

SEMINAR SERIES

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STRATEGIES FOR MINIMIZING POSTTRAUMATIC OSTEOARTHRITIS AFTER JOINT INJURY

Featuring Dr. Braden Fleming

Warren Alpert Medical School of Brown University

January 25, 2019

12:00 - 1:15 pm | H&K112

Parking Available in Lot T

ABOUT DR. FLEMING

Dr. Fleming joined the Department of Orthopaedics at Brown University in June 2003. He received his doctorate in Mechanical Engineering from the University of Vermont in 1996 and then served on the faculty of the Department of Orthopaedics & Rehabilitation at the University of Vermont for seven years. He was promoted to full professor in 2008 and became the Lucy Lippitt Professor of Orthopaedics in 2010. He is the Director of the Bioengineering Core of the COBRE for Skeletal Health and Repair at Rhode Island Hospital, and the Associate Editor of Biomechanics for the American Journal of Sports Medicine. Dr. Fleming's primary research interests focus on the lower extremity with specific interests in ACL injuries, soft tissue biomechanics, osteoarthritis and imaging. He has authored 172 peer-reviewed manuscripts. Most of Dr. Fleming's work has been funded by the National Institutes of Health and the Department of Defense.

LEARNING OBJECTIVES

Injuries to the anterior cruciate ligament (ACL) are common and place the injured knee at risk for post-traumatic osteoarthritis (PTOA). The current standard of care, ACL reconstruction surgery, in which the injured ligament is replaced with a soft tissue graft, appears not to reduce this risk. In an effort to improve outcomes following ACL injury, we are currently conducting studies to find ways to reduce joint arthrosis by optimizing current ACL reconstruction procedures, modulating joint inflammation, and preserving cartilage lubrication. In addition, we are working on a new tissue engineering strategy to stimulate ACL healing, rather than replacing it with a graft. Our preclinical data of the "bio-enhanced ACL repair" procedure demonstrates that it provides chondroprotection. While the mechanisms of chondroprotection following bio-enhanced ACL repair are currently under investigation, it appears that it may treat both the mechanical and biological insults that may place the ACL injured joint at risk for PTOA.

The presenter Braden Fleming, PhD has disclosed financial conflict of interest with Miach Orthopaedics. Members of the planning committee, Nick Stergiou, Ph.D., Jeffrey Kaipust, M.S., Angela Collins, M.A., Laura Rotert, B.S., and Jackie Farley, CPP have no financial conflict of interest to disclose.

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