UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

JUBILANT DRAXIMAGE INC., Petitioner,

v.

BRACCO DIAGNOSTICS INC., Patent Owner.

U.S. Patent Nos. 9,229,467 and 9,299,468

Case Nos. IPR2018-01448, -01449, and -01450

DECLARATION OF NORBERT J. PELC, Sc.D.



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Declaration of Norbert J. Pelc, Sc.D. Patent Owner Responses in IPRs 2018-01448, -01449, and -01450 U.S. Patent Nos. 9,299,467 and 9,299,468

I, Norbert J. Pelc, declare as follows:

II. INTRODUCTION AND QUALIFICATIONS

- 1. I have been engaged by Patent Owner Bracco Diagnostics, Inc. ("Bracco") to opine on certain matters regarding U.S. Patent Nos. 9,299,467 ("'467 patent") and 9,299,468 ("'468 patent"), together the "IPR patents", relative to *Inter Partes* Review Nos. 2018-01448, -01449, and -1450 ("the IPRs"). Specifically, this Declaration addresses arguments made by Petitioner, Jubliant Draximage, Inc. in the IPRs regarding the validity of certain claims of the '467 and '468 patents.
- 2. I am a Professor of Bioengineering, Radiology, and, by courtesy, of Electrical Engineering at Stanford University in Stanford, California.
- 3. In 1974, I received my B.S. in Applied Mathematics, Engineering and Physics from the University of Wisconsin in Madison and I started my graduate studies at Harvard University. While a student at Harvard, I was a research assistant at the Massachusetts General Hospital ("MGH"). I received my S.M. in Medical Radiological Physics in 1976 and my Sc.D. in Medical Radiological Physics in 1979, both from Harvard University.
- 4. I have worked in diagnostic imaging for more than 40 years. My graduate research while at Harvard and MGH focused on tomographic imaging with radioisotope sources (what is now called "Positron Emission Tomography" or PET),



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as well as tomographic imaging using x-ray sources (both "Computed Tomography" or CT, and what is now called "tomosynthesis"). From 1978 until 1990 I worked at GE Medical Systems as a Senior Physicist in the Radiological Sciences Laboratory, and as the manager of that group. While at GE, I contributed to the development of CT, Digital Radiography, Magnetic Resonance Imaging (MRI), and other advanced

diagnostic imaging devices, and I collaborated with radiologists at leading medical

centers on the development of new applications of these technologies.

- 5. I joined Stanford University as an Associate Professor of Radiology in 1990 and became a Professor of Radiology in 1997, a position I still hold. In 2002, I was named the Associate Chair for Research in the Department of Radiology. In 2004, I was appointed Professor of Bioengineering, a position I also still hold. Since 1990 I have also held a courtesy faculty appointment in Electrical Engineering at the same rank as my appointments in Radiology and Bioengineering. In 2012, I was named the Chair of the Department of Bioengineering and gave up the position of Associate Chair of the Department of Radiology. I completed my term as Chair of Bioengineering in 2017.
- 6. I am named as an author on more than 200 published peer-reviewed journal articles and over 350 research papers presented at scientific conferences, essentially all in the field of diagnostic imaging, including Positron Emission



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Tomography. I am also named as an inventor on 95 issued U.S. Patents. Among these are contributions related to Positron Emission Tomography.

- 7. I have received many awards for my contributions to medical imaging. I was elected to the National Academy of Engineering in 2012. In 2016, I received an Honorary Doctor of Medicine from Friedrich Alexander University of Erlangen-Nuremberg. I received the Edith H. Quimby Award from the American Association of Physicists in Medicine (AAPM) and the Outstanding Researcher Award from the Radiological Society of North America (RSNA), both in 2013. Among other honors, I am a Fellow of the AAPM, the International Society for Magnetic Resonance in Medicine, the Institute for Medical and Biological Engineering, and SPIE (international society for optics and photonics).
- 8. I also served as a reviewer for the National Institutes of Health (NIH), including as a member of the Radiology and Nuclear Medicine Study Section of NIH from 1991-1997, and for other grant funding agencies. My additional NIH service, includes serving as a member of the National Advisory Council of the National Institute of Biomedical Imaging and Bioengineering and of the Council of Councils. I have served as a reviewer and on the editorial boards for many journals. I recently completed a term as the Editor-in-Chief of the Journal of Medical Imaging.
 - 9. A copy of my Curriculum Vitae ("CV") is submitted herewith as



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