

Disclosure of Conflicts of Interest

Postgraduate Institute for Medicine (PIM) requires faculty, planners, and others in control of educational content to disclose all their financial relationships with ineligible companies. All identified conflicts of interest (COI) are thoroughly vetted and mitigated according to PIM policy. PIM is committed to providing its learners with high quality accredited continuing education activities and related materials that promote improvements or quality in healthcare and not a specific proprietary business interest of an ineligible company.

The faculty reported the following relevant financial relationships with ineligible entities related to the educational content of this CE activity:

<u>Last Name</u>	<u>First Name</u>	<u>Financial Relationships/Roles</u>	<u>Session Title</u>	<u>Presentation Title</u>
Abul-Husn	Noura	Royalty(ies)/Honoraria; Genentech. Consultant/Consulting Fees/Other Remuneration; Allelica	Stakeholder perspectives on ethical and social implications of using clinical polygenic risk scores through embedded ELSI research	
Austin-Tse	Christina	Salary/Employment; Mass General Brigham Personalized Medicine Laboratory for Molecular Medicine	Multidisciplinary omics approaches for diagnostics	
Battle	Alexis	Major Stockholder/Ownership Interest; Alphabet, Inc.; Consultant/Consulting Fees/Other Remuneration; Third Rock Ventures	Genetic variation in the context of immune traits	
Berry-Kravis	Elizabeth	Grant/Contracted Research Support (External); GeneTx, Roche, Zynerba, Acadia, Mallinckrodt, Orphazyme. Consultant/Consulting Fees/Other Remuneration; Roche, Novartis, Acadia, Taysha.	N-of-1 precision medicine in the era of antisense oligonucleotide therapeutics	Therapeutic ASO interventions for neurodevelopmental disorders: lessons from Angelman Syndrome
Bowman	Aaron	US Dept. of Labor Advisory Board Member; American Regent Inc.	Novel insights into gene-environment interactions from environmental influences on Mendelian disease phenotypes	Huntington's Disease Genotype Alters Neuronal Manganese Biology and Toxicological Sensitivity to Manganese.
Braverman	Nancy	Scientific Co-Founder; Congruence	Mechanisms underlying identification and transcriptional control of mitochondrial and related disorders	
Brown	Robert	Scientific Co-founder Apic Bio; consultant Wave Lifesciences	N-of-1 precision medicine in the era of antisense oligonucleotide therapeutics	RNA-targeting treatments for Amyotrophic Lateral Sclerosis
Campbell	Colleen	Non-remunerative positions of influence such as officer, board member, trustee, or public spokesperson; National Society of Genetic Counselors	Featured Plenary Abstract Session II	
Carter	Erin	Honorarium of \$1000 for CME presentation at ASBMR virtual conference in 2020; Excel Continuing Education	Leveraging the power of AI and electronic health records	
Carvill	Gemma	Grant/Research Support (External); Stoke Therapeutics.	Advances toward therapeutics for Mendelian disorders	
Chung	Wendy	Consultant/Consulting Fees/Other Remuneration; Regeneron Genetics Center.	N-of-1 precision medicine in the era of antisense oligonucleotide therapeutics	
Darnes	Deanna	Speakers Bureau; Illumina, Ambry, Quest Diagnostics, Color.	Gatekeeping genetics: Towards a more diverse, just, and inclusive research enterprise	Access and Availability of Genetic Testing for Prenatal Patients

Flynn	Elise	Employee, Patch Biosciences	Featured Plenary Abstract Session III	
Freeze	Hudson	Cerecor, Inc.; Glycomine Inc. (Consulting & Stock Options)	Expanding the frontiers of congenital disorders of glycosylation	The quest to identify novel types of CDG and their molecular genetic bases
Hanchard	Neil	Other; GLG; Single event Advisory panel for Transcriptomics	Presidential Symposium: Perspectives on diversity, race, inclusion and equity Featured Plenary Abstract Session IV	
Harrison	Steven	Salary/Employment; Ambry Genetics	Cutting-edge approaches and novel gene discovery in neurodevelopmental disorders	
Hirschhorn	Joel	Consultant/Consulting Fees/Other Remuneration; Camp4 Therapeutics	Genomic insights into anthropometry and metabolic disorders	Computational and functional gene prioritization from a saturated GWAS of adult height in >5 million people
Hormozdiari	Farhad	Major Stockholder/Ownership Interest; All authors have Google LLC stock as part of their compensation. Salary/Employment; All authors are employees of Google LLC.	Novel associations take novel statistical methods	DeepNull: Modeling non-linear covariate effects improves phenotype prediction and association power
Jarvik	Gail	Non-remunerative positions of influence such as officer, board member, trustee, or public spokesperson; Preverna	Presidential Address - Imagination and Daring: Past, Present and Future	
Lam	Christina	Grant/Contracted Research Support (External); Glycomine Inc.	Expanding the frontiers of congenital disorders of glycosylation	
Lewis	Anna	Employee Fabric Genomics	Stakeholder perspectives on ethical and social implications of using clinical polygenic risk scores through embedded ELSI research	ELSI considerations for PRS reporting choices
Liu	Pengfei	Other; Baylor Genetics	Identifying repeats and structural variants underlying complex phenotypes	Sequencing individual genomes with recurrent deletions reveals allelic architecture and disease loci for autosomal recessive traits
Macken	William	Grant/Contracted Research Support (External); Medical Research Council	Mechanisms underlying identification and transcriptional control of mitochondrial and related disorders	Clinician lead analysis of WGS data identifies missed diagnoses in suspected primary mitochondrial disease

