

National Human Genome Research Institute



Short Course
in Genomics

Agenda with Assignments by Day (August 1-5, 2022)

Monday, August 1, 2022

9:00 - 9:30 AM Pacific Time / 12:00 - 12:30 PM Eastern Time

*Welcome and Teacher Introductions (Group 1) - Belen Hurle, Ph.D., Rosann Wise, M.A.
(Group 1 presentation)*

9:30 - 10:30 AM Pacific Time / 12:30 - 1:30 PM Eastern Time

Live Presentation and Q&A: [Eric Green, M.D., Ph.D.](#), Director, National Human Genome Research Institute, National Institutes of Health

"Creating the Fourth Chapter of Human Genomics"

To prepare: visit: <https://www.genome.gov/2020SV> and read the [Action Agenda](#).

10:30 - 10:50 AM Pacific Time / 1:30 - 1:50 PM Eastern Time

Teacher introductions (Group 2 & Group 2 presentation)

10-minute break (10:50 - 11:00 AM Pacific Time / 1:50 - 2:00 PM Eastern Time)

11:00 AM - 12:00 PM Pacific Time / 2:00 - 3:00 PM Eastern Time

Live Presentation and Q&A: [Philip Shaw, B.M. B.Ch., Ph.D.](#)

"ADHD: insights from Neuroimaging and Genomics"

45 min break (12:00 - 12:45 PM Pacific Time / 3:00 - 3:45 PM Eastern Time)

12:45 - 1:00 PM Pacific Time / 3:45 - 4:00 PM Eastern Time

Quick Team Project presentations (Group 3) - Breakout rooms

1:00 - 2:00 PM Pacific Time / 4:00 - 5:00 PM Eastern Time

Live Presentation and Q&A with [Vence Bonham, J.D.](#)

"Enhancing Health Equity: sickle Cell Disease A Case Study "

To prepare, read: [A CRISPR focus on attitudes and beliefs toward somatic genome editing from stakeholders within the sickle cell disease community](#)

Tuesday, August 2, 2022

9:00 - 10:00 AM Pacific Time / 12:00 - 1:00 PM Eastern Time

Daily Check-in, Teacher Introductions (Group 4), and Breakout/Brainstorming (Group 4 presentation)

10:00 - 10:50 AM Pacific Time / 1:00 - 1:50 PM Eastern Time

Live Presentation and Q&A with [Sara Chandros Hull, Ph.D., Mose Herne, M.S., M.P.H](#)

"Grappling with 'Classic' Research Ethics Cases: An Exercise in Humility"

10-minute break (10:50 - 11:00 AM Pacific Time / 1:50 - 2:00 PM Eastern Time)

11:00 AM - 12:00 PM Pacific Time / 2:00- 3:00 PM Eastern Time

Live Q&A with [Shawn Burgess, Ph.D.](#)

"Fundamentals of Gene Editing"

45 min break (12:00 - 12:45 PM Pacific Time / 3:00 - 3:45 PM Eastern Time)

12:45 - 1:00 PM Pacific Time / 3:45 - 4:00 PM Eastern Time

Quick Team Project presentations (Group 5) - Breakout rooms

1:00 - 2:00 PM Pacific Time / 4:00 - 5:00 PM Eastern Time

Live Presentation and Q&A with [Alison Cawood, Ph.D., Smithsonian Environmental Research Center](#)

"Environmental Genomics and Citizen Science"

Wednesday, August 3, 2022

9:00 - 10:50 AM Pacific Time / 12:00 - 1:50 PM Eastern Time

Bioinformatics Workshop with [Jason Williams, Ph.D.](#), Dolan Center, Cold Spring Harbor Laboratory, NY
“[DNA Barcoding](#) – A Simple and Robust Research Experience for Molecular Biology, Bioinformatics, and Biodiversity”

10-minute break (10:50 - 11:00 AM Pacific Time / 1:50 - 2:00 PM Eastern Time)

11:00 - 12:00 PM Pacific Time / 2:00 - 3:00 PM Eastern Time

Live Presentation and Q&A with [Peter McGuire, M.D.](#)
Inborn errors of metabolism: mitochondrial disease

45 min break (12:00 - 12:45 PM Pacific Time / 3:00 - 3:45 PM Eastern Time)

12:45 - 1:00 PM Pacific Time / 3:45 - 4:00 PM Eastern Time

Quick Team Project presentations (Group 6) - Breakout rooms

1:00 - 2:00 PM Pacific Time / 4:00 - 5:00 PM Eastern Time

Clinical Genomics Careers at NHGRI, Panel with [Carolina Montano, M.D., Ph.D.](#);
[Natalie Deutch, M.S., C.G.C.](#) ; [Patrycja Hoffmann M.S., C.R.N.P.](#); [Jameson Floyd, B.S.](#)

BRING YOUR STUDENTS! K9-K16 Student Friendly; NHGRI Summer Program Interns attending

Thursday, August 4, 2022

9:00 - 10:00 AM Pacific Time / 12:00 - 1:00 PM Eastern Time

Daily Check-in, Teacher Introductions (Group 7), and Breakout/Brainstorming (Group 7 presentation)

10:00 - 10:50 AM Pacific Time / 1:00 - 1:50 PM Eastern Time

Live Presentation and Q&A with [Andres Colubri, Ph.D.](#)

"[Operation Outbreak](#): a simulation platform that generates genetic-epidemiologic data for bioinformatics training"

10-minute break (10:50 - 11:00 AM Pacific Time / 1:50 - 2:00 PM Eastern Time)

11:00 AM - 12:00 PM Pacific Time / 2:00- 3:00 PM Eastern Time

Live Presentation and Q&A with [Todd Brown, Ph.D.](#)

"[Operation Outbreak](#) Workshop: School and Classroom Implementation"

45 min break (12:00 - 12:45 PM Pacific Time / 3:00 - 3:45 PM Eastern Time)

12:45 - 1:00 PM Pacific Time / 3:45 - 4:00 PM Eastern Time

Quick Team Project presentations (Group 8) - Breakout rooms

1:00 - 2:00 PM Pacific Time / 4:00 - 5:00 PM Eastern Time

Live, Hands-on demonstration with [Belen Hurle, Ph.D.](#)

"CRISPR Hands-on Demonstration",

BRING YOUR STUDENTS! K6-K16 Student Friendly

Or assemble Kit on your own with the help of this [video](#) recording

2:00 - 2:15 PM Pacific Time / 5:00 - 5:15 PM Eastern

Parting Thoughts: [Larry Brody, Ph.D.](#), [Rosann Wise, M.A.](#), and [Belen Hurle, Ph.D.](#)

Friday, August 5, 2022

OPTIONAL! in-person guided tour program for local participants

["Genome Unlocking Life's Code"](#) Exhibit
Smithsonian's National Museum of Natural History
[Meg Rivers, M.A.](#), Exhibit Curator
[Carla Easter, Ph.D.](#), NMNH Director of Education

On Friday August 5, we will be hosting an optional, in-person, guided visit to the exhibit "Genome: Unlocking Life's Code" at the National Museum of Natural History (12 pm-2pm ET) for local teachers.

The group will meet up with our tour guides at noon in the Constitution Ave lobby at 12 noon ET.

After a short orientation in "[Q?rius?](#)" with the exhibit curator Meg Rivers, we will enjoy a 30-min-long guided tour of the [exhibit](#) with Carla Easter, NMNH Education Director, followed by ~1-h free exploration of the [NMNH museum](#).

Covid protocols permitting, we can consider a late lunch/early happy hour after the visit is concluded.