This webinar is being recorded.

Q&A Webinar

June 22, 2022 @ 3:00 PM EDT

Please submit your questions in the "Q&A" box

(scientific inquiries will not be discussed)

National Institutes of Health
Office of Strategic Coordination - The Common Fund

commonfund.nih.gov/pioneer
PioneerAwards@mail.nih.gov

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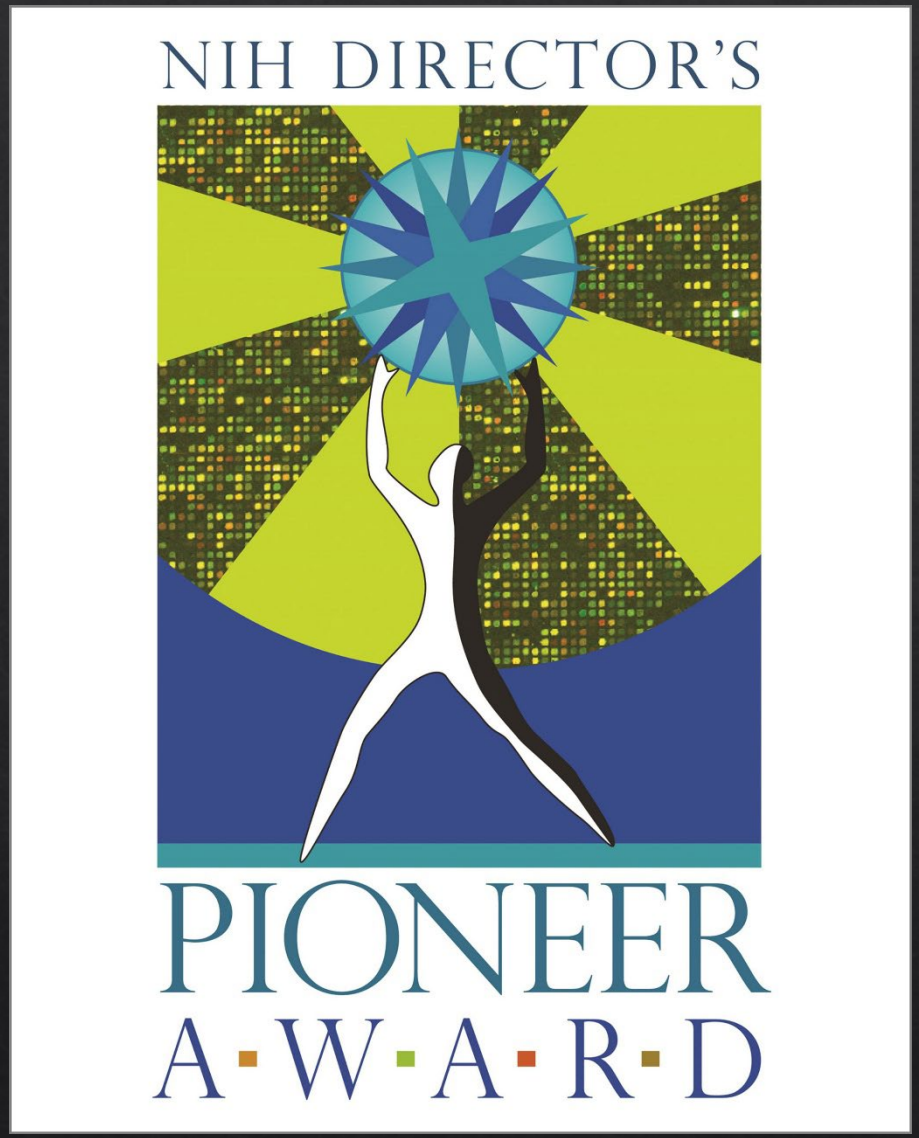
- Submit questions in the "Q&A" box
- Scientific or situationally specific questions will not be discussed (email us)
- For additional questions, contact us at PioneerAwards@mail.nih.gov
- Webinar recording & slides will be posted on website at commonfund.nih.gov/pioneer
- For more application guidance, see our Application & Award Guide on website (includes example applications)



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Panelists

Ravi Basavappa, Ph.D.

