UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC.,
Petitioner,

v.

OMNI MEDSCI, INC.,
Patent Owner.

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U.S. Patent No. 10,188,299

IPR Case No.: IPR2020-00175

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**DECLARATION OF DUNCAN L. MACFARLANE, Ph.D., P.E.
IN SUPPORT OF PATENT OWNER'S RESPONSE TO PETITION**

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List of Exhibits

No.	Description
2101-2103	*Reserved*
2104	U.S. Patent No. 9,651,533 to Islam, issued May 16, 2017, ("the '533 Parent Patent")
2105	U.S. Patent No. 9,757,040 to Islam, issued September 12, 2017, ("the '040 Related Patent")
2106-2119	*Reserved*
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)
2122	Declaration of Duncan L. MacFarlane, Ph.D., P.E.
2123	Curriculum Vitae of Duncan L. MacFarlane, Ph.D., P.E.
2124	Board's Institution Decision, IPR2019-000916, Paper 16, October 18, 2019 ("916 DI")
2125	Omni MedSci Patent Owner Preliminary Response, IPR2019-00916, Paper 23, January 31, 2020
2126	Apple Exhibit P, *Omni MedSci, Inc., v. Apple Inc.*, EDTX Case No. 2:18cv134 ("Lisogurski Claim Charts")
2127	Apple Exhibit N, *Omni MedSci, Inc., v. Apple Inc.*, EDTX Case No. 2:18cv134 ("Carlson Claim Charts")
2128	Apple Amended Answer, Affirmative Defenses, and Counterclaims, *Omni MedSci, Inc., v. Apple Inc.*, EDTX Case No. 2:18cv134 (Dkt. 38, July 19, 2018)
2129	Apple Exhibit Y, *Omni MedSci, Inc., v. Apple Inc.*, EDTX Case No. 2:18cv134 ("Park Claim Charts")
2130	Best Practices and FAQs for Filing Requests for Reexamination Compliant with 37 CFR 1.510 and 1.915, PTAB, May 2010
2131	Declaration of Duncan L. MacFarlane, Ph.D., P.E. in Support of Patent Owner's Response to Petition

I, Duncan L. MacFarlane, 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. 10,188,299 ("the '299 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 in IPR2019-000916 ("916 DI")), 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);

- The Board's Institution Decision ("DI") in this IPR; 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 DI that Lisogurski does not disclose a "system . . . configured to increase the signal-to-noise ratio by . . . increasing a pulse rate . . . from an initial pulse rate."

5.   Carlson does not disclose a "system . . . configured to increase the signal-to-noise ratio by . . . increasing a pulse rate . . . from an initial pulse rate."

6.   Lisogurski and Carlson, when taken together, neither disclose nor render obvious the challenged claims of the '299 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 and Computer 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

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