

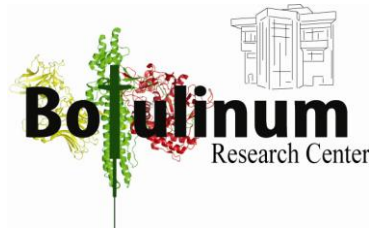


Third Annual Botulinum Research Symposium

Tentative Program

Thursday, August 20, 2009

- 1-4 PM Arrival and check-in at hotels
- 4-5 PM Registration and Welcome, UMass Campus, **Outside the BRC Building**, Parking Lot 15
- 5:00 PM Social and BBQ dinner, UMass Campus, **Outside the BRC Building**
- 6:45 PM Travel to Visual and Performing Arts (CVPA) Auditorium
- 7:00 PM Welcome to delegates – **Dr. Bal Ram Singh**, Director Botulinum Research Center, UMass Dartmouth
- 7:05 PM Lab Concert – Koyel Ghosal, Rishi Singh, Mike Goykhman, and others
CVPA auditorium, Group VI-153
- Session I** **Session Chair** – Andy Pickett, IPSEN LTD., UK
- 7:45 PM **Panel:** Role of NAPs in BoNT action, CVPA auditorium, Group VI-153
- Disruption of the Epithelial Barrier by Botulinum Hemagglutinin (HA),*
Yukako Fujinaga, Osaka University, Japan
- Do complexing proteins play a role in botulinum toxin therapeutics?,*
Jürgen Frevert, Merz Pharmaceuticals GmbH, Germany
- Gary Borodic**, Associated Eye Physicians And Surgeons, Inc., and Harvard Medical School
- 8:45 PM Q&A

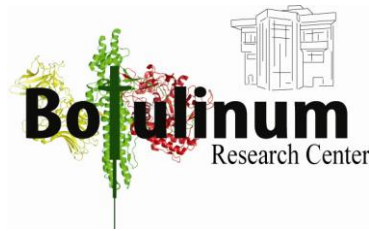


Friday, August 21, 2009: Woodland Commons Conference Area

- 8:00 AM Continental breakfast
- 9:00 *Introduction and Welcome*, Bal Ram Singh, UMass Dartmouth
- Session II** **Session Chair** – Shuowei Cai, Botulinum Research Center, UMass Dartmouth
- 9:15 AM **Symposium speech 1** – *Comparative Crystal Structure of Botulinum neurotoxins with inhibitors*, **S. Swaminathan**, Brookhaven National Laboratory, NY
- 10:00 AM *BotDB: A database resource for Clostridial neurotoxin*, **Regina Cer**, SAIC, Frederick, MD
- 10:20 AM Coffee/Tea break
- Session III** **Session Chair** – Klaus Fink, MERZ Pharmaceuticals, Germany
- 10:35 AM *New approaches to investigating the mechanism of Bot persistence* – **George Oyler**, Synaptic Research, MD
- 10:55 AM *TRP traps BoNT: An emerging cross talk*, **Baskaran Thyagarajan**, University of Medicine and Dentistry of New Jersey
- 11:15 AM *Current efforts in the CBD group*, **David Hodge**, DHS (a Q&A session)
- 11:30 AM *Current focus on botulinum and other biothreat agents at NIAID*, **Marian Wachtel**, NIAID, NIH
- 11:45AM Travel to BRC Quad
- 12:00 noon Tour of Center facilities and Group Photo
- 12:30 PM Lunch. **BRC Quad**
- 1:00 PM Poster session, **BRC Bridge**



