



University
of Victoria

CAMTEC & CBR SEMINAR

“Biomedical Imaging and Therapy Beamlines at the Canadian Light Source”

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Canadian Light Source Inc.

DATE: Friday, June 3, 2016

TIME: 10:00 – 11:00 am

LOCATION: EOW 430

Abstract:

The Biomedical Imaging and Therapy (BMIT) beamlines at the Canadian Light Source (CLS) deliver a comprehensive set of synchrotron-specific imaging and radiation therapy capabilities.

The BMIT facility provides a variety of x-ray imaging methods, including: conventional x-ray absorption imaging, K-Edge Subtraction (KES) Imaging, Diffraction Enhanced Imaging (DEI), and Phase Contrast Imaging (PCI), all in either projection or Computed Tomography (CT) modes.

Synchrotron-based imaging provides unique benefits to biomedical research. Unlike X-rays from conventional radiographic equipment, synchrotron light is monochromatic, polarized, extremely intense, and fine-tunable, allowing us to image both bone and soft tissues with micrometre-scale resolution, and to measure tissue properties never before accessible (refraction, phase, and scatter). Furthermore, the monochromatic radiation used for synchrotron-based imaging results in lower tissue radiation doses than the wider-spectrum X-rays of conventional radiography. Synchrotron-based imaging also provides the ability to conduct longitudinal studies (serial imaging) and to obtain quantitative data.

BMIT is designed for imaging and therapy research in biomedical systems including tissue specimens, live animals ranging in size from mice to horses, and ultimately humans. BMIT's unique imaging capabilities are also applicable to many other fields, including materials science, earth / environmental science, and agriculture.

The world-class research capabilities of BMIT are available for use by researchers from across Canada, free of charge. Research time on BMIT is awarded based on the scientific merit of submitted proposals, as determined by competitive peer review.

Please contact the CAMTEC office for further information (250) 721-7736 or camtec@uvic.ca.

This seminar is co-hosted by:

The Centre for Advanced Materials & Related Technologies and

The Centre for Biomedical Research