Program Leader
Office of the Director

Becky Miller, Ph.D.

Program Officer
Office of the Director

Trish Labosky, Ph.D.

Program Leader
Office of the Director

James Mack, Ph.D.

Branch Chief
Center for Scientific Review

Ellie Murcia, M.Ed.

Program Specialist
Office of the Director

Common Fund Programs

- 4D Nucleome (4DN)
- Acute to Chronic Pain Signatures (A2CPS)
- Bridge to Artificial Intelligence (Bridge2AI)
- Cellular Senescence Network (SenNet)
- Enhancing the Diversity of the NIH-Funded Workforce (DPC/BUILD)
- Extracellular RNA Communication (exRNA)
- Faculty Institutional Recruitment for Sustainable Transformation (FIRST)
- Gabriella Miller Kids First
- Global Health
- Glycoscience
- Harnessing Data Science for Health Discovery and Innovation in Africa (DS-I Africa)
- HCS Research Collaboratory
- High-Risk, High-Reward Research Program
  - Pioneer Award
  - New Innovator Award
  - Transformative Research Award
  - Early Independence Award
- Human BioMolecular Atlas Program (HuBMAP)
- Illuminating the Druggable Genome (IDG)
- Knockout Mouse Phenotyping (KOMP)
- Library of Integrated Network-Based Cellular Signatures (LINCS)
- Metabolomics
- Molecular Transducers of Physical Activity Consortium (MoTrPAC)
- *Nutrition for Precision Health*, powered by *All of Us* Research Program
- Somatic Cell Genome Editing (SCGE)
- Somatic Mosaicism Across Human Tissues (SMaHT)
- Stimulating Peripheral Activity to Relieve Conditions (SPARC)
- Transformative High Resolution Cryo-Electron Microscopy (CryoEM)
- Transformative Research to Address Health Disparities and Advance Health Equity
- Undiagnosed Diseases Network (UDN)

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CF programs may be useful for your research: FOAs, access to high-end instruments, databases, reagents, protocols, ...

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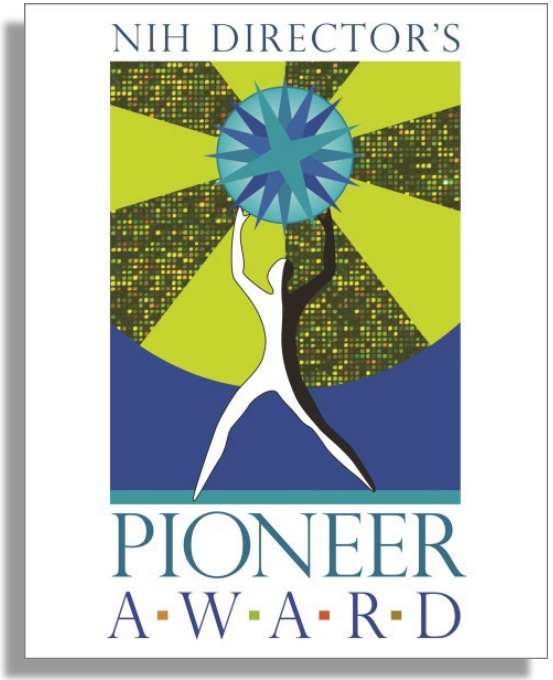
High-Risk, High-Reward Research Program