- Session IV** **Session Chair** – Joe McArdle, UMDNJ, Newark, NJ
- 2:00 PM **Symposium speech 2** –*Development of treatments of botulinum intoxication: Are we on the right track*, **Michael Adler**, US Research Institute of Chemical Defense, Aberdeen Proving Ground, MD
- 2:45 PM *Development of specific RNA aptamers as novel antidotes against endopeptidase activity of botulinum neurotoxin*, **Shuowei Cai**, Botulinum Research Center, UMass Dartmouth
- 3:05 PM *Novel Irreversible Peptide Inhibitor to Counteract Botulinum Neurotoxin A (BoNT/A) Poisoning In Vitro*, **Devon Andres**, Brian Keyser, Peng Zhang, Betty Benton, Prabhati Ray, **Radharaman Ray**, US Army Medical Research Institute of Chemical Defense, APG, MD; Walter Read Army Institute of Research, Silver Spring, MD.
- 3:25 PM Coffee/Tea break
- Session V** **Session Chair** – Theresa Smith, USAMRIID, Ft. Detrick, MD
- 3:55 PM *Development of a highly efficient and easily administered botulism vaccine for biodefense*, **Mingtao Zeng**, University of Rochester School of Medicine and Dentistry, Rochester, NY
- 4:15 PM *Single domain antibodies for botulinum A toxin and complex*, **Ellen Goldman**, US Naval Research Laboratory, Washington, DC.
- 4:35 PM *Llama nanobodies specific for the 7 BoNT serotypes as refoldable ligands for rugged diagnostics and therapeutics*, Jerry Conway, Laura Sherwood, Thelma Collazo, John Garza and **Andrew Hayhurst**, Southwest Foundation for Biomedical Research, TX
- 4:55 PM *Fit – for – purpose botulinum assays*, **Venkateswaran Kodumudi**, Radix BioSolutions, Georgetown, TX



5:15 PM *Development and characterization of embryonic stem cell derived neurons as a cell-based model system for botulinum research,*
Patrick McNutt, USAMRICD, Aberdeen Proving Ground, MD

5:35 PM Break

Friday, August 21, 2009 Evening Program: Woodland Commons

6:00 PM Social, Woodland Commons

6:30 PM Dinner

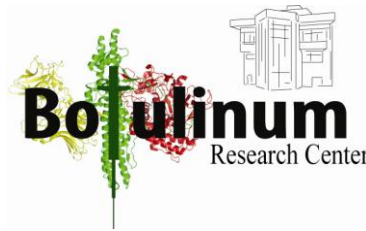
7:30 PM Research and Technology at UMass Dartmouth – **Dr. Lou Petrovic**,
Associate Vice Chancellor for Research,
UMass Dartmouth

Session VI **Session Chairs** –
Shashi Sharma, CFSAN, US FDA, College Park, MD
Venkateswaran Kodumudi, Radix Biosolutions, Austin, TX

7:40 PM **Dinner Symposium Panel:** Need and Progress on Alternative to Animal Assays for Botulinum Neurotoxins

Panelists

John Barr, CDC, Atlanta, GA
Andy Pickett, IPSEN LTD., UK
Keith Foster, Syntaxin Ltd, UK
Therasa Smith, USAMRIID, Ft. Detrick, MD



Posters

Binding mode hypothesis for Michellamine B: A natural product inhibitor of the botulinum neurotoxin serotype A light chain and its off-target effects

James Burnett, SAIC, Frederick, MD

Identification of BoNT/A LC Inhibitor Scaffolds by High Throughput Screening

Steve Cardinale and Terry Bowlin, Microbiotix, Worcester, MA

SNAP-25 gene over expression – an approach to restore neurotransmission in botulinum intoxication?

Koyel J Ghosal, Nagarajan Thirunavukkarasu, Shuowei Cai and Bal Ram Singh Botulinum Research Center, and Department of Chemistry and Biochemistry, University of Massachusetts Dartmouth

Genetic Diversity of Botulinum A Hall Strains

Ping Ke Fang, Bal Ram Singh, and Shuowei Cai, Botulinum Research Center and Department of Chemistry & Biochemistry, University of Massachusetts Dartmouth

Surface Plasmon Resonance to study binding of RNA aptamers to light chain BoNT/- A

Pavithra Janardhanan, Tzuu-Wang Chang, Ping Ke Fang, Shuowei Cai & Bal Ram Singh, Botulinum Research Center and Department of Chemistry & Biochemistry, University of Massachusetts Dartmouth

Novel Nanostructured Coatings For Biosensing Applications

Venumadhav Korampally, University of Missouri - Columbia

Comparison of structural stability and endopeptidase activity of botulinum neurotoxins type A, B, and E

Roshan Kukreja and Bal Ram Singh, Botulinum Research Center and Department of Chemistry & Biochemistry, University of Massachusetts Dartmouth



A Biologically Active Intermediate of Urea Denaturation in Botulinum Neurotoxin Endopeptidase

Raj Kumar¹, Li Li¹, R. Kukreja¹, S. Cai¹, S. A. Ahmed², and B.R. Singh¹,
¹Botulinum Research Center and Department of Chemistry and Biochemistry,
University of Massachusetts Dartmouth, Dartmouth, and ²US Army Medical
Research Institute of Infectious Diseases, Ft. Detrick, MD

