Annual Meeting Report

2023 NHGRI Research Training and Career Development
April 2–4, 2023

The NHGRI Research Training and Career Development 8th Annual Meeting was held on April 2–4, 2023. To accommodate the ongoing COVID pandemic and maximize participation, the meeting was convened as a hybrid event. The meeting was coordinated by Duke University and held at the Salt Lake City Center in downtown Salt Lake City. Virtual attendees participated via the Attendee Hub, a platform of Cvent (a software company for event management), which allowed virtual attendees to join selected sessions through a password-protected Attendee Website or the Attendee App (available on both Apple and Android devices). All plenary sessions were recorded and are available to meeting registrants.

Each year, the Annual Meeting provides a venue for all trainees supported by NHGRI across the U.S. in the fields of genome sciences, genomic medicine, and the ethical, legal and social implications (ELSI) to present their research and network with other trainees and established researchers. The meeting includes science and career development topics, invited keynote presentations, panel discussions, peer-reviewed platform and poster presentations, breakout sessions, and networking opportunities. In addition, other groups with non-NHGRI trainees engaged in genomic research were invited to attend the meeting

All students and trainees of NHGRI training programs were invited to attend, along with the program directors, program coordinators, NHGRI staff, and NHGRI program advisors. NHGRI students and trainees are supported from Diversity Action Plan (DAP) Programs, Institutional pre- and post-doctoral Training (T32) programs, pre- and post-doctoral Individual Fellowships (F30, F31, and F32), Career Development (K) Awards, and Centers of Excellence in ELSI Research (CEER) training programs. A registration fee of $170 was charged for all attendees. A total of 388 individuals registered for the meeting including 57 DAP Trainees, 173 T32 & RM1 Trainees, 4 Fellowship Awardees, 16 Career Development (K) Awardees, 6 Training Program Staff, 3 Faculty, 5 Invited Speakers and Panelists, 15 NHGRI staff, 14 Training Program Coordinators, 49 Training Program PIs/co-PIs, 3 NHGRI RTEP advisors, 3 Duke staff, and 16 Other, and 2 Not Specified. Of the 388 total meeting registrants, 329 (85%) registered to attend in-person and 59 (15%) registered to attend virtually.

All registered trainees were invited to submit abstracts. Of the 250 trainees who registered for the meeting, a total of 219 abstracts were submitted. Abstracts were organized into one of three focus areas (genome sciences, genomic medicine, and ELSI) and shared with NHGRI staff for final selection for platform presentations and lightning talks. A total of 9 abstracts were selected for a platform presentation and 40 abstracts were selected for a lightning talk. Traditional in-person poster sessions were convened at the meeting for in-person attendees. To enable all attendees to view a trainee's poster, all abstract submitters were asked to submit their abstract and a pdf file of their poster to virtualpostersession.org; virtual attendees were able to include a Zoom link for the virtual poster session.

A post-meeting survey was administered; a separate report on the survey responses will be shared with NHGRI program staff.

DAY ONE (Virtual Attendance: 45)

Welcome and Opening Remarks: Dr. Susanne Haga, Duke University

Keynote Speaker #1: Dr. Daphne Martschenko, PhD, Stanford University
***[Introduced by Dr**. James Tabery, Professor, University of Utah]*
Talk title: "Behind the Genes: Understanding the Social in Social and Behavioral Genomics"

Dr. Martschenko earned an MPhil from the University of Cambridge in Politics, Development, and Democratic Education and a Ph.D. in Education, also from the University of Cambridge. Dr Martschenko was an NHGRI Postdoctoral Research Fellow at Stanford before being appointed to Assistant Professor at Stanford. Her scholarship identifies novel ways to examine and enhance the conduct, translation, and interpretation of human genetics, with a focus on social and behavioral genomics. Dr. Martschenko aims to promote socially responsible research and communication of human genetics/genomics and public engagement with the field.

Following her presentation was a brief Q&A session.

Keynote Speaker #2: Dr. Clement Chow, Associate Professor of Human Genetics and Microbiology, University of Utah
[Introduced by Dr. Joe Yost]

Talk title: "Harnessing the power of genetic variation: Precision Medicine in the Lab"

Dr. Chow earned a PhD from the University of Michigan and completed his postdoctoral training at Cornell University. Dr. Chow's lab focuses on understanding the role of genetic variation on disease outcomes. In particular, they employ quantitative and functional tools, in a variety of model organisms, to study how genetic variation impacts basic cellular traits important to human health. Dr Chow's work in model organisms will help to model and inform studies of genetic variation in the human population and lead to more precise, personalized therapies, especially for rare disease.

Following his presentation was a brief Q&A session.

[Day 1 Adjourned; Happy Hour/Welcome Reception]

DAY TWO (Virtual Attendance: 58)

CLOSED EXECUTIVE SESSION FOR TRAINING PROGRAM PIs & COORDINATORS AND NHGRI STAFF
Dr. Lucia Hindorff led the discussion for this closed session.

