

State of the 'Net: A report on OppNet's progress and future

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“An investigation into a process . . .



might not pay off for a year, or a decade, or at all.

But when it does, the rewards are shared broadly, enjoyed by those who bore its costs and also by those who did not.

That's why the private sector generally under-invests in basic science, and why the public sector must invest in this kind of research.

While the risks may be large, so are the rewards for our economy and our society.”

President Obama at the National Academy of Sciences, September 2009





For Immediate Release
Wednesday, November 18, 2009

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NIH Opportunity Network to Expand Basic Behavioral and Social Sciences Research

National Institutes of Health (NIH) Director Francis Collins, M.D., Ph.D., today announced the launch of the Basic Behavioral and Social Science Opportunity Network (OppNet), a trans-NIH initiative to expand the agency's funding of basic behavioral and social sciences research (b-BSSR).

The b-BSSR field studies mechanisms and processes that influence behavior at the individual, group, community and population level. Research results lead to new approaches for reducing risky behaviors and improving the adoption of healthy practices.

All NIH Institutes and Centers (ICs) share the mission of supporting b-BSSR. Twenty-four ICs and five programs within the Office of the Director will integrate existing NIH efforts, target research challenges best met collectively and collaborate on new research initiatives in complementary scientific areas. OppNet will also develop a plan for focused multi-year programs across ICs to advance priority topics within b-BSSR.

"Synergy across a variety of research disciplines will fuel high-quality basic behavioral and social science research, a vital component of the NIH research portfolio," said Dr. Collins. "Basic behavioral and social science research contributes to our understanding of the complex factors that affect individuals, our communities and our environments."



OppNet: Mission and goals

- To pursue shared opportunities that strengthen basic behavioral and social science research (b-BSSR) beyond existing NIH investments
- To foster activities and initiatives on basic social processes and mechanisms of behavior that are relevant
 - across public health challenges
 - across the missions of individual NIH Institutes, Centers and Offices
- To expand NIH's funding of b-BSSR with additional investments that complement NIH's current overall research portfolio



OppNet Funding

24 ICs and 4 program offices co-fund and co-manage OppNet*



FY 2010:

\$10 million in ARRA funds
\$2 million for HIV/AIDS-related
research projects

FY 2011 (NIH budget request): \$20 million
\$10 million from NIH Office of the
Director
\$10 million from Institutes/Centers

* = All NIH Institutes and Centers
that fund extramural research

FY 2012-2014 (planned): \$30 million/year



Participating NIH Institutes, Centers, and Offices

- John E. Fogarty International Center
Advancing Science for Global Health
- National Cancer Institute
- National Center for Complementary and
Alternative Medicine
- National Center for Research Resources
- National Eye Institute
- National Heart Lung and Blood Institute
- National Human Genome Research
Institute
- National Institute on Aging
- National Institute on Alcohol Abuse and
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- National Institute of Allergy and
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- National Institute of Arthritis and
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- National Institute of Biomedical Imaging
and Bioengineering
- *Eunice Kennedy Shriver* National
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- National Institute on Deafness and Other
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- National Institute of Dental and
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- National Institute of Diabetes and
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- National Institute on Drug Abuse
- National Institute of Environmental
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- National Institute of General
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Participating NIH Institutes, Centers, and Offices

- National Institute of Mental Health
- National Institute on Minority Health and Health Disparities
- National Institute of Neurological Disorders and Stroke
- National Institute of Nursing Research
- National Library of Medicine
- Office of AIDS Research
- Office of Behavioral and Social Sciences Research
- Office of Disease Prevention
- Office of Research on Women's Health



OppNet FY2010 Funding Opportunities

RFA-OD-10-003: ARRA-supported short-term Mentored Career Development Awards in the basic behavioral and social sciences for mid-career and senior investigators (K18)

NOT-OD-10-032: ARRA competitive revisions for R01, R03, R15, R21, R21/33, R37 grants

NOT-OD-10-033: ARRA competitive revisions for HIV/AIDS-related research

NOT-OD-10-034: ARRA competitive revisions for Small Business Innovation Research and Small Business Transfer Technology Research Grants (R43/R44 and R41/R42)

NOT-OD-10-036: Competitive revisions for HIV/AIDS-related research



Short-term Mentored Career Development Awards (K18)

