Update from NASA Astrobiology Program

AbSciCon June, 2019

Mary Voytek
Lindsay Hays
Mitch Schulte
Michael New (Emeritus)
Moved from Step 1/Step 2 to NOI/Step 2, due date from October to May

156 Proposals submitted
  • 24 proposals were selected for funding
  • 21 fully selected
  • 1 partially funded
  • 1 conditionally funded (1-year proof-of-concept)
  • 1 funded through general R&A funds

Selection rate is 15.3%

ROSES 19: Shutdown moved due date
  • ROSES-19 due date 6/13 – received 158 proposals
Distribution of Funded Tasks

Percentages based on award amounts. Abbreviations are: BLE Biosignatures and Life Elsewhere; EAL Evolution of Advanced Life; EEL Early Evolution of Life and the Biosphere; LECM Large scale environmental change and Macro-evolution; PE Prebiotic Evolution.

Program currently funds 8 NESSF awards, NESSF will be replaced by Future Investigators in NASA Earth and Space Science and Technology (FINESST), and 1 Early Career Fellow who has received start-up funding (note: no ECF program in ROSES-17 or -18)
Habitable Worlds – ROSES 17/18

ROSES-18
Step 1 due 11/15/18
Step 2 originally due 1/17/19, moved to 3/29/19 due to shutdown
  • ROSES-19 NOI due 11/15/19, full proposals due 1/17/20

ROSES-17
46 Proposals submitted
  • 8 proposals were selected for funding
  • 7 fully selected
  • 1 partially funded
  • 1 funded by HPD

Selection rate is 17.4%

Currently: 21 Active grants, 3 active NESSF awards. NESSF will be replaced by Future Investigators in NASA Earth and Space Science and Technology (FINESST)
History of Habitable Worlds NRAs

Graph showing the number of proposals and selection rate over years:
- **Number of Proposals**:
  - ROSES-2014: ~50
  - ROSES-2015: ~60
  - ROSES-2016: ~70
  - ROSES-2017: ~60

- **Selection Rate**:
  - ROSES-2014: ~0.25
  - ROSES-2015: ~0.20
  - ROSES-2016: ~0.25
  - ROSES-2017: ~0.20
ROSES-18
PSTAR was not solicited due to lack of funding

ROSES-17
61 Step-1 Proposals submitted (11 discouraged)
47 Step-2 Proposals submitted
- 6 proposals were selected for funding
- 4 related to Mars exploration
- 2 related to Icy/Ocean Worlds exploration
- 1 selectable for the Mars Exploration Program

Selection rate is 12.8%

Currently: 17 Active grants, 1 active NESSF awards. NESSF will be replaced by Future Investigators in NASA Earth and Space Science and Technology (FINESST)
Planetary Protection Research – ROSES 17

ROSES-17 selections made in September 2018

Starting on bi-annual trend with May due date
  • ROSES-18 NOI due 4/12/19, full proposals due 5/10/19
  • ROSES-19 will not be solicited; ROSES-20 due May 2020

ROSES-17
14 Proposals submitted
  • 5 proposals were selected for funding
  • 2 fully selected
  • 3 partially funded (1 funded by PDART)

Selection rate is **35.7%**

Currently: PPR funds 1 NESSF awards. NESSF will be replaced by Future Investigators in NASA Earth and Space Science and Technology (FINESST)
History of PPR NRAs

Solicitation Year

Number of Proposals

Selection Rate


0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5

0 5 10 15 20 25
C.XX Interdisciplinary Consortia for Astrobiology Research (ICAR)

- Proposals should describe an interdisciplinary approach to a single, compelling question in astrobiology, and may address a single Science Strategy goal or several Science Strategy goals.
- A Step-1 proposal is required and the Step-1 proposal is binding.
- Team size and resources requested should be appropriate to the scale of the proposed research.
- There is no ideal size of an ICAR Team, but the scope of the research and the resources requested should exceed those typically considered in a Research Opportunities in Space and Earth Sciences (ROSES) program element (e.g., Astrobiology: Exobiology, Astrobiology: Habitable Worlds).
- Award sizes are expected to fall within $600- $1,000 K per year for five years.
- Proposals to this program element that are awarded funding will become members of the newly established Astrobiology Program Research Coordination Networks that are relevant to their selected research.
The areas of research emphasis and the RCNs covered in this solicitation are as follows:

1. The Nexus for Exoplanet System Science (NExSS) investigates the diversity of exoplanets and to learn how their history, geology, and climate interact to create the conditions for life.

2. Prebiotic Chemistry and Early Earth Environments (PCE3) investigates the delivery, synthesis, and fate of small molecules under the conditions of the Early Earth, and the subsequent formation of proto-biological molecules and pathways that lead to systems harboring the potential for life.

3. From Early Cells to Multicellularity (FECM) investigates the earliest biological processes and the evolution of life on Earth into more complex organisms.
C.XX Interdisciplinary Consortia for Astrobiology Research (ICAR)

Tentative Schedule- UPDATE

ROSES Announcement: October 2019
Step -1 Proposals Due: December 2019
Step -2 Proposals Due: March 2020
This document contains answers to Frequently Asked Questions about the Astrobiology Program organized by topical areas:

- NASA Astrobiology Program (goals, 2015 Strategy, history, contact)
- Funding Astrobiology Research (ICAR, Workshops, Early Career, topic-specific programs)
- Coordinating Astrobiology Research (RCNs: what, who, how)
In 2000, the NASA Astrobiology Institute began participating in the NASA Postdoctoral Program, allowing the NAI principal investigators to identify members of their teams who could serve as advisors.

In 2010, the eligible advisors were expanded to include principal investigators selected for grants from the Astrobiology Program.

Since 2000, 118 Ph.D. scientists and engineers have been supported to conduct astrobiology research within the astrobiology program.
A Research Coordination Network (RCN) is a virtual collaboration structure that helps support groups of investigators to communicate and coordinate their research across disciplinary, organizational, divisional, and geographic boundaries.
Astrobiology Research Coordination Networks

NExSS
Nexus for Exoplanet System Science

N-FoLD
Network for Life Detection

Prebiotic Chemistry and Early Earth Environments

From Early Cells to Multicellularity

NOW
Network for Ocean Worlds
Questions?