

Minnesota Microscopy Society

Local affiliate of the *Microscopy Society of America*
and the *Microanalysis Society*

Newsletter

February 2014



12th Annual MinnTS (Minnesota Technical Symposium)

www.minnts.org

THIS YEAR'S TOPICS: **MICROBIOTA
THERAPEUTICS & BRAIN IMAGING**



Date: Thursday, March 27, 2013

Time: 5:00 – 9:00 pm

Location: Medtronic Headquarters
710 Medtronic Parkway
Fridley, MN 55432

(I-694 and Hwy 65/Central Ave)

Parking: In attached ramp north of building

Schedule of events

- 5:00 - 6:00 Registration, social with refreshments
- 6:00 - 7:00 Dinner (followed by move into auditorium)
- 7:00 -7:15 Welcome message, introductions (Gary Korba)
- 7:15 -8:00 ***From Stool Transplants to Microbiota as a Novel Class of Therapeutics – Dr. Alexander Khoruts, Univ. of Minn.***
- 8:00 -8:15 Break
- 8:15 -9:00 ***New Ideas on Diagnostic Testing for Traumatic Brain Injury – Dr. Donald Dengel, Univ. of Minn.***

Menu

- Herb crusted chicken with pan glaze
- Wild mushroom strudel
- Potatoes
- Steamed carrots
- Garden salad with various dressings
- Rolls and butter
- Assorted mini desserts
- Assorted soda and water
- Coffee service with hot tea

Reservations

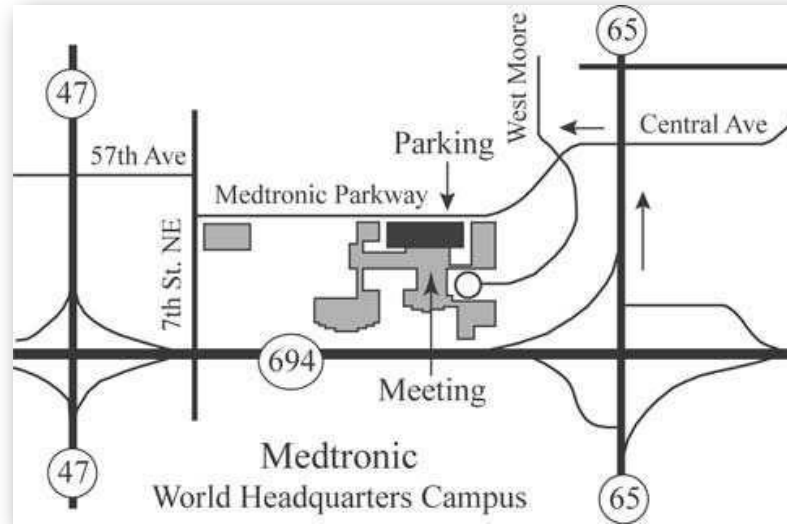
Cost for MinnTS is \$30. Reservations are being taken beginning February 20 through **Wednesday March 19** and may be made via PayPal by going to the MMS website at mnmicroscopy.org/calendar.html. Or, by phone: Bede Willenbring, H.B. Fuller Co., (651) 236-5470 (9a - 5p)

No refunds for cancellations after March 19.

MinnTS – Map and Speakers

continued

Directions



Speakers



Dr. Alexander Khoruts, Associate Professor of Medicine, Division of Gastroenterology and the Center for Immunology, University of Minnesota

From Stool Transplants to Microbiota as a Novel Class of Therapeutics

Abstract

The distal gut is densely populated by microbiota, which perform many important functions in human physiology. Antibiotics and various dietary choices have potent effects on microbiota, which may translate into deleterious health effects. *Clostridium difficile* infection, which has markedly risen in incidence, morbidity, and mortality in the last two decades is one dramatic example of this problem. Antibiotics currently constitute the standard treatment of *C. difficile* infection. However, standard treatment frequently fails because it also perpetuates the damage to the normal microbiota. In contrast, reconstitution of normal gut ecology with microbiota isolated from healthy human donors is highly effective even in the most refractory cases of *C. difficile* infection. ... (for full abstract, click [here](#))

