

NIBIB RESEARCH FOCUS AREAS

Group 2



Moderators:

Elliot Chaikof (Emory)

Beth McFarland (Wash U)

Haverford Suite

December 17 – 8:30 AM

Session Focus

Determine high-impact projects or promising emerging technologies that support the research focus areas and are appropriate for the NIBIB's mission.



James Cassatt, PhD

NIH/NIGMS

NIBIB Impact

Effect meaningful collaborations between the engineering intensive institutions and biomedical researchers.

Highest priority

Nanotechnology and its biomedical applications.



Elliot Chaikof, PhD

Emory University School of Medicine

NIBIB Impact

Support for research in biomaterials, bio-inspired and biomimetic materials science.

Highest priority

Bio-inspired and biomimetic materials science.



Laurie Fajardo, PhD

University of Iowa Medical Center

NIBIB Impact

Train more PhD and MD researchers with a balance among basic and clinical researchers.

Highest priority

Foster development of new molecular methods for imaging specific cellular events.



Michael Huerta, PhD

NIH/NIMH

NIBIB Impact

Fundamental research of new technology platforms for biomedicine.

Highest priority

Quantitative understanding of molecular structures and processes.



Ronald Kikinis, MD

Brigham and Women's Hospital

NIBIB Impact

Image Guided Therapy.

Highest priority

Focused Ultrasound.



Beth McFarland, PhD

Washington University

NIBIB Impact

Fund translational research in BME & BMI in development, clinical implementation, outcomes.

Highest priority

Molecular Imaging.



Norbert Pelc, PhD

Stanford University

NIBIB Impact

Foster the development of new technology for the detection, treatment, or basic understanding of an important human disease.

Highest priority

Imaging and other diagnostic technology that has low per-procedure cost and broad application.



David Piwnica-Worms, PhD

Washington University School of Medicine

NIBIB Impact

Interpret trends in molecular medicine and genomics research; support all aspects of image research (detectors, image enhancing agents, models systems) directed at interrogating disease processes at cellular & molecular levels.

Highest priority

Discovery, validation and development of image enhancing agents as signal transducers to link in vivo biology with imaging instruments.



Alan Snyder, PhD

Penn State College of Medicine

NIBIB Impact

Take the lead in steering the development of emerging technologies towards noninvasive diagnosis and therapy, tissue engineering and regenerative medicine.

Highest priority

Nanoscale science and technology applied to medicine and biology.



Tuan vo Dinh, PhD

Oak Ridge National Laboratory

NIBIB Impact

Support the development of advanced technologies to investigate disease at the sub-cellular level (e.g. spectrochemical tools).

Highest priority

Support the development of novel, high-risk/high-payback, minimally invasive technologies for diagnostics and therapy that have the potential to be used by physicians.



John Watson, PhD

NIH/NHLBI

NIBIB Impact

Team with NIH ICs to fully Engineer Health Technologies.

Highest priority

Team with NIH ICs to develop “Period Table Analog” for Proteins.



GREATEST ENGINEERING ACHIEVEMENTS OF THE 20th CENTURY

1. Electrification
2. Automobile
3. Airplane
4. Water Supply
5. Electronics
6. Radio and TV
7. Ag. Mechanization
8. Computers
9. Telephones
10. AC & Refrigeration
11. Highways
12. Spacecraft
13. Internet
14. Imaging
15. Household Appliances
16. Health Technologies
17. Petroleum Technologies
18. Laser and Fiber Optics
19. Nuclear Technologies
20. High-performance
Materials

