NIST BMD/IBBR Seminar: “New Technologies to Study Archaeal DNA Replication and Repair”

Event Type: IBBR Seminar Series
Contact Person: Nicole Tenly
Host: Zvi Kelman

Event Info
Date: Feb 9 2021 - 11:00am to 12:00pm
Location: Virtual

Details
Speaker/Presenter: Kelly Zatopek
Speaker Affiliation: New England Biolabs
Event Description:
DNA replication and repair are essential biological processes needed for the survival of all organisms across all domains of life. Interestingly, a variety of archaeal species thrive in extreme environments, including high temperature, high salt, and low pH, and must maintain their genome under such extremes. In this talk I will present two technologies developed and utilized by our lab at New England Biolabs to study DNA replication and repair in hyperthermophilic Archaea. The first, RADAR-seq: RAre DAmage and Repair Sequencing, is a Next Generation Sequencing technology that identifies and detects DNA damage on a genome-wide scale. RADAR-seq can be adapted to study a variety of biological processes including DNA replication, Restriction-Modification systems, and CRISPR-Cas. The second technology is a high-throughput functional genomics screen to identify novel DNA repair and replication enzymes from hyperthermophilic Archaea. Likewise, the functional genomics screen can be adopted to identify a wide-variety of novel enzymes from single and metagenomic samples.

Meeting link:
https://umd.webex.com/umd/j.php?MTID=m1a492c223973a0e8d39a1c4a306b5a45

Meeting number:
120 051 1478

Password:

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