Office of Research Newsletter – June 6, 2014

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Part I. News and Announcements

BRAIN 2025 Calls for $4.5 billion in New Funding for Brain Research over the Next 12 Years

The long-term scientific vision of the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative was presented to Francis S. Collins, Director of the National Institutes of Health by his Advisory Committee to the Director (ACD). Dr. Collins accepted the recommendations, calling the report bold and game changing.

The report drafted by the ACD BRAIN Working Group maps out a sustained commitment of $4.5 billion in new federal funding over 10 years beginning in fiscal year 2016 to achieve seven primary goals. NIH already announced an investment of $40 million in fiscal year 2014 and President Obama has made a request for $100 million for NIH's component of the initiative in his fiscal year 2015 budget.

The NIH efforts on the BRAIN Initiative will seek to map the circuits of the brain, measure the fluctuating patterns of electrical and chemical activity flowing within those circuits, and understand how their interplay creates our unique cognitive and behavioral capabilities. The following scientific goals were identified as high priorities for achieving this vision:

- Identify and provide experimental access to the different brain cell types to determine their roles in health and disease.
- Generate circuit diagrams that vary in resolution from synapses to the whole brain.
- Produce a dynamic picture of the functioning brain by developing and applying improved methods for large-scale monitoring of neural activity.
- Link brain activity to behavior with precise interventional tools that change neural circuit dynamics.

- Produce conceptual foundations for understanding the biological basis of mental processes through development of new theoretical and data analysis tools.
- Develop innovative technologies to understand the human brain and treat its disorders; create and support integrated brain research networks.
- Integrate new technological and conceptual approaches produced in the other goals to discover how dynamic patterns of neural activity are transformed into cognition, emotion, perception, and action in health and disease.

The Working Group outlined an investment ramping up to $400 million a year for fiscal years 2016-2020 to focus on technology development and validation. They called for $500 million a year for years 2020-2025 to increasingly focus on the application of those technologies in an integrated fashion to make fundamental new discoveries about the brain. The working group emphasized that its cost estimates assume that the budget for the BRAIN Initiative will supplement — not supplant — NIH's existing investment in the broader spectrum of basic, translational, and clinical neuroscience research.

In December 2013, NIH announced six funding opportunities in response to high priority areas identified by the BRAIN Working Group in September 2013. Awards are expected to be announced in September 2014.

The BRAIN Initiative is jointly led by the NIH, NSF, DARPA, and FDA. Private organizations are also committed to ensuring success through investment in the initiative.

More at http://www.nih.gov/news/health/jun2014/od-05.htm

NSF Dear Colleague Letter: Cybersecurity Education EAGERs - Pushing the Dimensions of the Domain

The National Science Foundation is announcing its intention to fund a small number of Early Concept Grants for Exploratory Research (EAGERs) to encourage advances in cybersecurity education, an area supported by the Foundation's Secure and Trustworthy Cyberspace (SaTC) (http://www.nsf.gov/pubs/2013/nsf13578/nsf13578.htm) and CyberCorps®: Scholarship for Service (http://www.nsf.gov/pubs/2014/nsf14510/nsf14510.htm) programs.

The process for submission is as follows:

- Investigators should e-mail a two-page summary of their idea(s) (plus references and CVs on additional pages, if desired) to Victor Piotrowski, Valerie Barr, Jeremy Epstein, and Harriet Taylor at satc-edu@nsf.gov. The deadline for consideration is August 1, 2014. There is no specified format for these summaries, but a brief statement of how the proposed work furthers cybersecurity education should be included. The two-page summary should not include any budget information.
- NSF Program Directors will review the two-page summaries, and will invite those of most interest to submit EAGER proposals. Notifications for first-round submissions are expected by September 1, 2014.
- The anticipated deadline for submission of invited EAGER proposals is September 30, 2014. Submission of EAGER proposals will be via Fastlane or Grants.gov.

