



U.S. ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND
PRESENTS

2022 Spring Research Festival Keynote Presentation



April 27, 2022
10:00 am - 12:00 pm

Alvin Smith, PhD, PMP

Manager

Planetary Protection Center of Excellence
Jet Propulsion Laboratory
National Aeronautics and Space
Administration

**Considerations for Backward
Planetary Protection in Mars
Sample Return Planning: Biological
Safety from Flight to Facilities**

Dr. Alvin L. Smith is Jet Propulsion Laboratory's Backward Planetary Protection Lead for Mars Sample Return and Manager for the JPL Planetary Protection Center of Excellence (CoE). In these roles he provides scientific oversight to several research & development projects to meet stringent engineering requirements for planetary protection, as well as program management for training programs, university outreach, and interagency collaborations. His contributions have been instrumental in planning flight implementation for Mars 2020 (Perseverance rover), Europa Clipper, and the Mars Sample Return campaign, to include planning for the Mars Sample Receiving Facility. Alvin joined JPL after spending over 20 years as a researcher in high containment laboratories and as a consultant as a biodefense subject matter expert (SME) and focusing on the development of medical countermeasures and biodetection capabilities for HIV, human smallpox, Ebola, and other potential biological weapons. Alvin's expertise in chemical, biological, radiological, and nuclear (CBRN) threats has been leveraged by numerous government agencies including Congress, Department of Defense, Department of Homeland Security, Health and Human Services, and the intelligence community.

Alvin holds a doctorate in Medical Microbiology from Howard University and a bachelor's degree in Biology from Talladega College. He is also a certified Project Management Professional.



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