## **BIOLOGY SEMINAR**:

Transitional applications of black bear research for ischemic protection of organs

## Speaker: Dr. Paul laizzo Professor Visible Heart® Laboratories, U of MN





Join us as Dr. laizzo discusses the potential clinical translational aspects of understanding black bear hibernation physiology and how it may be applied to cardiothoracic surgery and organ transplantation including:

- the ongoing translational research within the Visible Heart<sup>®</sup> Lab at the University of Minnesota.
- an overview of hibernation physiology of the \* America black bear and how his group has been assessing such
- how omega-3 fatty acids, ursodeoxycholic acid, and/or delta-opioid agonists may act to minimize ischemic damage to tissues
- how he has been studying the pre- and post-conditioning use of the aforementioned agents to protect the heart and/or lungs against ischemic damage and how they could be applied as clinical therapies

Paul A. laizzo, PhD is a Professor in the Departments of Surgery, Integrative Biology & Physiology and the Carlson School of Management, at the University of Minnesota. He also serves on the graduate faculties in Biomedical Engineering, Neuroscience, Integrative Biology & Physiology, Biological Science, Bioinformatics and Computational Biology and Mechanical Engineering. He is the Director of the Malignant Hyperthermia Diagnostic Center and Medtronic Professor of Visible Heart® Research. Additionally, he is the Associate Director and Medtronic Chair of the Institute for Engineering in Medicine, also at the University of Minnesota. He earned both MS and PhD degrees (Focus: Physiology/Neurophysiology) from the University of Minnesota. His main research focus is translational systems physiology, where his research group does a broad range of studies. The Visible Heart<sup>®</sup> Laboratories are well known for their novel imaging techniques of functional cardiac anatomies and device testing within large mammalian hearts, including human.



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