Investigators are encouraged to review the final report of a recent cybersecurity education workshop at https://research.gwu.edu/sites/research.gwu.edu/files/downloads/CEW_FinalReport_040714.pdf.

More at http://www.nsf.gov/pubs/2014/nsf14075/nsf14075.jsp?WT.mc_id=USNSF_25&WT.mc_ev=click

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A Weekly Newsletter from DOE Office of Energy Efficiency and Renewable Energy (EERE): http://apps1.eere.energy.gov/news/enn.cfm

MARK YOUR CALENDAR

June 30-July 2, 2014, Boston, MA
CSP Symposium at ASME 2014 8th International Conference on Energy Sustainability

More at http://www.asmeconferences.org/ESFuelCell2014/TechnicalTracks.cfm

July 17, Bethesda, Maryland
Medical Scientist Training Program 50th Anniversary Symposium

Register at http://meetings.nigms.nih.gov/index.cfm?event=registration&ID=18184. You can also watch the event live at http://videocast.nih.gov.

August 17-21, 2014, San Diego, CA
Solar Energy + Technology 2014 Symposium

More at http://spie.org/x13194.xml

Part II. Funding Opportunities

DOD

DOD Prostate Cancer Exploration-Hypothesis Development Award Grant
http://www.grants.gov/web/grants/view-opportunity.html?oppId=256291
Pre-Application Due Date: June 25, 2014. Application Due Date: July 9, 2014

DOD Neurofibromatosis New Investigator Award
http://www.grants.gov/web/grants/view-opportunity.html?oppId=256027
Pre-Application Due Date: July 10, 2014. Application Due Date: July 24, 2014

DOD Neurofibromatosis Exploration-Hypothesis Development Award
http://www.grants.gov/web/grants/view-opportunity.html?oppId=256030
Pre-Application Due Date: July 10, 2014. Application Due Date: July 24, 2014

DOD Spinal Cord Injury Investigator-Initiated Research Award Grant

http://www.grants.gov/web/grants/view-opportunity.html?oppId=256728
Pre-Application Due Date: July 10, 2014. Application Due Date: October 30, 2014

DOD Spinal Cord Injury Qualitative Research Award Grant
http://www.grants.gov/web/grants/view-opportunity.html?oppId=256730
Pre-Application Due Date: July 10, 2014. Application Due Date: October 30, 2014

DOD Spinal Cord Injury Translational Research Award Grant
http://www.grants.gov/web/grants/view-opportunity.html?oppId=256733
Pre-Application Due Date: July 10, 2014. Application Due Date: October 30, 2014

RFI: Institutes for Manufacturing Innovation
https://www.fbo.gov/index?s=opportunity&mode=form&id=20149a9325aab69ace3bf57124df053a&tab=core&_cview=0
Response Due Date: July 14, 2014

The DOD wishes to consider input from Industry and Academia as part of an effort to select and scope the technology focus areas for future Institutes for Manufacturing Innovation. These IMIs will be regionally centered Public Private Partnerships enabling the scale-up of advanced manufacturing technologies and processes with the goal of successful transition of existing science and technology into the marketplace for both Defense and commercial applications. Each Institute will be led by a not-for-profit organization and focus on one technology area. The Department is requesting responses which will assist in the selection of a technology focus area from those currently under consideration, based upon evidence of national security requirement, economic benefit, technical opportunity, relevance to industry, business case for sustainability, and workforce challenge. The Technical Focus Areas currently under consideration are: 1. Flexible Hybrid Electronics; 2. Photonics; 3. Engineered Nanomaterials; 4. Fiber and Textiles; 5. Electronic Packaging and Reliability; and 6. Aerospace Composites.

