

Q&A

- **U.S. EPA:** Based on the Martian soil, is it possible to use unique archaea as biological indicators?
 - **J. Nick Benardini:** We could consider it from a resource perspective; we have not added those to the list at this time. We are thinking about biological analogues at the surface of Mars, but also in dust kicked up in the air.
- **U.S. EPA:** What about other extremophiles?
 - **J. Nick Benardini:** We have pulled a lot of data from extremophiles in acid mine drainage, hydrothermal vents, and other extreme environments.
- **U.S. EPA:** Is there any value for looking at cold microbiology? And have you done this in the past?
 - **J. Nick Benardini:** We are engaging in some cold microbiology research at Penn State University. We are looking at testing for organisms in these types of environments as well. We have been focusing on the heat portion from a killing modality because it is good for sterilization.
- **UNC Chapel Hill:** Are you looking at protozoa or viruses in regard to host relationships?
 - **J. Nick Benardini:** We have a whole risk assessment portfolio looking at the probabilities of potential biogenics, but also for host organisms and infectious potential.