Welcome & Meeting Announcements: Dr. Susanne Haga, Duke University

Plenary Talk: NHGRI Update and Listening to the Voices of NHGRI trainees

Moderators: Vence Bonham, Jr., J.D. and Lucia Hindorff, PhD, MPH

Mr. Bonham is the Acting Deputy Director for NHGRI and an associate investigator in NHGRI's Social and Behavioral Research Branch. Mr. Bonham provides leadership for the institute's health equity and workforce diversity programs and works in partnership across NIH to promote the mission of the institute. His research focuses primarily on the social implications of new genomic knowledge,

particularly in communities of color. He studies how genomics influences the use of the constructs of race and ethnicity in biomedical research and clinical care, and the role of genomics in exacerbating or ameliorating health inequities.

Dr. Hindorff is the Lead Extramural Training Program Director in the Training, Diversity, and Health Equity Office at the NHGRI. She received her M.P.H. and Ph.D. degrees from the University of Washington, where her research focused on cardiovascular genetic epidemiology and motivating factors for using genetic tests in clinical care. She previously served as an epidemiologist and program director in NHGRI's Division of Genomic Medicine and as the lead Program Director for the Clinical Sequencing Evidence-Generating Research program. Dr. Hindorff is broadly interested in health information disparities, the integration of genomic tests into clinical care and practical issues related to large epidemiological studies.

During this session, Mr. Bonham welcomed meeting attendees and gave an overview of the Office of Training Diversity and Health Equity Office (TiDHE) and its mission to coordinate, develop and support NHGRI training programs for genomics careers; develop and support initiatives to enhance genomic workforce diversity and genomic health equity and to provide strategic programmatic leadership for training, diversity and health equity at NHGRI. Dr Hindorrf provided a brief overview of the range of training programs supported by NHGRI.

Next, Mr. Bonham moderated a discussion with two NHGRI trainees about their training experiences: Kirstan Gimse (University of Wisconsin-Madison); Sandy Kim (UCLA)

A brief period of Q&A from in-person attendees followed the discussion

Concurrent Breakout Session #1
(Attendees could attend any of the three sessions offered in its entirety or choose another session to move to; Session A was web-cast)

- Session A: Introduction to NIH Grants *[WEBCAST]*
  Presenters: Lisa Chadwick, PhD (NHGRI) & April Kriebel, PhD (Univ Michigan)
  Overview: This session introduced trainees to the NIH grant application process, including information about the different types of training and research grants, general information about applying for NIH grants, and grant-writing tips.

- Session B: Science Communication
  Presenter: Julie Kiefer, PhD (Univ Utah)
  Overview: This session provided useful tips and tools for communicating complex information to broad audiences.

- Session C: Open Science & Data-Sharing for NHGRI-Funded Researchers
  Presenter: Elena Ghanaim, MA (NHGRI)
  Overview: This session introduced attendees to policies regarding NIH data sharing.

Trainee Lightning Round #1 (18 Presentations)

Eight-teen trainees presented Lightning Talks which were a brief one-minute, one-slide presentations intended to quickly engage the audience's attention and interest them in visiting the trainee's poster presentation. Each Lightning Talk presenter also presented a poster during the in-person/virtual poster session.

- Sam Hart, University of Washington
- Lia Serrano, University of Wisconsin-Madison
- Cynthia Zajac, University of Michigan
- Deanine Dilworth, University of Utah
- Mira Mastoras, University of California, Santa Cruz
- Leandro Sanabria Alberto, University of Puerto Rico
- Kendall Clement, Mass General Hospital/Harvard
- Mitchell Conery, University of Pennsylvania
- Megan Lancaster, Vanderbilt University
- Drew Blasco, University of Michigan
- Daniel Chavez-Yenter, University of Utah
- Aubrey Mansfield, University of Utah
- Mohammed Gbadamosi, University of Florida (v)
- Alma Quijano, Children's Hospital of Philadelphia (v)
- Kate Saylor, University of Pennsylvania (v)
- Leland Hull, Massachusetts General Hospital (v)
- Tegan Thurston, Children's Hospital of Philadelphia (v)
- Juan Carlos Fernandez del Castillo, The Broad Institute of MIT and Harvard (v)

Trainee Platform Presentations (Genome Sciences)
Moderator: Temesgen Fufa, NHGRI

Presenters:
- Elizabeth Plender, University of Washington
- Sosie Yorki, Broad Institute of MIT and Harvard
- Tanner Jensen, Stanford University

Networking Plated Lunch

Trainee Platform Presentations (Genomic Medicine)
Moderator: Robb Rowley, NHGRI

Presenters:
- Alejandra Cardenas Montanez, University of Utah
- Alexandre Harris, University of Pennsylvania
- Alexandra Ladd, University of Florida

Concurrent Breakout Session #2
(Attendees could attend any of the three sessions offered in its entirety or choose another session to move to; Session F was web-cast)

