

Spring 2008 SEMINAR SERIES

F21C Bioprocessing & Biosensing Center

• DIVISION OF FOOD SYSTEMS & BIOENGINEERING •

PRESENTER: **Dr. Xudong Cao, Assistant Professor**
Department of Chemical Engineering
University of Ottawa, Ottawa, Canada

TITLE: **Tissue Engineering Approach to Nerve Regeneration after Spinal Cord Injuries**

ABSTRACT:

Injury to the mature central nervous system (CNS) is characterized by the inability of the axons to repair or regenerate by themselves. Functional recovery from such injuries is limited or nonexistent, as it is true for patients with spinal cord injuries (SCI), leaving patients permanently paralyzed below the site of injury. It is estimated that there are about 400,000 people who live with SCI in North America and that the cost of care of these patients exceeds \$10 billion annually. In an attempt to overcome SCI, we are proposing a hollow fiber channel (HFC) that will physically bridge the two severed cord stumps and eventually promote nerve regeneration within the channel. Our recent efforts in the channel designs and results from our animal studies will be discussed.

BIOGRAPHY:

Dr. Cao obtained his BS degree in polymer science and engineering from Beijing University of Chemical Technology in China in 1994 and received his Master's and Ph.D. degrees from chemical engineering at the University of Toronto, Toronto, Canada in 1997 and 2001. After completing his postdoctoral trainings at Harvard Medical School and Brown University, Dr. Cao took a position as an assistant professor at the University of Ottawa, Ottawa, Canada in 2005. His research interests are biomaterials and regenerative medicine.

DATE • TIME • LOCATION:

Tuesday, February 19, 4:00 pm

Ag Eng Bldg 105 • Refreshments