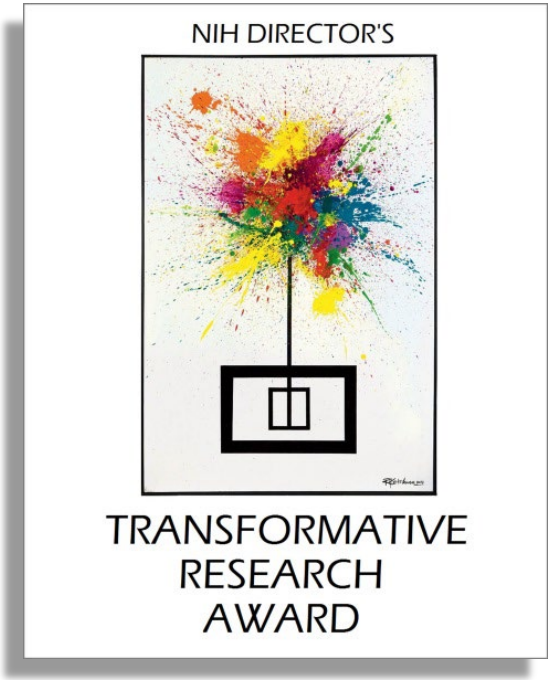
Supporting outstanding scientists at all career stages proposing high-risk, high-impact research

High-Risk, High-Reward Research Program

Annual funding opportunities

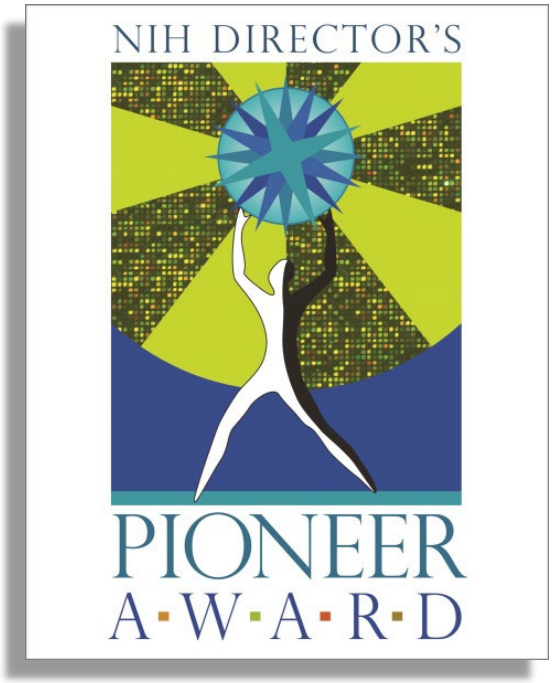
High-Risk, High-Reward Research Program

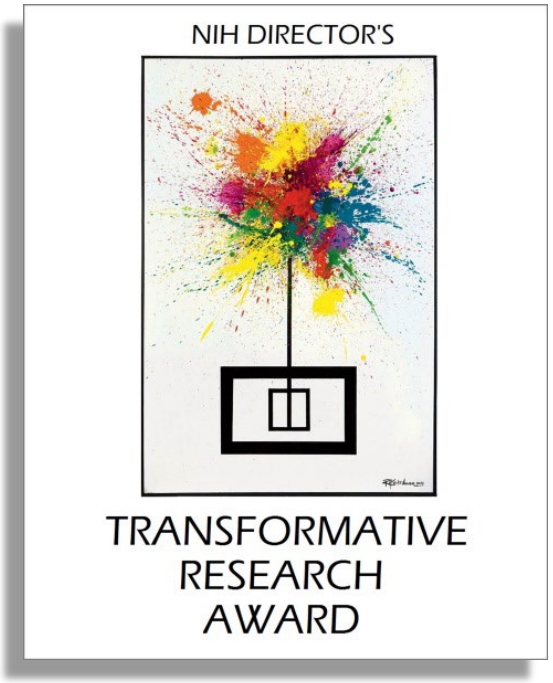




High-risk, high-impact ideas

High-Risk, High-Reward Research Program





No preliminary data or detailed experimental plan required

High-Risk, High-Reward Research Program

Any topic relevant to NIH mission welcome

Behavioral, social, biomedical, applied, and formal sciences,
and basic, translational, or clinical research