A Structural Characterization of a Double-Mutated BoNT/A relative to Type A Toxin
Michael Morse, Shuowei Cai, and Bal Ram Singh, Botulinum Research Center,
and Department of Chemistry and Biochemistry, UMass Dartmouth

Understanding the protein dynamics of Botulinum neurotoxin type A interactions with its substrate peptide

M. J. Oliveira, R. Kukreja, S. Cai, and B. R. Singh, Botulinum Research Center,
and Department of Chemistry and Biochemistry, UMass Dartmouth

The Evaluation of Immunogenicity on Recombinant Double Mutated Botulinum Neurotoxin Sero Type A

Easwaran Ravichandran, Roshan V Kukreja, Kruti Vasa, Weiping Yang, Paul Lindo, Steve Riding, Shouwei Cai and Bal Ram Singh, Botulinum Research Center and Department of Chemistry and Biochemistry, University of Massachusetts Dartmouth

Botulinum Neurotoxin Invokes Differential Expression of Genes in Human Neuroblastoma and Colon Carcinoma cells

Nagarajan Thirunavukkarasu, Roshan Kukreja, Yu Zhou, Shuowei Cai, and Bal Ram Singh, Botulinum Research Center and Department of Chemistry & Biochemistry, University of Massachusetts Dartmouth

Novel natural inhibitor compounds against botulinum Neurotoxin type A

Kruti Vasa¹, Virinder S Parmar² Shuowei Cai¹, Bal Ram Singh¹, ¹Department of Chemistry and Biochemistry, The Botulinum Research Center, University of Massachusetts Dartmouth, North Dartmouth, ²Department of Chemistry, University of Delhi



A SPR study of binding interaction between M13 bacteriophage and BoNT type A
Hai-Hong Wang², **Animesh Agrawal**¹, Charlene Mello³, and Bal Ram Singh²
¹Department of Materials and Textiles, University of Massachusetts Dartmouth,
²Department of Chemistry and Biochemistry, University of Massachusetts
Dartmouth; ³Bioscience and Technology Team, US Army Natick Soldier
Research, Development, & Engineering Center (NSRDEC)

Detection of Botulinum Neurotoxins with Fluorescence Endopeptidase Assays
Hai-Hong Wang, Stephen Riding, Paul Lindo, Shuwei Cai, and Bal Ram Singh,
Botulinum Research Center and Department of Chemistry and Biochemistry,
University of Massachusetts Dartmouth

Partial list of other attendees/potential presenters of posters or brief introductory talks

Dr. John R. Barr, CDC, Atlanta, GA
Dr. Brian Blanchette, CEO, Dakota Laboratories, MA
Dr. Terry Bowlin, CEO, Microbiotix, MA
Dr. Jon Edelson, CEO, Anterios, Inc.
Dr. Klaus Fink, Merz, Frankfurt, Germany
Mrs. Foster, Syntaxin Ltd.
Dr. Conor Galleghar, Allergan, Inc., Irvine, CA
Dr. Shmuel Halevi, CEO, BioTell, MA
Dr. Sanjay Jain, Novbiosolutions, Shrewsbury, MA
Dr. Suzanne R. Kalb, CDC, Atlanta, GA
Dr. Roshan Kukreja, Anterios, Inc, MA
Dr. Daniel McAuliffe, Senior Administration Director, CIMIT, MA
Dr. Charlene Mello, U. S. Army Natick Soldier Research, MA
Dr. Leonard Moise, EpiVax, Providence, RI
Dr. Elizabeth Moyer, M/P Biomedical Consultants, Mill Valley, CA
Dr. Cindy Orser, ASDx Biosystems, Boulder, CO
Dr. Michael Powanda, M/P Biomedical Consultants, Mill Valley, CA
Dr. Andrew Ress, BB Scientific and Ress Institute, FL
Dr. Mary Senica, Q A Director, Anterios Inc.
Dr. Nancy Shine, List Biological Laboratories, Inc., Campbell, CA
Dr. Klaus Theobald, CSO, Anterios Inc.
Dr. Neeraja Venkateswaran, Radix Biosolutions, Austin, TX
Dr. Boke Zhang, VP, Anterios, Inc., MA