DOD Prostate Cancer Biospecimen Resource Site Award Grant
http://www.grants.gov/web/grants/view-opportunity.html?oppId=256293
Pre-Application Due Date: July 23, 2014. Application Due Date: October 29, 2014

DOD Prostate Cancer Postdoctoral Training Award Grant
http://www.grants.gov/web/grants/view-opportunity.html?oppId=256298
Pre-Application Due Date: August 27, 2014. Application Due Date: September 10, 2014

DARPA

Spatial, Temporal, and Orientation Information Contested Environments
https://www.fbo.gov/index?s=opportunity&mode=form&id=de9dee0b1f9f1c03ce8046b7f8026854&tab=core&_cview=0
Proposal Abstract Due Date: June 17, 2014. Proposal Due Date: July 24, 2014

Block Access to Deny Entry (BlockADE) RFI

https://www.fbo.gov/index?s=opportunity&mode=form&id=a6442f21e69e4813b78c1884f351cb71&tab=core&_cview=0
July 2, 2014

ONR

FY14 Acquisition Research Program
http://www.grants.gov/web/grants/view-opportunity.html?oppId=254736
White Papers Due Date: June 16, 2014

NASA

Economic Research for Space Development Grant
http://www.grants.gov/web/grants/view-opportunity.html?oppId=256505
July 16, 2014

NIH

NIOSH Support for Conferences and Scientific Meetings (R13)
http://grants.nih.gov/grants/guide/pa-files/PAR-14-246.html
August 12, 2014

Molecular and Cellular Characterization of Screen-Detected Lesions (U01)
http://grants.nih.gov/grants/guide/rfa-files/RFA-CA-14-010.html
LOI Due Date: August 17, 2014. Application Due Date: September 17, 2014

Development of Sample Sparing Assays for Monitoring Immune Responses (U24)
http://grants.nih.gov/grants/guide/rfa-files/RFA-AI-14-027.html
LOI Due Date: August 26, 2014. Application Due Date: September 26, 2014

Basic Research on HIV Persistence (R01)
http://grants.nih.gov/grants/guide/pa-files/PAR-14-247.html
September 7, 2014

Basic Research on HIV Persistence (R21)
http://grants.nih.gov/grants/guide/pa-files/PAR-14-248.html
September 7, 2014

Research on Chronic Overlapping Pain Conditions (R01)
http://grants.nih.gov/grants/guide/pa-files/PA-14-244.html
October 5, 2014

Research on Chronic Overlapping Pain Conditions (R21)
http://grants.nih.gov/grants/guide/pa-files/PA-14-243.html
October 16, 2014

Role of the Microflora in the Etiology of Gastro-Intestinal Cancer (R01)
http://grants.nih.gov/grants/guide/pa-files/PAR-14-242.html
November 4, 2014; March 3, 2015; November 4, 2015; March 3, 2016; November 4, 2016; March 3, 2017

NSF

NSF/Intel Partnership on Cyber-Physical Systems Security and Privacy (CPS-Security)
http://www.nsf.gov/pubs/2014/nsf14571/nsf14571.pdf
Preliminary Proposal Due Date: July 29, 2014. Full Proposal Due Date: October 28, 2014

Methodology, Measurement, and Statistics (MMS)
http://www.nsf.gov/pubs/2014/nsf14574/nsf14574.htm?WT.mc_id=USNSF_25&WT.mc_ev=click
September 2, 2014; January 20, 2015; January 20, Annually Thereafter; August 20, 2015; August 20, Annually Thereafter

Partnerships for Innovation: Accelerating Innovation Research- Technology Translation (PFI: AIR-TT)
http://www.nsf.gov/pubs/2014/nsf14569/nsf14569.htm?WT.mc_id=USNSF_179
LOI Due Dates: September 2, 2014; March 13, 2015. Full Proposal Due Dates: October 2, 2014; April 14, 2015

ED

Gaining Early Awareness and Readiness for Undergraduate Programs (Partnership Grants)
http://www.grants.gov/web/grants/view-opportunity.html?oppId=256631
July 7, 2014

Please note that this bulletin is not intended to be an exhaustive listing of funding opportunities. Your input and feedback are always welcome. Please send your comments and requests to be removed from the distribution list to huangj7@rpi.edu.