exhibit	Description
2120	PCT Application Serial No. PCT/US2013/075767 (Publication No. WO/2014/143276)
2121	U.S. Patent Application Serial No. 14/109,007 (Publication No. 2014/0236021)
2123	Curriculum Vitae of Duncan L. MacFarlane, Ph.D, P.E.

I, Duncan L. MacFarlane, hereby declare as follows:

1. I am making this declaration at the request of Patent Owner, Omni MedSci, Inc., in the matter of *Inter Partes* Review of U.S. Patent No. 9,651,533 ("the '533 Patent") to Omni MedSci, Inc.

2. I am being compensated for my work in this matter at a rate of $425/hour. My compensation in no way depends on the outcome of this proceeding.

3. In preparation of this declaration, I have reviewed:

- Apple's petition for *inter partes* review, the challenged patents and claims, the prior art cited in Apple's petition, Dr. Anthony's declaration supporting Apple's petition, the Board's Institution Decision, the other documents cited in these documents, and other documents cited in my analysis below.
- The relevant legal standards, including the standard for obviousness provided in *KSR International Co. v. Teleflex, Inc*., 550 U.S. 398 (2007); and
- My knowledge and experience based upon my work and study in this area as described below.

I. Summary of My Opinions

4. The Board correctly determined in the Institution Decision that Lisogurski does not disclose a "light source . . . configured to increase signal-to-

noise ratio by . . . increasing a pulse rate."

5. Carlson does not disclose a "light source . . . configured to increase signal-to-noise ratio by . . . increasing a pulse rate."

6. Lisogurski and Carlson, when taken together, neither disclose nor render obvious the challenged claims of the '533 patent.

II. Qualifications and Professional Experience

7. I have provided my full background in my curriculum vitae. (Ex. 2123.) The following provides an overview of some of my experience that is relevant to the matters set forth in this declaration.

8. I am a Professor in the Department of Electrical Engineering at The Bobby B. Lyle School of Engineering at Southern Methodist University (SMU) in Dallas, Texas. At SMU, I am the Associate Dean for Engineering Entrepreneurship and the Bobby B. Lyle Centennial Chair in Engineering Entrepreneurship. I previously served as Acting Executive Director of the Hart Center for Engineering Leadership at SMU. I am Executive Director of the Hart Institute for Technology, Innovation and Entrepreneurship.

9. I am also Professor Emeritus of Electrical Engineering at The Erik Jonsson School of Engineering and Computer Science at the University of Texas at Dallas. At UT Dallas, I was an Assistant Professor of Electrical Engineering from 1989 to 1994, an Associate Professor of Electrical Engineering from 1994 to 2001,

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