

Genome Science and Leadership Initiative (GSLI)

Fort Lewis College, Durango, CO

May 19 – 25, 2019

Presented by: Jennifer Lowell, *Fort Lewis College*; Joslynn Lee, *Howard Hughes Medical Institute*; Larry Hunter, *University of Colorado, Denver*



WORKSHOP The goal of the workshop is to introduce participants to the connection and importance of the natural world to molecular biology and genomics. Participants will gain hands-on laboratory and computational experience to explore the presence of bacteria in environmental samples affected by mining contamination downstream of the Gold King Mine in Southwest Colorado. This experience will introduce the latest DNA technologies, current computational biology tools and data science methods to investigate the hidden world of microbial communities.

ELIGIBILITY Applicants must be a current undergraduate student majoring in science or science education, and/or be currently in a science internship

and have a GPA of 2.5 or above and provide a recommendation from a member of the science faculty (or staff). Students from groups underrepresented in science are encouraged to apply. American Indians and Alaska Natives students will be given priority but no one will be excluded from consideration based on their ethnic background.

Tentative schedule:

March 2019 - Sample Collection in Colorado and New Mexico (optional)

Sun May 19 - Arrive at Fort Lewis College campus, Durango, CO

Mon May 20 - Visit waterways of Southwest Colorado and meet local scientists

Tues May 21 - Molecular Biology: Perform sample preparation of environmental samples

Wed May 22 - Introduction to Bioinformatics: 16S rRNA data processing of environmental samples

Thurs May 23 - Data Science: Understanding microbial communities through statistics and predictive modeling

Fri May 24 - Data Science: Explore the microbial co-occurrence patterns of environmental samples

Sat May 25 - Depart from Fort Lewis College campus, Durango, CO

See highlights from the workshop program from 2018: <http://bit.ly/gсли2018-overview>

APPLICATION

The following documents must be complete:

1. Fill out the application online: (<http://bit.ly/GSLI-FLC>)
2. Resume and most recent college transcript(s) (unofficial is acceptable in Word or PDF format)
3. Name / phone number / email of a science faculty or science staff member who will serve as a reference.

Applications will be considered starting February 8, 2019 and and resume and transcripts should be sent by email to: Joslynn Lee (leej2@hhmi.org)

Housing and all meals will be arranged and paid by the workshop. Students will receive stipends for their time. Attendees will be responsible for travel to Fort Lewis College, Durango, CO.

Questions? Contact Joslynn Lee (leej2@hhmi.org)

This workshop is supported by the NIH NLM BIOMEDICAL INFORMATICS TRAINING PROGRAM.