- Session D: Negotiation & Faculty Positions
  Presenters: Joe Yost, PhD (Univ Utah) & Madison Kilbride, PhD (Univ Utah)
  Overview: This session will introduce trainees to the hiring process for an academic faculty position, areas of negotiation, and negotiation strategies.
- Session E: Genomics & the All of Us Research Program
  Presenters: Jodell Linder Jackson, PhD and Amanda Kutz, PhD (All of Us Research Program, Data and Research Center, Vanderbilt)

Overview: The NIH's All of Us Research Program is an initiative to build a diverse database containing various health data from up to and beyond one million people for the purposes of advancing precision medicine. In this session, we will dive into the data from over 370,000 participants that is currently available for analysis to registered researchers and highlight recent endeavors to expand our available resources with new data types. Additionally, we will provide a demonstration on how to use our free-to-access cloud computing platform, the Researcher Workbench, so attendees can learn how to utilize our database in their research projects.

- Session F: Interpreting Human Genetic Variation and its Role in Disease *[WEBCAST]*
  Presenter: Heidi Rehm, PhD (Harvard)
  Overview: This session will focus on approaches to interpret the role genes and variants play in human disease to support genetic diagnosis. It will include an overview of the different types of genetic variation uncovered through DNA sequencing, evidence-based frameworks for evaluating gene-disease relationships and variant pathogenicity, and how genomic databases including ClinVar, ClinGen, GenCC, OMIM, DECIPHER and gnomAD are used to support analysis.

TRAINEE LIGHTNING TALKS #2

Fifteen trainees presented Lightning Talks, one-minute, one-slide presentations intended to quickly engage the audience's attention and interest them in visiting the trainee's poster presentation. Each Lightning Talk presenter also presented a poster during the in-person/virtual poster session.

- Briana Lopez-Patino, Johns Hopkins University
- Clayton Marcinak, University of Wisconsin-Madison
- Kenzi-Alayna Campbell, Baylor College of Medicine
- Tiffany Russell, University of Michigan
- Nicole Zeltser, UCLA
- Arpita Singhal, Stanford University
- Shira Archie, University of Utah
- Julane Machado, University of Utah
- Eduardo Garcia, University of California, Santa Cruz
- Amanda Hernandez, University of Puerto Rico
- Savannah Gonzales, Washington University School of Medicine
- Pablo Oyler-Castrillo, Princeton University (v)
- Nathaniel Robinson, University of Alabama at Birmingham (v)
- Hadley Smith, Harvard Medical School (v)
- Naomi Scheinerman, University of Pennsylvania (v)

POSTER SESSION #1 Odd-Numbered Posters & Virtual Poster Session

Attendees were invited to view the posters set up in the adjacent meeting room. Posters, abstracts, and a Zoom link of virtual attendees were accessible through virtualpostersession.org.

[Day 2 Adjourned]

DAY THREE (Virtual attendance: 51)
Closed Executive Session for Training Program Coordinators

Greetings and Meeting Announcements: Dr Susanne Haga, Duke University

Trainee Platform Presentations (Ethical/Legal/Social Issues)
Moderator: Rene Sterling, NHGRI

Presenters:
- Meg Glasmann, University of Utah
- Colin Halverson, Indiana University (v)
- Katherine Callahan, University of Pennsylvania (v)

POSTER SESSION #2 (Even-Numbered Posters)
Attendees were invited to view the posters set up in the adjacent meeting room.

Concurrent Breakout Session #3
(Attendees could attend any of the three sessions offered in its entirety or choose another session to move to; Session G was web-cast)

- Session G: Start-Ups and Working in Industry [WEBCAST]
  Panelists: Michael Snyder, PhD (Stanford); Andrew Hemmert, PhD (Biofire); Ashley Elrick, PhD (Project Ronin); Howard McLeod (Intermountain Healthcare)
  Overview: This session will provide attendees with an overview about working in various industries and start-up companies in biomedical research, contrasting the work environment to an academic setting.

- Session H: Genetic Counselors in Research
  Moderator: Renee Rider, JD, MS, LCGC (NHGRI);
  Panelists: Wendy Kohlman, MS, LCGC (Univ Utah); Emily Spoth, MS, LCGC (Univ Utah); Erin Baldwin, MS, LCGC (Univ Utah)
  Overview: This moderated panel discussion will provide an opportunity to learn how genetic counselors fit into a genomics research team.

- Session I: Design Your Community: Creating a Culture of Inclusion and Equity
  Moderator: Gloria Slattum, PhD (Univ Utah)
  Panelists: Faith Bowman, BS, Grad Student (Univ Utah), Jeanette Ducut-Sigala, PhD (Univ Utah); David J. Grunwald, PhD (Univ Utah); Travis Tu'ifua, BS, Grad Student (Univ Utah)
  Overview: Everyone has their own unique genome with variations in DNA sequences that influence biological function for the better, the worse, or not at all. The same can be said about the giant organism that is our research institution and workplace environment. On this panel, we will speak about the process of editing the genome (community culture) of your institution to encode equity, diversity, and inclusion into its core and increase retention, community engagement, and advance research.