- ES020062, Epigenetic mechanisms of social disparities in health and development, DP Keating, PI
- HL108332-01, Sleep in Rats: From Conceptualization to Measurement, Analysis and Interpretation, GG Page, PI
- MH093940, Seasonality of Mood: A Genome-Wide Association Study in the Old Order Amish, PT Postolache, PI
- HD058365, Mentored merging of psychobiology and neonatology, JR Alberts, PI
- NR012847, Using behavioral economics to understand end-of-life decisions, AE Barnato, PI

Sixteen K18 Awards made in FY2010 (>\$1.5 million)



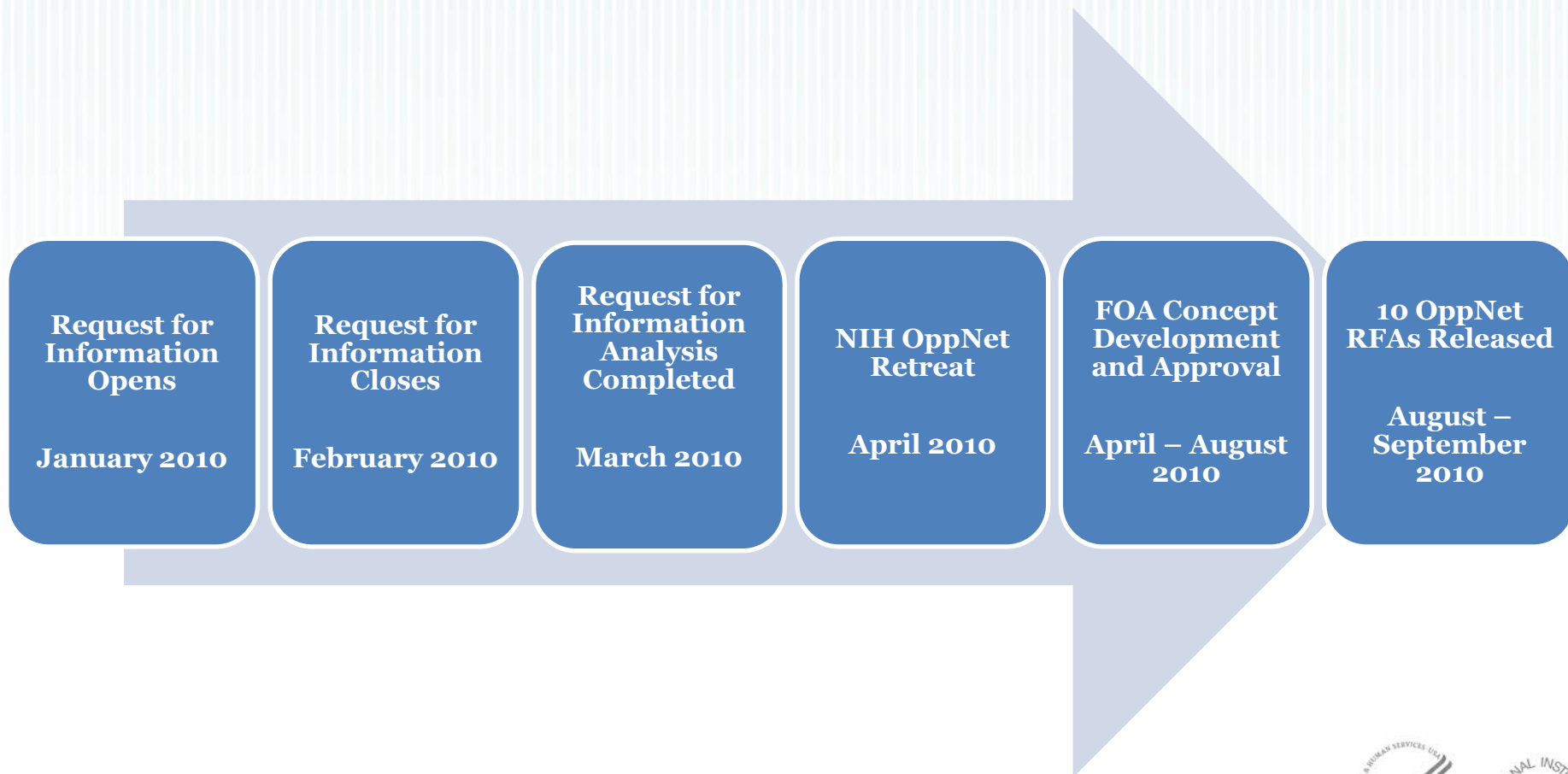
Competitive Revision Awards

- AG033906, Ethnic Differences in Responses to Painful Stimuli, RB Fillingim, PI
- DC009292, The Role of Consolidation and Sleep in Children's Word Learning, ME Dyken & K McGregor, PIs
- DA023643, Developmental Genetics of Serotonin Neuron Subtypes in Brain Reward Circuits, SM Dymecki, PI
- CA134159, Enhanced Self-Appraisal After Cancer: A Bias in Survivors' Self-Report?, CJ Recklitis, PI
- MH086983, Web-based Dissemination Tool (WDT) for Community Mental Health, JS McMillen & DC Swick, PIs
- AI041935, HIV – Emergence of Drug Resistance, SM Blower, PI
- NS047293, EEGLAB, Software for Analysis of Human Brain Dynamics, S Makeig, PI

43 competitive revision awards made in FY2010 (>\$8.6 million)



Timeline: FY2011 FOA Development



FY2010 Request for Information

- Purpose
 - Provide opportunity to suggest b-BSSR priorities

- Requested information
 - Challenges
 - Describe what you believe to be the most critical, health related challenges that will benefit b-BSSR

 - Opportunities
 - Indicate the most promising b-BSSR targets that will inform solutions to identified challenges

 - Outcome indicators
 - Describe what measures could be used to indicate whether proposed activities were successful in meeting challenges



FY2010 Request for Information

- Open for public comment from January 28 – February 19
- 358 responses received
 - Scientific societies, advocacy & policy organizations, research centers
 - Individual researchers from a wide variety of academic disciplines including psychology, anthropology, neuroscience, sociology, & medicine
- Key themes were extrapolated through qualitative analysis
 - Scientific