High-Risk, High-Reward Research Program

Encourage applications from investigators with diverse backgrounds and from the full spectrum of eligible institutions

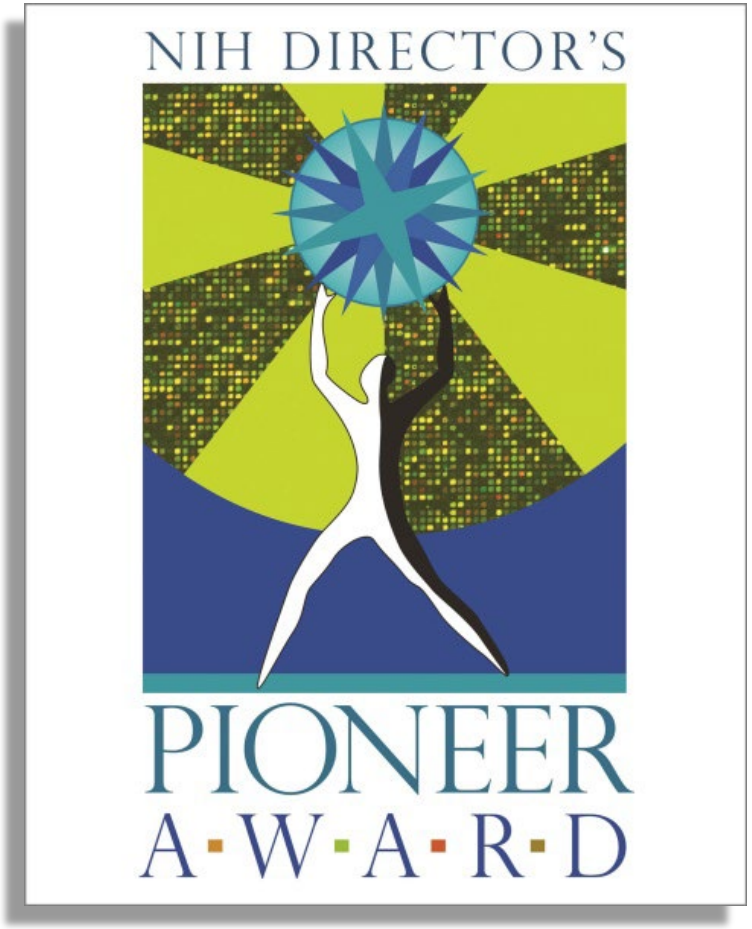
HRHR Working Group

Chair
James Anderson (OD)

Program Leader
Ravi Basavappa (OD)

Members
Kristin Abraham (NIDDK)
Hugh Auchincloss (NIAID)
Abraham Bautista (NIAAA)
Sangeeta Bhargava (NEI)
Gene Carstea (CSR)
Robert Carter (NIAMS)
Jennifer Collins (NIEHS)
Christine Colvis (NCATS)
Emmeline Edwards (NCCIH)
Zeynep Erim (NIBIB)
Rene Etcheberrigaray (NIA)
Nancy Freeman (NIDCD)
Dana Greene-Schloesser (OD)
Jane Hettinger (NINDS)
Gabriel Hidalgo (NIDCR)
Ray Jacobson (CSR)
Flora Katz (FIC)
Anthony Kirilusha (NIAMS)
Susan Koester (NIMH)
Trish Labosky (OD)
James Li (CSR)
Roger Little (NIDA)
James Mack (CSR)
Becky Miller (OD)
Brett Miller (NICHD)
Daniel Miller (NINDS)
David Miller (NCI)
Michael Morse (OD)
Ellie Murcia (OD)
Imoh Okon (CSR)
Richard Palmer (NLM)
Steven Pittenger (NCATS)
Srikanth Ranganathan (CSR)
Diana Rutberg (NIDCR)
Suzanne Ryan (CSR)
John Satterlee (NIDA)
Carol Shreffler (NIEHS)
Lillian Shum (NIDCR)
Darren Sledjeski (NIGMS)
Heidi Sofia (NHGRI)
Barbara Sorkin (OD)
Nathaniel Stinson (NIMHD)
Stephanie Webb (NHLBI)
Elizabeth Wilder (OD)

