Agenda

Tuesday, June 12

12:15 Welcome Remarks
Peder Olofsson, MD, PhD
Karolinska Institutet
Chad Bouton
The Feinstein Institute for Medical Research
Jan Andersson, MD, PhD
Journal of Internal Medicine

12:30 Clinical Updates

12:30 Paul-Peter Tak, MD, PhD
GlaxoSmithKline
Bioelectronic medicine: Immunomodulation by vagus nerve stimulation

13:00 Michael Eberhardson, MD, PhD
Karolinska Institutet
Bioelectronic therapy in IBD: a prospective clinical trial in Crohn's disease

13:30 Gregoire Courtine, PhD
Ecole Polytechnique Federale De Lausanne
Targeted neurotechnologies enabling walking after paralysis

14:00 Molly Stevens, PhD
Imperial College London
Bio-responsive hybrid materials for regenerative medicine and biosensing

14:30 Coffee Break

15:00 Defining Circuits

15:00 Kevin J. Tracey, MD
The Feinstein Institute for Medical Research
Afferent and efferent mechanisms of the inflammatory reflex

15:30 Isaac Chiu, PhD
Harvard Medical School
Neural regulation of bacterial infection and host defense

16:00 Stephen Liberles, PhD
Harvard Medical School
Molecular and genetic analysis of the vagus nerve

16:30 Guiseppe Lembo, MD
Sapienza, University di Roma
Neuroimmune mechanisms in cardiovascular diseases

17:15 Poster Session & Refreshments

19:00 BBQ Dinner

Wednesday, June 13

07:30 Breakfast and Coffee

08:00 Molecular Targets

08:00 Charles N. Serhan, PhD, DSc
Harvard University
Novel mediators & mechanisms in the resolution of inflammation: the role of vagus stimulation in resolution of infectious inflammation

Wednesday, June 13 (continued)

08:30 Masaaki Murakami, VMD, PhD
Institute for Genetic Medicine, Hokkaido Univeristy
Neural stimulations modulate the formation of immune cell gateways into the CNS

09:00 Camilla Svensson, PhD
Karolinska Institutet
Mechanisms of pain in arthritis – novel roles of autoantibodies

09:30 Coffee Break

10:00 Molecular Targets (continued)

10:00 Colin Duncan, MD
University of Edinburgh
Jason Witherington, PhD
Galvani Bioelectronics
Polycystic ovary syndrome (PCOS) – a role for the autonomic nervous system in an established endocrine disorder

10:30 Sebastien Talbot, PhD
University of Montreal
Context-dependent neuro-immune interplay

11:00 Goran Hansson, MD, PhD
Karolinska Institutet
Inflammation in atherosclerosis – from mechanisms to therapy

11:30 Lunch

13:00 Neural Interfaces

13:00 Polina Anikeeva, PhD
Massachusetts Institute of Techology
Electronic, optical, and magnetic tools to study the nervous system

13:30 Stephanie P. Lacour, PhD
Ecole Polytechnique Federale de Lausanne
Soft microelectrode implants

14:00 Anthony Zador, MD, PhD
Cold Spring Harbor Laboratory
Sequencing the connectome

14:30 Coffee Break

15:00 Signal Processing

15:00 Chad Bouton
The Feinstein Institute for Medical Research
Neural decoding and restoring hand function in tetraplegia

15:30 George G. Malliaras, PhD
University of Cambridge
Novel materials and devices for neural interfacing

16:00 Roisin Owens, PhD
University of Cambridge
Bioelectronics in vitro: 3D, biomimetic devices and cell models

18:00 Three-Course Dinner

Agenda

Thursday, June 14

08:00 **Breakfast and Coffee**

09:00 **Disruptive Tools and Techology**

09:00 Ed Boyden, PhD
Massachusetts Institute of Technology
Tools for optically mapping and repairing biological functions

09:30 Douglas Weber, PhD
University of Pittsburgh
Next generation neuromodulation devices will be smarter, sharper, and more aware

10:00 Mark Okusa, MD
University of Virginia School of Medicine
Optogenetic control of inflammation in acute kidney injury

10:30 **Coffee Break**

11:00 **Disruptive Tools and Technology (continued)**

11:00 Olle Inganas, PhD Linkoping University *Bioelectronics with electronic polymers in biomembranes*

11:30 Jan Linnros, PhD
Royal Institute of Technology
Silicon nanotechnology for biomolecule sensing

12:00 Bjorn Hogberg, PhD
Karolinska Institutet
Deciphering nanoscale spatial effects in biology with DNA origami

12:30 **Lunch**

14:00 **Accelerating Clinical Translation**

14:00 Christopher Puleo, PhD
General Electric
Precision noninvasive peripheral neuromodulation

14:30 Tim Denison, PhD
Medtronic
The journey to "digital" therapy discovery

15:00 David Chernoff, MD
SetPoint Medical
Disrupting the paradigm for treating autoimmune disease: Bioelectronic therapy for rheumatoid arthritis

15:30 **Coffee Break**

16:00 Kevin J. Tracey, MD
The Feinstein Institute for Medical Research
Kelly Owens
Bioelectronic Medicine Patient
Patient experience with bioelectronic medicine

16:30 **Concluding Remarks**
Peder Olofsson, MD, PhD
Karolinska Institutet
Chad Bouton
The Feinstein Institute for Medical Research

18:00 **Evening Boat Tour**