

# MedTechLabs

## Workshop in Bioelectronic Medicine

MedTechLabs is a new venture between Stockholm County Council (SLL), Karolinska Institutet (KI) and KTH Royal Institute of Technology (KTH). The purpose of this interdisciplinary collaboration between technology and medicine is to enhance science and ultimately increase survival and improve quality of life for the inhabitants in the Stockholm region.

### INVITATION

On behalf of MedTechLabs, KI, KTH and SLL are pleased to invite you to a workshop in **Bioelectronic Medicine**. Researchers and clinicians are welcome to attend.

### WHEN AND WHERE

**Time:** November 6th at 13:00

**Place:** Karolinska Institutet, Nobels väg 1, Nobel Forum, Wallenbergsalen.

### BIOELECTRONIC MEDICINE

This is a new field developing rapidly worldwide with interesting clinical applications. In order to survey current and potential research activities in this area, MedTechLabs has taken the initiative to this workshop to discuss possible research collaborations and applications of bioelectronic medicine within healthcare.

### AIM

To investigate the potential benefits and new synergies that would result if MedTechLabs was to invest in bioelectronic medicine in the coming 3-5 years.

### INVITED SPEAKER

**Kevin J. Tracey**, MD, President and CEO of The Feinstein Institute for Medical Research, Professor of Molecular Medicine & Neurosurgery, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, New York, USA.

### PROGRAMME

13.00 - 14.20 Molecular mechanisms in bioelectronic medicine: Lab to clinic  
14.20 - 14.50 Coffee  
14.50 - 16.00 10-minute pitches on potential research projects in this area  
16.00 - 16.45 Network mingle

### FOR REGISTRATION

Please email [Erika.lokatt@indek.kth.se](mailto:Erika.lokatt@indek.kth.se) no later than Oct 30th for registration and possible pitch.

Welcome!



## ABSTRACT

The major focus of Dr. Tracey's laboratory is the molecular basis of inflammation and identifying the mechanisms by which neurons control the immune system.

Advances in technology and molecular mechanisms now place bioelectronic medicine at the forefront of technological advances in medicine. Bioelectronic medicine – the convergence of molecular medicine; neuroscience and biology; and electronics to develop treatments – may change the future of therapies for a wide variety of diseases.

Molecular tools in immunology and neuroscience revealed neural circuits that operate reflexively in response to pathogens, cytokines, and other molecules associated with infection and injury. Mapping the specific and functional organization of reflexes in the vagus nerve has revealed anatomical, neurophysiological and molecular mechanisms for reflex control of immunity. This is also a path to clinical testing of bioelectronic devices that have been used successfully to treat patients in the first clinical trials of rheumatoid arthritis and inflammatory bowel disease.