 - Opportunity type
 - Methodology and measurement



FY2010 Emerging Scientific Themes

- Health behaviors
- Social & personality psychology
- Decision making
- Cognition & emotion
- Gene by environment
- Social gradients, social stratification & health inequities
- Social environment
- Culture, health and well-being
- Sleep/circadian rhythms
- Development: time, exposure and change
- Stress
- Capacity building



NIH OppNet Retreat



19 April 2010



FY2011 Requests for Applications

- Capacity Building
 - Scientific Meetings
 - RFA-CA-10-017 (R13)
 - Short-term Interdisciplinary Research Education Programs
 - RFA-NR-11-002 (R25)
 - Short-term Mentored Career Development Awards
 - RFA-DE-11-003 (K18)
- Self-Regulation
 - Basic Research on Self-Regulation
 - RFA-AG-11-010 (R21)
- Behavioral Maintenance
 - Basic Mechanisms Influencing Behavioral Maintenance
 - RFA-HL-11-035 (R01)



FY2011 Requests for Applications

- Sleep and Social Environment
 - Basic Biopsychosocial Processes
 - RFA-HD-11-101 (R01)
 - RFA-HD-11-102 (R21)
- Social Environment
 - Measurement, Methods, and Mechanisms
 - RFA-DA-11-003 (R01)
- Psychosocial Stress
 - Integration of Behavioral and Physiological Processes
 - RFA-HL-11-033 (R01)
 - Development of Comprehensive and Conceptually-based Measures
 - RFA-HL-11-034 (R21)



Strategic Planning for FY2012 & Beyond

- Support investigator-initiated and develop research initiatives
 - Build a collective body of knowledge about the nature of behavior and social systems
 - Deepen our understanding of basic mechanisms of behavioral and social processes
- Expand disciplinary perspectives engaged in NIH mission
- Highlight relevancy of b-BSSR to NIH mission



Basic Behavioral and Social Science Research: NIH Definition circa 1996

Basic BSSR furthers our understanding of
fundamental mechanisms
and patterns of behavioral and social functioning
relevant to the Nation's health and well-being,
and as they interact with each other, with biology,
and with the environment



Basic BSSR at NIH: Three Categories

- Behavioral and social processes
- Interactions between biology, behavior, and social processes (also known as biopsychosocial)
- Methodology and measurement in the behavioral and social sciences