High-Risk, High-Reward Research Program



Supports individual scientists with outstanding records of creativity proposing pioneering approaches to major challenges in biomedical and behavioral research

- Started in 2004
- Open to all career stages
- Must be new research direction
- Requires 3 letters of reference
- Commit major portion of research effort (more than 51% for first three years)
- Awards of $700,000 per year for 5 years
- Uses DP1 activity code

Pioneer Application

	R01	DP1
Specific Aims page	Required	Do not use
Research Strategy	12 pages including detailed experimental plan and preliminary data	3-5 page Essay (see later slide for more information)
Biosketch	For all Senior/Key Personnel	For PI only
Bibliography	Required	Do not use; include essential references in Essay
Budget	Details required, esp. for >$250k direct cost	No detailed budget accepted (indicate only $3.5M)
Letters of support	Encouraged	Not allowed
Research Effort	Depends on project	At least 51% for first 3 years
Letters of Reference	Not allowed	3 required

Pioneer Application

Unless specifically directed in the FOA, follow the instructions in the SF424 application guide.

This means that, if appropriate, complete the vertebrate animals section, human subjects section, authentication of key biological and/or chemical resources, …

Complete as best as you can, reviewers will keep in mind that you may have not worked out all the details yet.

Pioneer Application

In 5 pages, use the following headings or subsections:

- ***Project science areas*** – 1 digit code and abbreviation for primary and secondary areas
- ***Project title*** – descriptive title of proposed project
- ***Project Description*** – Describe scientific importance of topic; overall innovative approach to be taken; preliminary data not required, but accepted; state that to comply with the FOA, a detailed experimental plan and extensive are not being provided; however, provide sufficient evidence that proposal has been deeply considered and will be pursued in a robust and rigorous manner
- ***PI's Innovativeness*** – Provide evidence of a history of high innovation
- ***Change in research direction*** – Explain how proposed project is a change in research direction
- ***Suitability for Pioneer Award program*** – Describe why proposal is "HRHR" rather than traditional
- ***Research effort commitment*** – State will commit at least 51% research effort toward project
- ***Bibliography/citations*** – Not required, but encouraged to include critical citations; may be in an abbreviated form as long as identifier is unique

Pioneer Research Strategy Essay

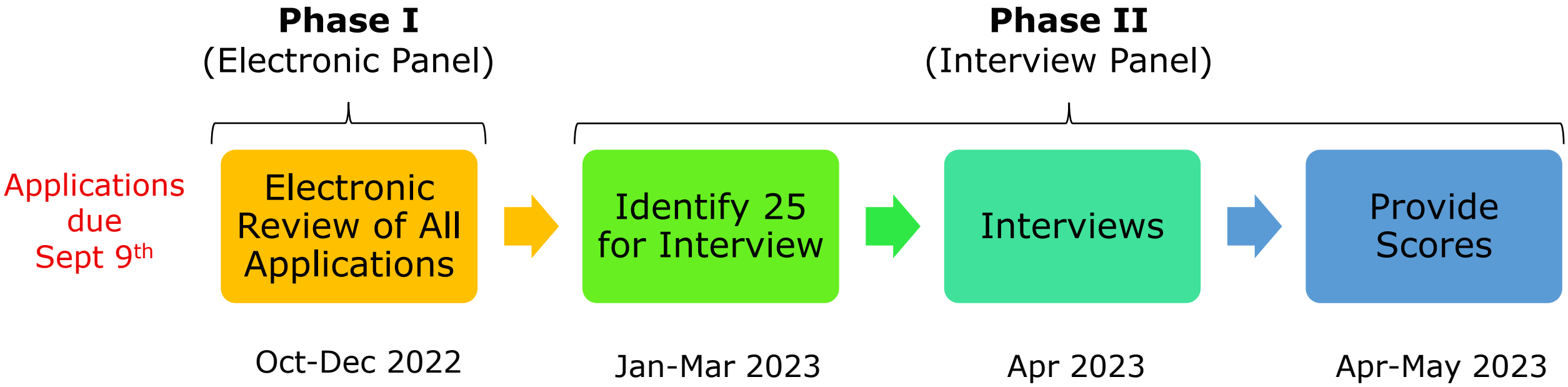
Points to consider:

