



Institute of
Advanced
Sciences

Botulinum
Research
Center

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Symposium Coordinators:

Shuwei Cai, University of
Massachusetts Dartmouth

Raj Kumar, Institute of
Advanced Sciences

FINAL Program

15th Annual Botulinum Research Symposium, August 18-19, 2021

The 15th annual symposium organized by the Botulinum Research Center at the Institute of Advanced Sciences, Dartmouth, MA.

Theme: Redesigned Botulinum Neurotoxins

Program

Wednesday, August 18, 2021 (Time, US Eastern Daylight Saving Time)

Session I -Inaugural Session

Chair: Michael Adler, US Army Research Institute
of Chemical Defense

9:00 – 9:30 AM

Welcome and Introductory Remarks – Bal Ram Singh, BRC, INADS

9:30 – 10:15 AM

**A chimeric toxin-based delivery platform for post-exposure
treatment of botulism- Min Dong**, Harvard Medical School

10:15 – 10:30 AM

Q&A

10:30 – 10:45 AM

Break

Session II

Chair: John Bogdan, Senior Consultant, Joint Project Executive
Office, CBRN, DoD

10:45 – 11:15 AM

**Local injection of an anti-cholinesterase restores
muscle function post BoNT-A impairment – Sameer B.
Shah**, DelNova, Inc., USA

11:15 – 11:45 AM

Treatment of botulism with 3,4-diaminopyridine – Michael Adler,
US Army Research Institute of Chemical Defense, Aberdeen Proving
Ground, MD, USA

11:45 – 12:15 PM

**Inhibition of BoNT enzymatic activity with sodium phosphate –
Suzy Kalb**, CDC, Atlanta, USA

12:15 – 12:45 PM

Lunch – cum –breakout sessions

Session III

Chair: Brenda Wilson, Univ of Illinois

12:45 – 1:15 PM

**Phage-Assisted Evolution of Botulinum Neurotoxin Proteases
with Reprogrammed Specificity– Travis Blum**, Harvard University

1:15 – 2:30 PM

Panel Discussion - Risk and Rewards of Redesigned Botulinum Neurotoxins – Shuowei Cai,
Moderator

Suzy Kalb, CDC, Atlanta, USA
Klaus Fink, Merz, Germany
Michael Adler, USARICD, USA
Min Dong, Harvard Medical School, Boston
David Hodge, Former Program Officer, Homeland Security

Thursday, August 19, 2021

Session IV

Chair: Klaus Fink, Merz Pharma

9:00 – 9:10 AM

**Introduction to the BR DasGupta Memorial Lecture
– Bal Ram Singh and V. Sathyamoorthy**

9:10 – 9:55 AM

**Making of IncobotulinumtoxinA (Xeomin™), Dr. Jurgen Frevert,
Merz Pharma, Germany**

9:55 – 10:10 AM

Q&A

Session V

Chair: Terry Bowlin, Microbiotix, Worcester, USA

10:10 – 10:40 AM

**Further Research Progress on Novel medical applications of
botulinum neurotoxins – longevity and macular disease, Gary
Borodic, Harvard Medical School, Boston, USA**

10:40 – 11:10 AM

**Gliosid mediated Action of Isolated and Complete BoNT/A,
Ghuncha Ambrin, UMass Dartmouth, MA, and Univ of North Carolina
Charlotte, USA**

11:10 – 11:25 AM

Break

Session VI

Chair: Andy Pickett, Toxin Sciences

11:25 AM – 12:25 PM

Lifetime Achievement Award - Speeches

Session VII

Chair: John Barr, CDC, Atlanta, USA

12:25 – 12:55 PM

**Biosimilar Botulinum Neurotoxin Product– Enan Guan, Biologicsa
& BoNT Consulting, Washington DC, USA**

12:55 – 1:25 PM

**Antibody-free Detection and Quantitation of Botulinum
Neurotoxins by Nano LC with Targeted Multistage Mass
Spectrometry– Markus Kalkum, Beckman Research Institute, USA**

1:25 – 1:55 PM **Conformational Dynamics of Botulinum Toxin
and its implication on evolution– Raj Kumar, Institute of Advanced
Sciences, Dartmouth, USA**

1:55 – 2:25 PM **Issues with Redesigned Botulinum
Neurotoxins, Andy Pickett, Toxin Sciences, UK, and Botulinum
Research Center, INADS, Dartmouth, MA**

2:25 – 2:40 PM Closing

**Zoom Conference registration
- Join Zoom Meeting**

<https://us02web.zoom.us/j/84052256405?pwd=NFZBMzlrRXk3SVhYRFIudVYyRi96UT09>

Meeting ID: 840 5225 6405
Passcode: 096956