

# NIBIB RESEARCH FOCUS AREAS

## Group 1



Moderators:

Thomas Brady (MGH)

Thomas Skalak (UVA)

LaLique Suite

December 17 – 8:30 AM

# Session Focus

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Determine the highest priority research focus areas that the NIBIB can support to address a critical biomedical research or health care need in the next five to ten years.



# Thomas Brady, PhD

## Massachusetts General Hospital

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### NIBIB Impact

Improve operating room technologies – real-time, 3D imaging of soft tissue disease, robotic manipulation and systems integration.

### Highest priority

Characterize vascular plaque using novel non-invasive and intravascular “imaging” devices.



# Eileen Bradley, PhD

## NIH/CSR

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### NIBIB Impact

Support centers of excellence in bioengineering.

### Highest priority

Optical Imaging/Imaging Probes.



# Carlo DeLuca, PhD

Boston University

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## NIBIB Impact

Enhance the awareness of BMI and BME and Health Science specialists and society at large.

## Highest priority

Neuroengineering, Bio-Chem Terrorism.



# Richard Ehman, PhD

Mayo Clinic and Foundation

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## NIBIB Impact

An environment that fosters innovation in imaging & bioengineering technology.

## Highest priority

Support “grass-roots” (investigator-initiated) research priorities.



# William Heeterks, MD, PhD

## NIH/NINDS

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### NIBIB Impact

Transform interdisciplinary research from something special to business as usual for appropriate biomedical research projects.

### Highest priority

Development of chronic, implantable systems for physiological sensing and controlled delivery of therapeutic agents.



# King Li, MD

## NIH/CC

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### NIBIB Impact

Set up networks to integrate research in biomedical imaging and engineering.

### Highest priority

Personalized treatment through combined, targeted imaging and therapy.





# Hunter Peckham, PhD

## Case Western Reserve University

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### NIBIB Impact

Facilitate greater integration of engineering within all relevant Institutes and Centers at NIH.

### Highest priority

Development of techniques for interfacing, restoring and repairing function in the nervous system.



# Jeff Schloss, PhD

## NIH/NHGRI

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### NIBIB Impact

Achieve effective integration of teams:  
engineering/physical sciences &  
biomedical sciences.

### Highest priority

Develop and apply nanobioscience/  
technology fundamentals.



# Thomas Skalak, PhD

University of Virginia

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## NIBIB Impact

Develop integrative, mechanism-based computational biology models - including organ-scale hierarchy.

## Highest priority

Mechanobiology of the cardiovascular, nervous, and skeletal systems.



# David Walt, PhD

Tufts University

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## NIBIB Impact

Bringing new diagnostic technologies to the clinic.

## Highest priority

Transition genomics revolution to the clinic.



# Michael Viola, MD

## U.S. Department of Energy

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### NIBIB Impact

The development and evaluation of biosensors that address specific critical clinical problems.

### Highest priority

Development of the infrastructure for the next decade of multi-functional probes, instruments with high temporal/spatial resolution, rapid computational data acquisition and analysis.