CLOSING REMARKS

Dr. Eric Green, NHGRI Director, delivered the final remarks of the meeting. He provided updates on NHGRI activities.

Networking Buffet Lunch
[Meeting adjourned]

Closed Executive Session with NHGRI and Advisors

APPENDIX

AGENDA -- 2023 NHGRI Research Training and Career Development Annual Meeting

Bios of Speakers/Panelists

2023 NHGRI Research Training and Career Development Annual Meeting
April 2-4, 2023

Conference Agenda

Apr 2nd (Sunday)		
1:30 PM	**Registration opens** **Poster Set-Up (Odd #s Only)**	Grand Ballroom A/ B
3:00 PM	**Welcome *[WEBCAST]*** Susanne Haga, PhD, Duke University	Grand Ballroom C
3:15 PM	**Keynote #1: Behind the Genes: Understanding the Social in Social and Behavioral Genomics *[WEBCAST]*** Daphne Martschenko, PhD, Stanford University	Grand Ballroom C
3:45 PM	**Keynote #2: Harnessing the power of genetic variation: Precision Medicine in the Lab *[WEBCAST]*** Clement Chow, PhD, University of Utah	Grand Ballroom C
4:15 PM	**Happy Hour (Dinner on your own)**	Trofi Restaurant
Apr 3rd (Monday)		
7:00 AM	**Breakfast** **Poster Set-Up (Odd #s Only)**	Alpine Ballroom Grand Ballroom A/ B
7:45 AM	**Executive Session: Training PI/Coordinators + NHGRI Program Staff (Closed Session)**	Topaz
9:00 AM	**Welcome & Announcements *[WEBCAST]*** Susanne Haga, PhD, Duke University	Grand Ballroom C
9:10 AM	**Plenary Talk: NHGRI Update and Listening to the Voices of NHGRI trainees *[WEBCAST]*** *Moderator:* Vence Bonham, NHGRI Acting Deputy Director *Panelists:* Lucia Hindorff, PhD, MPH, Lead Extramural Training Program Director; NHGRI Trainees: Sandy Kim (UCLA) and Kirstan Gimse (University of Wisconsin-Madison)	Grand Ballroom C

(v) = virtual

9:45 AM **Concurrent Session #1 (A-C)**

Session A: Introduction to NIH Grants *[WEBCAST]* — Grand Ballroom C

Presenters: Lisa Chadwick, PhD (NHGRI) & April Kriebel, PhD (Univ Michigan)

Overview: This session will introduce trainees to the NIH grant application process, including information about the different types of training and research grants, general information about applying for NIH grants, and grant-writing tips.

Session B: Science Communication — Canyon Room A

Presenter: Julie Kiefer, PhD (Univ Utah)

Overview: Science is complicated but your work will be more impactful to anyone — even career scientists — when it is engaging and easy to understand. This session will provide useful tips and tools for communicating complex information to broad audiences.

Session C: Open Science & Data-Sharing for NHGRI-Funded Researchers — Canyon Room B

Presenter: Elena Ghanaim, MA (NHGRI)

Overview: This session will introduce attendees to policies regarding NIH data sharing.

10:45 AM **BREAK**

11:00 AM **Plenary: Trainee Lightning Round #1 *[WEBCAST]*** — Grand Ballroom C

(Note: 1 minute each)

- Sam Hart, University of Washington
- Lia Serrano, University of Wisconsin-Madison
- Cynthia Zajac, University of Michigan
- Deanine Dilworth, University of Utah
- Mira Mastoras, University of California, Santa Cruz
- Leandro Sanabria Alberto, University of Puerto Rico
- Kendall Clement, Mass General Hospital/Harvard
- Mitchell Conery, University of Pennsylvania
- Megan Lancaster, Vanderbilt University
- Drew Blasco, University of Michigan
- Daniel Chavez-Yenter, University of Utah
- Aubrey Mansfield, University of Utah
- Mohammed Gbadamosi, University of Florida (v)
- Alma Quijano, Children's Hospital of Philadelphia (v)
- Kate Saylor, University of Pennsylvania (v)
- Leland Hull, Massachusetts General Hospital (v)
- Tegan Thurston, Children's Hospital of Philadelphia (v)
- Juan Carlos Fernandez del Castillo, The Broad Institute of MIT and Harvard (v)

