

Opportunity Title: Solar System Exploration: Exogenous Organics for the Origin

and Early Evolution of Life

Opportunity Reference Code: 0158-NPP-NOV23-GSFC-Astrobio

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0158-NPP-NOV23-GSFC-Astrobio

Application Deadline 11/1/2023 6:00:59 PM Eastern Time Zone

Description The origin of life on Earth (and possibly elsewhere) was either influenced by or a product of organic compounds from space. These vital compounds were delivered by comets, meteorites, and IDPs to the early Earth. Such material is delivered today. Our goal is to analyze the organics in such samples at unprecedented sensitivities. Our focus is on small organic molecules, such as amino acids, hydroxy acids, amines, purines, pyrimidines, pyridines, etc. We typically use different forms of chromatography coupled with various types of mass spectrometry to understand the structural, enantiomeric, and stable isotopic distribution of these species across a range of extraterrestrial materials—principally meteorites. We furthermore closely collaborate with field work and other laboratories to perform experiments to explore the origin of these compounds under plausible astrophysical conditions. Principally we study aqueous alteration, energetically processed ices, gas-grain reactions, and terrestrial analogs of Mars.

Location:

Goddard Space Flight Center Greenbelt, Maryland

Field of Science: Astrobiology

Advisors:

Jason P Dworkin Jason.P.Dworkin@nasa.gov +1 (301) 286-8631

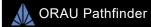
Jamie Elsila Cook Jamie.E.Cook@nasa.gov 301-286-9160

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







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pending status

Eligibility • Degree: Doctoral Degree.

Requirements

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