- Given review process used, be sure that what you write can be easily appreciated by people well outside the field for exceptional innovation and potential for unusually broad impact
- May be helpful to begin with a description of the landscape of the field and current state-of-the-art or boundaries; provide proper context for proposal and an in that context why what you are proposing is so innovative and potentially impactful
- Ease the reader into the jargon of the field
- Though no data or detailed experimental plan are required, convince the reviewer that you have thought deeply about the project – identify risky aspects, how they will be mitigated, alternate approaches
- Also, convince the reviewer that the research will be performed in a robust and rigorous manner – validate new approaches, provide estimates of numbers of human or animal subjects (if used) and why, include that sex will be considered as a biological variable (if appropriate)

Pioneer Review Process

R01	Pioneer Award
Single panel	2 phase review (2 panels) and includes in-person interviews
Topic experts	Reviewers not assigned by specific topic expertise
Consider: • Significance/impact • Innovation • Approach • Investigator • Environment	Consider: • Innovation/impact • Investigator • Change in Research Direction and Risk
Focus tends to be on approach and feasibility	Focus on investigator

Pioneer Review Process



Applicants Declare Research Plan to Be in One of These 9 Scientific Areas

1. Behavioral and Social Sciences
2. Chemical Biology
3. Clinical and Translational Research
4. Immunology
5. Instrumentation and Engineering
6. Molecular and Cellular Biology
7. Neuroscience
8. High Throughput and Integrative Biology
9. Quantitative and Computational Biology

Phase I Review

- All the applications will be reviewed in one Special Emphasis Panel
- All CSR IRGs (Integrated Review Groups) will participate in assigning mail reviewers to applications based on appropriate biomedical and biobehavioral science areas
- Each application is assigned to 3 mail reviewers
  - 2 reviewers have expertise in broad area of the application
  - 1 reviewer has expertise outside the area

Stage 1 Reviewers Also Declare One or More Scientific Areas

1. Behavioral and Social Sciences
2. Chemical Biology
3. Clinical and Translational Research
4. Immunology
5. Instrumentation and Engineering
6. Molecular and Cellular Biology
7. Neuroscience
8. High Throughput and Integrative Biology
9. Quantitative and Computational Biology

Philosophy Adopted by Pioneer Reviewers

- Think of yourself as a prospector scouring for exciting nascent ideas that explore fundamental mechanisms, probing technologies, or enabling methodologies in basic, clinical and applied biomedical sciences.
- In prospecting, be driven far more by broad recognition of important problems and novel – potentially path-breaking - approaches to address them than by the more traditional narrow focus of expert assessment of feasibility. Avoid picking technical nits as long as violation of laws of nature are not proposed!
- *Do not reflexively penalize for riskiness* in propositions, especially if the payoff for success would be major.
- Read the research plans with the spirit that you would bring to a *Scientific American* article; they were *written* that way, for broadly informed scientific audiences.