(v) = virtual

11:25 AM	**Plenary: Trainee Platform Presentation (Genome Sciences)** ***[WEBCAST]*** *Moderator: Temesgen Fufa, NHGRI* • Elizabeth Plender, University of Washington • Sosie Yorki, Broad Institute of MIT and Harvard • Tanner Jensen, Stanford University	Grand Ballroom C
12:05 PM	**Trainee Networking Lunch**	Alpine Ballroom/ Topaz (Open Seating)
1:30 PM	**Plenary: Trainee Platform Presentation (Genomic Medicine)** ***[WEBCAST]*** *Moderator: Robb Rowley, NHGRI* • Alejandra Cardenas Montanez, University of Utah • Alexandre Harris, University of Pennsylvania • Alexandra Ladd, University of Florida	Grand Ballroom C
2:10 PM	**Concurrent Session #2 (D-F)**	
	Session D: Negotiation & Faculty Positions Presenters: Joe Yost, PhD (Univ Utah) & Madison Kilbride, PhD (Univ Utah) Overview: This session will introduce trainees to the hiring process for an academic faculty position, areas of negotiation, and negotiation strategies.	Canyon Room A
	Session E: Genomics & the All of Us Research Program Presenters: Jodell Linder Jackson, PhD and Amanda Kutz, PhD (All of Us Research Program, Data and Research Center, Vanderbilt) Overview: The NIH's All of Us Research Program is an initiative to build a diverse database containing various health data from up to and beyond one million people for the purposes of advancing precision medicine. In this session, we will dive into the data from over 370,000 participants that is currently available for analysis to registered researchers and highlight recent endeavors to expand our available resources with new data types. Additionally, we will provide a demonstration on how to use our free-to-access cloud computing platform, the Researcher Workbench, so attendees can learn how to utilize our database in their research projects.	Canyon Room B
	Session F: Interpreting Human Genetic Variation and its Role in Disease *[WEBCAST]* *Presenter:* Heidi Rehm, PhD (Harvard) *Overview:* This session will focus on approaches to interpret the role genes and variants play in human disease to support genetic diagnosis. It will include an overview of the different types of genetic variation uncovered through DNA sequencing, evidence-based frameworks for evaluating gene-disease relationships and variant pathogenicity, and how genomic databases including ClinVar, ClinGen, GenCC, OMIM, DECIPHER and gnomAD are used to support analysis.	Grand Ballroom C
3:10	**BREAK**	

(v) = virtual

3:25 PM	**Group Photographs**	TBD
3:35 PM	**Plenary: Trainee Lightning Round #2 *[WEBCAST]*** (Note: 1 minute each) • Briana Lopez-Patino, Johns Hopkins University • Clayton Marcinak, University of Wisconsin-Madison • Kenzi-Alayna Campbell, Baylor College of Medicine • Tiffany Russell, University of Michigan • Nicole Zeltser, UCLA • Arpita Singhal, Stanford University • Shira Archie, University of Utah • Julane Machado, University of Utah • Eduardo Garcia, University of California, Santa Cruz • Amanda Hernandez, University of Puerto Rico • Savannah Gonzales, Washington University School of Medicine • Pablo Oyler-Castrillo, Princeton University (v) • Nathaniel Robinson, University of Alabama at Birmingham (v) • Shoshana Leftin Dobkin, Children's Hospital of Philadelphia (v) • Hadley Smith, Harvard Medical School (v) • Naomi Scheinerman, University of Pennsylvania (v)	Grand Ballroom C
3:55 PM	**In-Person Poster Session** **Virtual Poster Session (Virtualpostersession.org**)	Grand Ballroom A/B Online
5:00 PM	**Dinner (on your own)**	

Apr 4th (Tuesday)

7:00 AM	**Breakfast** **Poster Set-Up (Even #s Only)**	Alpine Ballroom Grand Ballroom A/ B
7:45 AM	**Executive Session Program Coordinators (Closed Session)**	Topaz
9:00 AM	**Welcome & Announcements *[WEBCAST]*** Susanne Haga, PhD, Duke University	Grand Ballroom C
9:10 AM	**Plenary: Trainee Platform Presentation (ELSI) *[WEBCAST]*** *Moderator: Rene Sterling, NHGRI* • Meg Glasmann, University of Utah • Colin Halverson, Indiana University (v) • Katherine Callahan, University of Pennsylvania (v)	Grand Ballroom C
9: 45 AM	**In-Poster Session (Even #s)**	Grand Ballroom A/ B

(v) = virtual

10:45 AM	**Concurrent Session #3 (G-I)**	
	Session G: Start-Ups and Working in Industry [WEBCAST] Panelists: Michael Snyder, PhD (Stanford); Andrew Hemmert, PhD (Biofire); Ashley Elrick, PhD (Project Ronin); Howard McLeod (Intermountain Healthcare) Overview: This session will provide attendees with an overview about working in various industries and start-up companies in biomedical research, contrasting the work environment to an academic setting.	Grand Ballroom C
	Session H: Genetic Counselors in Research Moderator: Renee Rider, JD, MS, LCGC (NHGRI); Panelists: Wendy Kohlman, MS, LCGC (Univ Utah); Emily Spoth, MS, LCGC (Univ Utah); Erin Baldwin, MS, LCGC (Univ Utah) Overview: This moderated panel discussion will provide an opportunity to learn how genetic counselors fit into a genomics research team.	Canyon Room A
	Session I: Design Your Community: Creating a Culture of Inclusion and Equity Moderator: Gloria Slattum, PhD (Univ Utah) Panelists: Faith Bowman, BS, Grad Student (Univ Utah), Jeanette Ducut-Sigala, PhD (Univ Utah); David J. Grunwald, PhD (Univ Utah); Travis Tu'ifua, BS, Grad Student (Univ Utah) Overview: Everyone has their own unique genome with variations in DNA sequences that influence biological function for the better, the worse, or not at all. The same can be said about the giant organism that is our research institution and workplace environment. On this panel, we will speak about the process of editing the genome (community culture) of your institution to encode equity, diversity, and inclusion into its core and increase retention, community engagement, and advance research.	Canyon Room B
11:45 AM	**Plenary: Update from NHGRI Director *[WEBCAST]*** Eric Green, MD, PhD, NHGRI Director (v)	Grand Ballroom C
12:15 PM	**Networking Buffet Lunch**	Alpine Ballroom/Topaz (Open seating)
1:30 PM	**Executive Session NHGRI & Advisors (Closed Session)**	Topaz