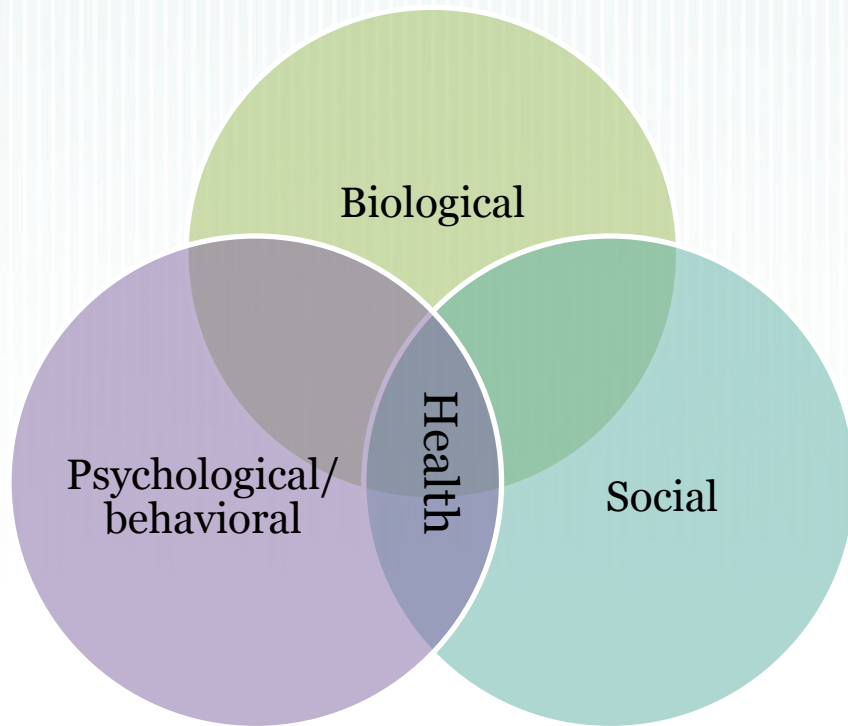


Basic BSSR: Behavioral and Social Processes

- Sensation & perception
 - Emotion & motivation
 - Vulnerability & resilience
 - Attention, learning, & memory
 - Ingestive, sexual, & aggressive behaviors
 - Language development
- Social influences & social cognition
 - Family & group processes
 - Social networks
 - Sociocultural & environmental processes
 - Population dynamics



