Peter N. Burns

Medical Biophysics and Professor of Medical Imaging at the University, Toronto
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Dr Peter Burns is Professor and Chairman of Medical Biophysics and Professor of Medical Imaging at the University of Toronto, and Senior Scientist at Sunnybrook Research Institute, Toronto. He was born and educated in the United Kingdom. After taking first class honours in Theoretical Physics, he studied Philosophy of Science before obtaining his PhD in Medicine (Radiodiagnosis) at the University of Bristol. He moved to the United States in 1984 as Assistant Professor of Radiology at Yale University. He then joined the faculty of the Department of Diagnostic Radiology at Thomas Jefferson University in Philadelphia before moving to the University of Toronto as Professor of Medical Biophysics in 1991.

His first contributions were in blood flow detection and instrumentation for Doppler ultrasound, where he was part of the original efforts to detect blood flow perfusion in tumours. His subsequent research in ultrasound contrast agents resulted in the development of several new imaging techniques including harmonic imaging, pulse inversion imaging and Doppler for tissue and microbubble contrast agents, and the first real time images of perfusion of the myocardium. He was involved in pivotal trials for the clinical approval of microbubble contrast agents for their current major indications. He has published five books and more than 180 scientific papers, serves on the editorial boards of several scientific and clinical journals. Dr. Burns' current research work, funded by the Canadian Institutes of Health Research (CIHR) and the US National Institutes of Health (NIH), seeks to harnesses microbubbles and liquid nanodroplets as vehicles to deliver drugs, as well as genetic material itself, to specifically targeted organs by means of ultrasound.

Dr Burns is a Fellow of the American Institute for Ultrasound in Medicine and honourary member of the Canadian Association of Radiologists, the Italian, Chilean and Iranian Societies of Radiology and the Society for Vascular Technology. He is recipient of the Ultrasound in Medicine and Biology Clinical Prize; the World Federation of Ultrasound in Medicine and Biology Pioneer Award, the Ian Donald Gold Medal for Technical Achievement

(International Society for Ultrasound); Innovation and Excellence Trophy of the Société Canadienne-Francaise de Radiologie; the medal of the Canadian Association of Radiologists; the William Fry Memorial Award of the American Institute of Ultrasound in Medicine and the Distinguished Lecturer Award of the IEEE.