(v) = virtual

Speakers & Panelists

Erin Baldwin, MS, LCGC is a certified and licensed genetic counselor in the Department of Pediatrics at the University of Utah. She received a Master of Science in genetic counseling from California State University Northridge in 2005. She has a background in both clinical and research genetic counseling in the fields of pediatric, adult, and laboratory medicine. Erin currently serves as a study coordinator for the University of Utah's Undiagnosed Diseases Network and Penelope Program, working with patients with complex, undiagnosed genetic conditions.

Vence Bonham, Jr., JD is acting Deputy Director of the National Human Genome Research Institute and a member of the senior leadership team. He received his BA from James Madison College at Michigan State University and his JD from the Moritz College of Law at Ohio State University. He is also an associate investigator in NHGRI's Division of Intramural Research's Social and Behavioral Research Branch. He leads the Health Disparities Unit, which investigates the equitable integration of new genomic knowledge and precision medicine into clinical settings. His research focuses primarily on the social implications of new genomic knowledge, particularly in communities of color.

Faith Bowman is a Doctoral Candidate in the Summers-Holland Lab in the Department of Biochemistry at the University of Utah. Faith received a B.S. in Genetics from the University of Wisconsin-Madison. Faith Joined the University of Utah community in 2018. Currently, Faith works in the Summers-Holland Lab, contributing to Glucose and lipid metabolism in cardiometabolic disease while serving as the president of the Utah SACNAS Chapter (2021 Chapter of the Year), and participating in the McNair Alumni Network and as a mentor for the UROP and IMSD Programs.

Lisa Chadwick, PhD. joined the National Human Genome Research Institute's Extramural Research Program as a program director in 2018. She oversees the Centers for Mendelian Genomics within the NHGRI Genome Sequencing Program. Prior to joining NHGRI, Dr. Chadwick was a program director in the Division of Extramural Research and Training at the National Institute of Environmental Health Sciences (NIEHS), where she was involved in the leadership of the NIH Roadmap Epigenomics Program, and the NIH 4D Nucleome Program.

Clement Chow, PhD is an Associate Professor of Human Genetics at the University of Utah. He earned a PhD from the University of Michigan and completed his postdoctoral training at Cornell University. Dr. Chow's lab focuses on understanding the role of genetic variation on disease outcomes. In particular, they employ quantitative and functional tools, in a variety of model organisms, to study how genetic variation impacts basic cellular traits important to human health. Dr Chow's work in model organisms will help to model and inform studies of genetic variation in the human population and lead to more precise, personalized therapies, especially for rare disease.

Ashley Elrick, PhD is a Senior UX Researcher at Nuance Communications. She earned her PhD in Communication from the University of Utah in 2019. Her dissertation investigated family communication of genetic test results for multiple genes by breast cancer survivors. After completing her PhD, Ashley joined Ancestry's DNA Science team as a Health Communication Scientist and conducted research on health literacy and comprehension to inform product and design decisions. She then worked as a UX Researcher at Project Ronin, where she provided product research specifically in the oncology space, showcasing data science-driven insights for personalized care along with patient symptom monitoring for oncologists and triage nurses. In her current role, she focuses on clinician experiences and how to improve their documentation burdens within electronic health record systems.

Elena Ghanaim, MA is the Policy Advisor for Data Science and Sharing within the Office of Genomic Data Science at the NHGRI. Ms. Ghanaim earned a Bachelor's in Genetics from Rutgers University (2015) and a Master's in Bioethics & Science Policy from Duke University (2018). She spearheads NHGRI's scientific data sharing policy development, oversight, and implementation and collaborates with international and NIH partners and grantees on data sharing and privacy policy issues. For the last 3 years, she has advised on NHGRI Genomic Data Science Analysis, Visualization and Informatics Lab-space (AnVIL).