Scoring & Critiques

- Assign an overall impact score (1-9, 1 being the best)
- Use the 1 to 9 scale to score each of a streamlined set of three criteria:
  - Significance
  - Investigator
  - Suitability for Pioneer Award
- Emphasis will be on "investigator" and "innovation" and potential for broad impact and suitability for the Pioneer Award

Interview Panel

- A group of eminent scientists known for their broad scientific perspective will conduct a second phase review.
- Informed by first stage review results, Interview Panel selects ~25 applicants that they deem to be the most "pioneering" for interviews in Bethesda, MD

Interview Considerations

- Is the Principal Investigator an individual with a track record of exceptional scientific creativity?
- Is the proposed project bold with the potential for broad impact?
- Does the proposal represent the extent of departure for the investigator and inherent risk sought in the Pioneer Award versus conventional NIH funding mechanisms?

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Eligibility

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Application & Submission

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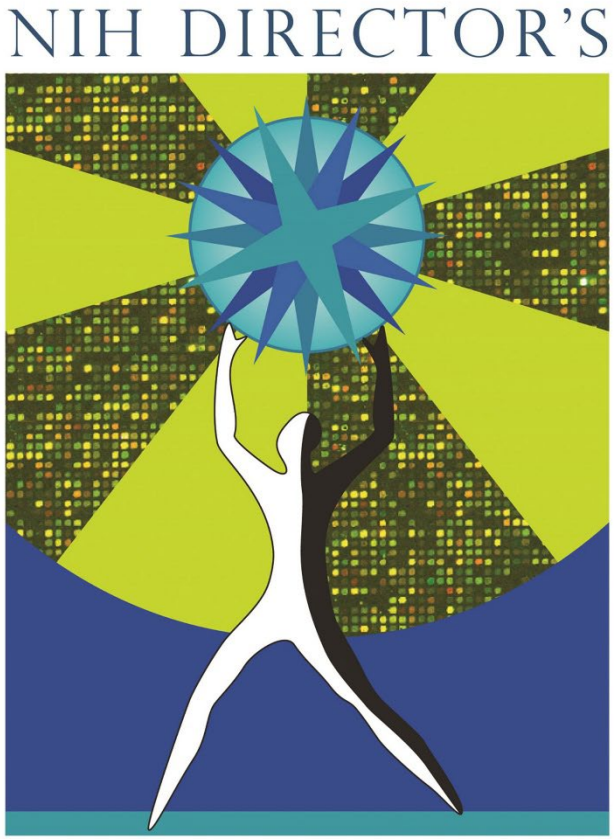
Budget



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Review

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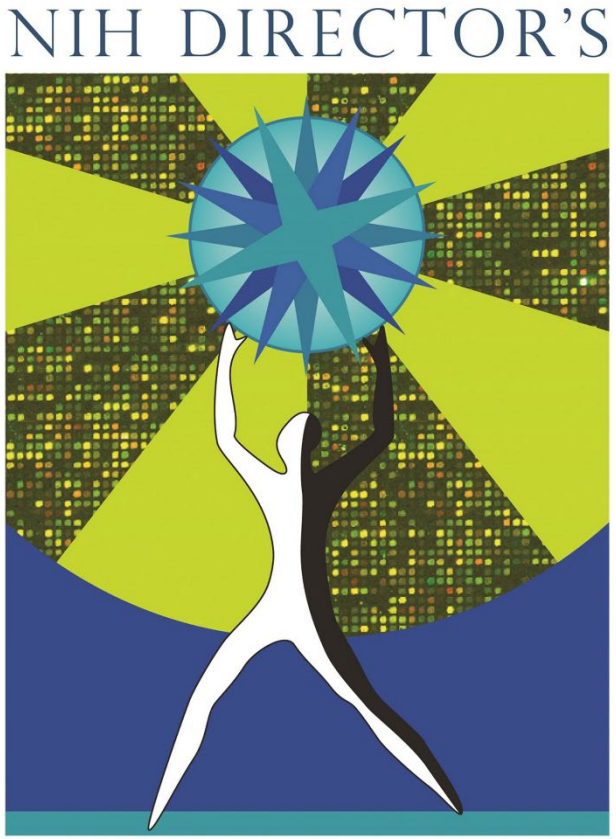

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