

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



Whether you are just starting your career or already at a senior level, ORAU offers internships, fellowships, research opportunities, and contract positions that can provide you with invaluable experience. Download the ORAU Pathfinder mobile app and find the right opportunity to propel you along your career path!

Visit ORAU Pathfinder 



Opportunity Title: Solar System Exploration: Exogenous Organics for the Origin and Early Evolution of Life

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

pending status

Eligibility Requirements • **Degree:** Doctoral Degree.