Eric D. Green, M.D., Ph.D., is the director of the National Human Genome Research Institute (NHGRI) at the U.S. National Institutes of Health (NIH). He is the third NHGRI director, having been appointed by NIH director Dr. Francis Collins in 2009. r. Green received his B.S. degree in bacteriology from the University of Wisconsin - Madison in 1981, and his M.D. and Ph.D. degrees from Washington University in 1987. Previously, Dr. Green served as the Institute's scientific director (2002 - 2009), chief of the NHGRI Genome Technology Branch (1996 - 2009) and founding director of the NIH Intramural Sequencing Center (1997 - 2009). While directing an independent research program for just over two decades, Dr. Green was at the forefront of efforts to map, sequence, and understand mammalian genomes.

Andrew Hemmert, PhD is the Senior Vice President for Molecular Research and Development at bioMerieux. He received a doctorate in biophysics from the University of North Carolina at Chapel Hill and has been working in the diagnostics industry for the past 13 years. Dr. Hemmert currently leads research and development teams across the US and France to create innovative molecular diagnostics for infectious diseases.

Jeanette Ducut-Sigala, Ph.D., is a Multifaceted Research Scientist with successful history catalyzing progress in Diversity Recruitment & Inclusion initiatives & grant programs in Academia. Dr. Ducut-Sigala received the 'Inclusive Excellence Award' from the University of Utah Office of Health, Equity, Diversity, and Inclusion and is a member of the Linton-Poodry SACNAS Leadership Institute. Dr. Ducut-Sigala currently manages the diversity & inclusion health sciences training programs in the Senior Vice President for Health Sciences (SVPHS) Research Unit at the University of Utah and continues advising the award-winning University of Utah SACNAS Chapter.

David J. Grunwald, Ph.D., is Helen Lowe Bamberger Colby's Presidential Endowed Chair of Human Genetics at the University of Utah School of Medicine. Dr. Grunwald is the Director of the NIH-sponsored Genetics Training Program, Zebrafish Core Facilities Executive Director, and a nuclear Control of Cell Growth and Differentiation Program member at Huntsman Cancer Institute. In addition, Dr. Grunwald leads a research team focused on investigating cell-intrinsic and intercellular signaling factors that regulate the maintenance or direct the differentiation of tissue precursor cells and develop new tools to manipulate the genome to advance the study of gene function in zebrafish.

Lucia Hindorff, PhD, MPH is the Lead Extramural Training Program Director in the Training, Diversity, and Health Equity Office at the NHGRI. She received her M.P.H. and Ph.D. degrees from the University of Washington, where her research focused on cardiovascular genetic epidemiology and motivating factors for using genetic tests in clinical care. She previously served as an epidemiologist and program director in NHGRI's Division of Genomic Medicine and as the lead Program Director for the Clinical Sequencing Evidence-Generating Research program. Dr. Hindorff is broadly interested in health information disparities, the integration of genomic tests into clinical care and practical issues related to large epidemiological studies.

Jodell Jackson, PhD is the Director of Operations, MicroVU at Vanderbilt University and manager at the Vanderbilt Institute for Clinical and Translation Research since 2014. Dr. Jackson is the Genomics lead of the Data and Research Center for the *All of Us* Research Program, with the goal to enroll and sequence 1 million people across the country, and enable genomic research on the world's largest and most diverse datasets to further precision medicine. Dr. Jackson received her PhD from the University of Georgia in 2009 in genetics and completed a postdoctoral experience in 2011 at Stanford in immunological genetics. Dr. Jackson's work includes training and publications in genetics, immunology, biobanking, and electronic health record data.

Julie Kiefer, PhD is the Associate Director, Science Communications at University of Utah Health. As a PhD scientist and experienced communications professional, she leads teams to engage broad audiences in stories of discovery through writing, video, radio, web and social media. An in-depth understanding of science, its people and processes enriches my work and comes from a strong background in hands-on research.

Madison Kilbride, PhD is an Assistant Professor in the Department of Philosophy at the University of Utah. She earned her doctoral degree in Philosophy from Princeton University and her Masters of Science in Medical Ethics from the University of Pennsylvania. Dr. Kilbride's scholarship addresses the ethical, legal, and social implications (ELSI) of genetics and genomics, with a focus on direct-to-consumer (DTC) genetic testing. Her current research is supported by a K01 Career Development Award from NHGRI.

Wendy Kohlman, MS, LCGC is a genetic counselor at the Huntsman Cancer Institute, University of Utah. My research interests focus on improving the identification of families at risk for hereditary cancer syndromes, incorporating genetic risk assessment into clinical cancer care, and the psychological and behavioral outcomes of genetic counseling.

April Kriebel, PhD is a fourth year Bioinformatics PhD student in the laboratory of Dr. Joshua Welch at the University of Michigan. Her current research focuses on single cell integration techniques, the generation of a multi-modal single-cell atlas of the mouse brain, and the relationship between physiological response and molecular cell type. She is supported by an F31 Ruth L. Kirschstein Predoctoral Fellowship from the NHGRI.

Amanda Kutz, PhD is an IT project manager for the *All of Us* Data and Researcher Center (DRC) at Vanderbilt University. She received her doctorate degree in clinical psychology from the University of Maine and is a licensed clinical psychologist. Interest in precision medicine, particularly in mental health, is what drew her to the *All of Us* program. She serves as project manager for projects involving surveys and cognitive tasks.

