Department of Biomedical Engineering

香港城市大學
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Molecular Imaging, Nanobiotechnology, and Theranostics

Dr. Weibo Cai

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Vilas Distinguished Achievement Professor of Radiology and Medical Physics

University of Wisconsin - Madison, USA

Hosted by Prof. SONG Yu

FRIDAY
29 May 2026

TIME
15:30 - 16:30

VENUE
Y4-302, 4/F Yeung Kin Man Academic Building

ABSTRACT

The Molecular Imaging and Nanotechnology Laboratory at the University of Wisconsin - Madison (http://mi.wisc.edu/) is mainly focused on three areas: 1) development of multimodality molecular imaging agents; 2) nanobiotechnology and its biomedical applications; and 3) molecular therapy of cancer and various other diseases. In this talk, I will present our representative work on molecular imaging and image-guided drug delivery of cancer and other diseases with peptides, proteins, and a variety of nanomaterials. The primary imaging techniques used in these studies are positron emission tomography (PET), photoacoustic tomography (PAT), optical imaging, and magnetic resonance imaging (MRI). The nanomaterials that will be discussed in this presentation may include silica-based nanoparticles, COVID-19 nanovaccines, DNA nanomaterials, micelles, iron oxide nanoparticles, 2-D nanomaterials, hybrid nanomaterials, among others.

BIOGRAPHY

Weibo Cai is a Vilas Distinguished Achievement Professor of Radiology, Medical Physics, Materials Science & Engineering, and Pharmaceutical Sciences at the University of Wisconsin - Madison. He received a BS degree in Chemistry from Nanjing University, China (1995) and a PhD degree in Chemistry from the University of California San Diego (2004). Between 2005 and 2008, Dr. Cai did his post-doctoral research in the Molecular Imaging Program at Stanford University. Dr. Cai's research at UW-Madison (http://mi.wisc.edu) is primarily focused on molecular imaging and nanobiotechnology.

Dr. Cai has authored >450 peer-reviewed articles (total citation: >50,000 times; h-index: 116), edited 3 books, and given > 400 talks. Dr. Cai has received many awards, including the European Association of Nuclear Medicine (EANM) Springer Prize (2011 & 2013), American Cancer Society Research Scholar (2013), EANM Annual Congress Plenary Lecturer (2016), Inaugural Nano Research Young Innovators (NR45) in Nanobiotechnology Award (2018), Fellow of American Institute for Medical and Biological Engineering (AIMBE, 2018), Highly Cited Researchers from Clarivate Analytics (Cross-Field, 2018), Fellow of the Society of Nuclear Medicine and Molecular Imaging (SNMMI, 2019), #1-Rated Expert in Molecular Imaging Worldwide by Expertscape Inc. (2020-present), Stanford University's List of "World's Top 2%" Scientists (2020-present), Fellow of Royal Society of Chemistry (RSC, 2021), SNMMI Radiopharmaceutical Sciences Council's Michael J. Welch Award (2022), Journal of Nanobiotechnology (JNB) Trailblazer Award (BMC/Springer Nature, 2022),Fellow of American Association for the Advancement of Science (AAAS, 2024), Fellow of Royal Society of Biology (RSB, 2025), AIMBE Professional Impact Award for Mentoring (2025), Elected Member of Academia Europaea (MAE, 2026), among many others.