Basic BSSR: Biopsychosocial Research

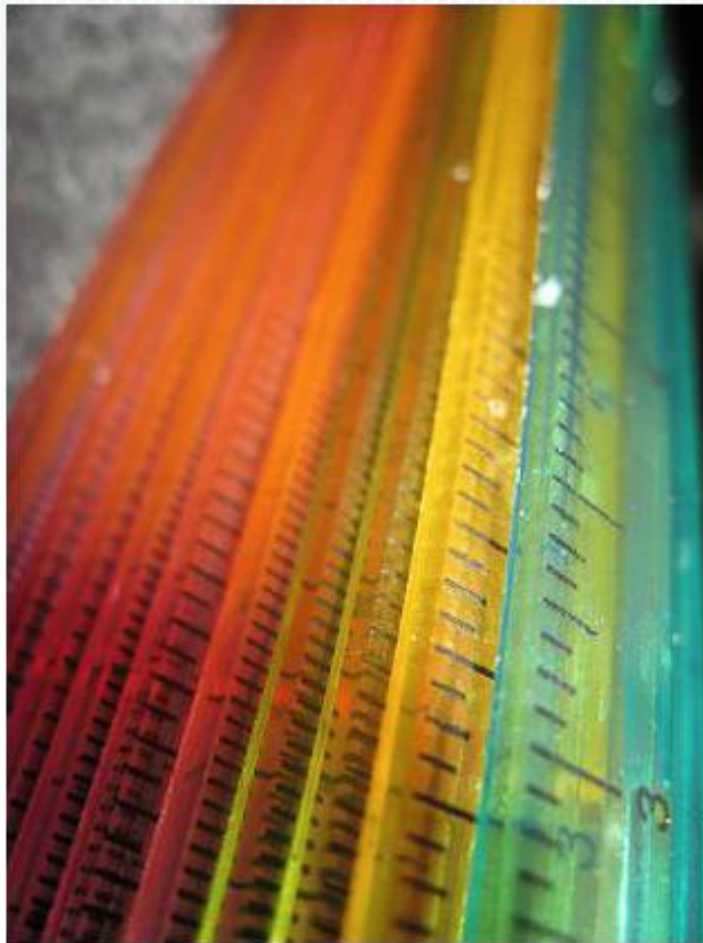


Reciprocal and multilevel relationships

- Psychophysiology
- Psychoneuroimmunology
- Neurosciences
 - Behavioral, cognitive, social, affective, & economic
- Behavior genetics
- Sociogenomics
- Biosocial surveys



Basic BSSR: Methodology & Measurement



- Research design
- Data collection
- Measurement
- Data analysis
- Development of research tools, infrastructure, and data resources
- Modeling
- Development and testing of theory



Strategic Planning as a Public Partnership



OPPNET Basic Behavioral & Social Science
Opportunity Network

Expanding Opportunities in Basic Behavioral and Social Science Research

A meeting on NIH's Basic Behavioral and Social Science Opportunity Network

Free Registration

Thursday-Friday, October 28-29, 2010

Hyatt Regency Washington on Capitol Hill

400 New Jersey Avenue, NW

Washington, DC 20001



OppNet Public Meeting: Methodological Approach

- **Brainstorming and synthesis sessions**
 - Brainstorm and synthesize ideas
- **Plenary sessions**
 - Share ideas from brainstorming sessions among convened body
- **Panel discussions**
 - Obtain commentaries on shared ideas
- **Networking session**
 - Facilitate exchange of ideas and opportunities for collaboration
- **Public comment session**
 - Forum to share ideas widely with convened body



Scientific Input Requested

- Emerging scientific themes:

- Day 1 Focus

- Cognition and emotion
- Culture and health
- Decision-making
- Development over the life-course
- Gene by environment interactions

- Cross-cutting themes:

- Day 2 Focus

- Translation of b-BSSR
- Model animals and human applications
- Neuroscience approaches
- 21st century transdisciplinary approaches



Orientation to Brainstorming Sessions

- What is the state of the field?
 - Where is the research now?
 - Where does the research need to go?
- Are there recent seminal advances in this field that present new opportunities?



Brainstorming Scientific Opportunities

- What are the critical scientific questions that remain unanswered?
- Are there new approaches researchers can use? Or, is there a need for new approaches?
- Are there technological/conceptual/theoretical barriers that are limiting progress?
- Are there approaches/technologies/models with great potential that are not currently being used?
- Can research in this field benefit from expertise from multiple disciplines or cross-disciplinary approaches?



Synthesis of Ideas

- Challenge
 - What basic BSSR challenge needs to be addressed?
- Opportunity
 - Why is this opportunity timely?
 - Why this approach?
 - Why now?
- What does this concept provide that is lacking or needed to advance the field?
 - How will this initiative advance b-BSSR?



Acknowledgments

- William “Bill” Elwood, PhD
- Angela Farris
- Lawrence Tabak, PhD
- Raynard Kington, MD, PhD, MBA
- Jeremy Berg, PhD
- Richard Hodes, MD
- OppNet Public Meeting Working Group
- OppNet Coordinating Committee
- OppNet Coordinating Committee Executive Team
- NIH Friends and Supporters of OppNet
- OppNet Steering Committee
- OppNet Stakeholders



Participating NIH Institutes, Centers, and Offices

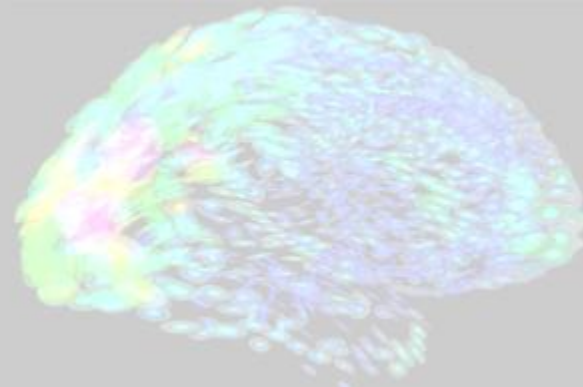
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Questions

