Opportunity Title: Exploration of Meteoritic Peptides and their Relevance for the Origin of Life
Opportunity Reference Code: 0211-NPP-MAR26-GSFC-Astrobio

Organization National Aeronautics and Space Administration (NASA)

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How to Apply All applications must be submitted in Zintellect

Please visit the NASA Postdoctoral Program website for application instructions and requirements: How to Apply | NASA Postdoctoral Program (orau.org)

A complete application to the NASA Postdoctoral Program includes:

1. Research proposal
2. Three letters of recommendation
3. Official doctoral transcript documents

Application Deadline 3/1/2026 6:00:59 PM Eastern Time Zone

Description **About the NASA Postdoctoral Program**

The NASA Postdoctoral Program (NPP) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

Description:

The exogenous delivery of prebiotic organic compounds to Earth likely played a role in the chemical evolution that gave rise to the origin of life. Meteorite studies have demonstrated that some of the chemical building blocks of life may have been delivered to the primordial Earth by small solar system bodies. While simple organic monomers, such as amino acids, have been heavily studied in the meteorite literature, the polymerization products of these compounds, namely peptides, have been understudied in the literature.

Exploring the peptide content of meteorites will better constrain the extent to which small solar system bodies could have delivered larger, more complex biomolecules to the early Earth. In turn, such insights will shed new light on the possibility that meteorites may have expanded the prebiotic chemical inventory en route to the formation of primitive proteins.

To address this issue, **this NPP opportunity will focus on the development of new, sensitive analytical tools to detect and quantify a wide array of abiotic peptides. These techniques will then be used to examine the peptide chemical space in a suite of meteorites.** The implications of this research will be directly relevant to the soluble organic analyses of samples returned by space flight missions, such as the NASA OSIRIS-REx and Mars Sample Return missions, as well as the JAXA

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Hayabusa2 and MMX missions.

Applicants with research experience in the below disciplines and techniques are strongly encouraged to apply:

1. **Astrobiology or a related field (e.g., origins of life, prebiotic chemistry, etc.)**
2. **Analytical chemistry**
3. **Chromatography and mass spectrometry**
4. **Contamination control of precious samples**

Location:
Goddard Space Flight Center
Greenbelt, Maryland

Field of Science: Astrobiology

Advisors:
Eric Parker
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301-614-5107

Applications with citizens from Designated Countries will not be accepted at this time, unless they are Legal Permanent Residents of the United States. A complete list of Designated Countries can be found at: https://www.nasa.gov/oiir/export-control.

Eligibility is currently open to:

- U.S. Citizens;
- U.S. Lawful Permanent Residents (LPR);
- Foreign Nationals eligible for an Exchange Visitor J-1 visa status; and,
- Applicants for LPR, asylees, or refugees in the U.S. at the time of application with 1) a valid EAD card and 2) I-485 or I-589 forms in pending status

Questions about this opportunity? Please email npp@orau.org

Point of Contact Mikeala

Eligibility
- **Degree:** Doctoral Degree.

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Requirements