Daphne Martschenko, PhD is an Assistant Professor at the Stanford Center for Biomedical Ethics. She earned an MPhil from the University of Cambridge in Politics, Development, and Democratic Education and a Ph.D. in Education, also from the University of Cambridge. Dr Martschenko was an NHGRI Postdoctoral Research Fellow at Stanford before being appointed to Assistant Professor at Stanford. Her scholarship identifies novel ways to examine and enhance the conduct, translation, and interpretation of human genetics, with a focus on social and behavioral genomics. Dr. Martschenko advocates for and facilitates research efforts that promote socially responsible research and communication of human genetics/ genomics and public engagement with the field.

Howard McLeod, PharmD is the Executive Clinical Director of Precision Health of the Intermountain HealthCare System and Professor at Intermountain. Most recently, he was Medical Director for Precision Medicine at the Geriatric Oncology Consortium and a Professor of Medicine and Pharmacy at the University of South Florida. Dr McLeod has been recognized as a Fellow of both the American Society of Clinical Oncology and the American College of Clinical Pharmacy. Dr. McLeod has published almost 595 peer reviewed papers on pharmacogenomics, applied therapeutics, and clinical pharmacology.

Heidi Rehm, PhD, FACMG is the Chief Genomics Officer at Massachusetts General Hospital as well as Clinical Lab Director and Co-Director of the Program in Medical and Population Genetics at the Broad Institute. Dr. Rehm also co-leads the Broad Center for Mendelian Genomics focused on discovering novel rare disease genes and co-leads the Matchmaker Exchange to also aid in gene discovery. She earned her PhD from Harvard University (2000). She is a PI of ClinGen, a publicly accessible resource supporting the interpretation of genes and variants.

Renee Rider, M.S, J.D., LSCGC is a genetic counselor and a Program Director for the NHGRI's Implementing Genomics in Practice Pragmatic Trials Network (IGNITE PTN). Renee received her Master's in science in genetic counselling from the University of Utah and a juris doctor from Northeastern University School of Law. Prior to joining NHGRI, Renee worked at the University of Utah Alzheimer's Center and the Veterans' Administration. She provided genetic counseling for adult diseases in a wide variety of specialties and was a part of growing the VA's robust, national telehealth genetic counseling consult service. Her research interests include developing the genetics workforce and using alternative genetic education and counseling methods to increase access to genetic services.

Gloria Slattum, MS, PhD is the research manager for the Research Education Office in the Department of Pediatrics, University of Utah. She directs the Genomics Summer Research for Minorities (GSRM) Program, manages the Native American Research Internship (NARI) Program, and serves the pediatrics community through Equity, Diversity, and Inclusion initiatives. After receiving her PhD in Oncological Sciences at the University of Utah, Dr. Slattum completed a fellowship at the Max Planck Institute of Molecular Cell Biology and Genetics in Germany. Throughout her career, she has integrated her scientific background, her experiences as a first-generation college student, and being a proud Latina Scientist to fostering excitement and promote opportunities for historically underrepresented students interested in STEM. Dr. Slattum is particularly interested in identifying what tools effectively increase the participation and retention of diverse individuals in STEM and leadership positions.

Michael Snyder, PhD is the Stanford Ascherman Professor and Chair of Genetics and the Director of the Center of Genomics and Personalized Medicine. He received his Ph.D. from the California Institute of Technology and completed his postdoctoral training at Stanford. Dr. Snyder has pioneered the use o f “big data” and multi-omics to advance scientific discovery and transform healthcare, inventing many technologies widely used today, including methods for characterizing genomes and their products (e.g. RNA-Seq, NGS paired-end sequencing, ChIP-Chip and later Chip-Seq, and machine learning). His application of omics and wearables technologies to perform longitudinal profiling of individuals has transformed medicine and

Emily Spoth, MS, LCGC Emily Spoth is a licensed and certified genetic counselor. She earned her Master’s degree in Genetic Counseling from the University of Pittsburgh in 2018. In her current role at the University of Utah, Emily provides genetic counseling to patients with neurologic conditions and ocular conditions. In addition to her clinical role, she is also involved in several research studies and is a faculty member of the University of Utah Graduate Program in Genetic Counseling.

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Joseph Yost, PhD, FAAA is the Richard L. Stimson Presidential Endowed Chair at the University of Utah and Vice Chairman for Basic Science Research in Pediatrics. Dr. Yost received his PhD in Genetics from the University of Chicago and completed his postdoctoral training in vertebrate embryology and development at the University of California, Berkeley. His lab’s research is at the intersection between model organism genetics and the discovery of novel disease-causing mutations in human genomes, focusing on congenital heart disease, embryonic origins of adult-onset heart disease, and pediatric rare diseases such as Kabuki Syndrome. Dr. Yost has extensive experience in a variety of life sciences research approaches and model organisms, including zebrafish, *Xenopus*, mice, *Drosophila*, yeast, and human iPSC cell culture.