Seminário

Introduction to Micro-ultrasound of the Mouse with Applications in Cardiovascular Disease and Cancer

Abstract Over the past decade, non-invasive pre-clinical imaging has emerged as an important tool to facilitate biomedical discovery. Not only have the markets for these tools accelerated but the numbers of peer reviewed papers in which imaging end points and biomarkers have been used have grown dramatically. High frequency "micro-ultrasound" has steadily evolved in the post genomic era as a rapid, comparatively inexpensive imaging tool for studying normal development and models of human disease in small animals, especially mice. One of the fundamental barriers to this development was the technological hurdle associated with high frequency array transducers. Recently, new approaches have enabled the upper limits of linear and phased arrays to be pushed from about 15 MHz to over 50 MHz enabling a broad range of new applications. This lecture outlines the physical principles of ultrasound with a special focus on high frequency imaging technology used in anatomical, functional and molecular imaging research. Applications are explored in the areas of cardiovascular disease and cancer. The value of microbubble contrast agents and photoacoustic imaging are described and novel directions in contrast imaging are explored.

Prof. F. Stuart Foster, PhD
Department of Medical Biophysics, University of Toronto, Canada
Pesquisador Visitante Especial - Ciência sem Fronteiras
Programa de Engenharia Biomédica/COPPE
Programa de Pós-Graduação em Ciências Cirúrgicas/Departamento de Cirurgia/FM

Dia **06** de novembro (quarta-feira)
às **9:30 horas**
Auditório da COPPE
Centro de Tecnologia da UFRJ
Bloco G, sala 122
Ilha do Fundão

Apoio