Speaker Bio

Dr. Alexander Khoruts is Associate Professor of Medicine in the Division of Gastroenterology and the Center for Immunology at the University of Minnesota. His early research focus has been in the area of regulatory T cell biology, T cell homeostasis and immunologic tolerance. However, in the past several years the focus entirely shifted toward investigation of the gut microbiota in clinical disease states, particularly refractory *C. difficile* infection. He and Dr. Michael Sadowsky have established a UMN Microbiota Therapeutics Program within the BioTechnology Institute, which is now focused on developing human gut microbiota as a class of therapeutic agents. This group was the first to demonstrate prompt and sustained engraftment of entire microbial communities in patients with recurrent *C. difficile* infection. ([click](#) for more)

MinnTS – Speakers

continued



Donald Dengel, Professor, School of Kinesiology and Director of the Human Performance Core and Densitometry Services, Clinical and Translational Science Institute, University of Minnesota

New Ideas on Diagnostic Testing for Traumatic Brain Injury

Abstract

Each year more than 300,000 sports-related concussions occur in the U.S., with football having the highest absolute number. It has been reported more than 60% of former NFL players have sustained at least one concussion during their professional football career and almost of quarter of them have sustained three or more concussions. These data demonstrate the volume of football players that suffer a sports-related concussion. Clearly, sports-related concussions are a major problem in the sporting as well as medical community.

To date, magnetic resonance imaging (MRI) has been unable to report any structural changes in the brain following a sports-related concussion. One possible reason for this is the limitations of imaging the brain; however, it may also be that sports-related concussions cause more functional damage versus structural damage in the brain. Animal studies have reported that vascular function in cerebral arteries is impaired following brain injury. In humans measuring cerebral vascular function has proven to be difficult due to that fact that a stimulus must be given that can alter cerebral blood flow, but not alter other parameters and produce a reproducible condition so that cerebral arteries can be imaged and measured... (for full abstract, click [here](#))

Speaker Bio

Donald Dengel, Ph.D., is a professor in the School of Kinesiology and Director of the Human Performance Core and Densitometry Services in the Clinical and Translational Science Institute at the University of Minnesota. He is considered a leading expert in the area of vascular structure and function in children and adults and is a Fellow in both the American Heart Association and the American College of Sports Medicine. Dr. Dengel earned his doctorate in Exercise & Applied Physiology from the University of Georgia. He also earned a Master of Science degree in Human Bioenergetics from Ball State University, and Bachelor of Science degrees in Physical Education and Health Education from the University of Wisconsin-LaCrosse. Recently, Dr. Dengel received a grant from NFL Charities to examine the effects of multiple sports-related concussions on neurocognition and cerebral vascular function.



UPCOMING EVENTS

May 2 **What:** **Spring Symposium**

Location: Science Museum of Minnesota
120 W. Kellogg Blvd., St. Paul, MN

Speakers: [Dick Bisbing](#), McCrone Associates, Inc. (retired) - *"The Forensics of the Night: The CSI Effect and the Microscopy and Analysis of Trace Evidence"*

[Keith Thompson](#), Thermo Fisher Scientific - *"Does my EDS specification really describe my EDS detector?"*

[George Vander Voort](#), Vander Voort Consulting; Struers Inc. – *"Metallographic Sample Preparation and Grain Size Determination"*

[Scott Walck](#), Bowhead Science and Technology

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Minnesota Microscopy Society – Membership Form

All microscopists are urged to support their Society at one of the membership levels offered below. Often, supervisors will support MMS memberships out of their project budget because they recognize that it is a very inexpensive way to maintain and increase the skills of their microscopists. If you have been a member over the years and recognize the value of MMS to the community of microscopists it serves, consider upgrading your membership this year to the patron or sustaining level. Thank you.

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(Newsletter notifications will be e-mailed to the address above.)

Check here if you do NOT want your name and address to appear in the Society directory.

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