Morava	Eva	Grant/Contracted Research Support (External); Glycomine, Cerecor. Receipt of Intellectual Property Rights/Patent Holder; Maggie's Pearl	Expanding the frontiers of congenital disorders of glycosylation	Bringing CDG therapies from the bench to the bedside
Parikh	Aparna	Equity C2I genomics for SAB member, Checkmate 2020 one-time advisory board Eli Lilly personal consulting, Pfizer personal consulting, Roche DSMC Data Safety Monitoring Committee; Inivata one time advisory board 2021, Natera 2020 Advisory Board 2020). Institutional Research for: Puretech, PMV Pharma, Plexxicon, Takeda, BMS, Novartis, Mirati, Genentech, Daiichi Sankyo	Cell-free DNA: Biological and clinical applications	cfDNA in gastrointestinal cancers: are we ready?
Perera	Minoli	Royalty(ies)/Honoraria; Illumina	Cross-ancestry genomic research: Time to bridge the gap	The role of local ancestry and DNA methylation in gene expression in African Americans
Pollin	Toni	Grant/Research Support (External); Organization; Regeneron Pharmaceuticals	Listening to the people	
Ritchie	Marylyn	Consultant/Consulting Fees/Other Remuneration; CIPHEROME, Goldfinch Bio	Insights from large-scale studies of diverse phenotypes and populations	
Royal	Charmaine	Consultant/Consulting Fees/Other Remuneration; Illumina	Presidential Symposium: Perspectives on diversity, race, inclusion and equity Novel insights into gene-environment interactions from environmental influences on Mendelian disease phenotypes	Sickle Cell Disease: A gene-environment model for understanding and addressing health disparities
Sreenath Nagamani	Sandesh	Grant/Contracted Research Support (External); Sanofi Genzyme	Featured Plenary Abstract Session III	Targeting transforming growth factor- β for treatment of osteogenesis imperfecta
Turchin	Michael	Salary/Employment: Bristol Meyers Squibb	Polygenic risk prediction in diverse populations: Leveraging ancestry and family history	A trans-ancestry polygenic test to predict severe hypercholesterolemia in diverse ancestry patients
Worthey	Liz	Royalty(ies)/Honoraria; AbbVie.	Technologies for optimizing impact of precision animal models for variants of uncertain significance or therapeutic development	Application of data science and computational biology approaches: from variant impact to therapeutic selection.

Yu	Timothy	What was received; Speaker honorarium, Speaker honorarium, consulting fees.; Roles; Speaker, Speaker, scientific advisor	N-of-1 precision medicine in the era of antisense oligonucleotide therapeutics	Early forays in individualized genomic medicine, the milasen example & beyond
Zhu	Kaiyi	Salary/Employment: Gilead Sciences	Mechanisms of fetal CNS development	Joint transcriptome and chromatin accessibility profiling of the developing human brain cortex at the single cell level

All other faculty not listed above have no financial relationships with ineligible companies to disclose.

The program committee [and abstract reviewers](#) reported the following relevant financial relationships with ineligible entities related to the educational content of this CE activity:

Last Name	First Name	Financial Relationships/Roles
Campbell	Colleen	National Society of Genetic Counselors in 2021; Secretary/Treasurer/ Board Member; Joan H. Marks Graduate Program in Human Genetics at Sarah Lawrence College; On the External Advisory Board Member
Garcia-Bassets	Ivan	Universal Sequencing Technology
Gharavi	Ali	Grant/Contracted Research Support (External); Renal research Institute, Natera, Frenova. Consultant/Consulting Fees/Other Remuneration; Goldfinch Bio
Hanchard	Neil	GLG; Single event Advisory panel for Transcriptomics
Harrison	Steven	Salary/Employment; Ambry Genetics
Karczewski	Konrad	Consultant/Consulting Fees/Other Remuneration; Vor Biopharma
Kitzman	Jacob	Consultant/Consulting Fees/Other Remuneration; Scientific Advisor, MyOme Inc
McBride	Kim	Grant/Contracted Research Support (External); Biomarin, Abeona, Homology Medicine
Montgomery	Stephan	MyOme Inc; Scientific Advisory Board Member
Morava-Kozicz	Eva	Royalty(ies)/Honoraria; BioBridge. Other; Maggie's Pearl
Niihori	Tetsuya	Grant/Contracted Research Support (External); Japan Foundation for Pediatric Research
Ozelius	Laurie	Royalty(ies)/Honoraria; Athena Diagnostics, Inc.
Parker	Stephen	Consultant/Consulting Fees/Other Remuneration; Pfizer
Pollin	Toni	Grant/Contracted Research Support (External); Regeneron Pharmaceuticals.
Razaghi	Roham	Salary/Employment; Gilead Sciences Inc.
Ritchie	Marylyn	Consultant/Consulting Fees/Other Remuneration; CIPHEROME, Goldfinch Bio
Roman	Tamara	Salary/Employment; UNC Medical Center Chapel Hill
Schmidt	Monika	Royalty(ies)/Honoraria; Elsevier Academic Press
Tanigawa	Yosuke	Consultant/Consulting Fees/Other Remuneration; CIPHEROME, Inc.
Thacker	Stetson	Salary/Employment; Genomonology

Torkamani	Ali	Major Stockholder/Ownership Interest; geneXwell. Grant/Contracted Research Support (External); Takeda. Salary/Employment; The Scripps Research Institute. Non-remunerative positions or influence such as officer, board member, trustee, or public spokesperson; Protocol Intelligence, Vivid Genomics
Yang	Rose	Macrogenics Inc; Employee
Yu	Timothy	Royalty(ies)/Honoraria; Takeda Pharmaceuticals, Alnylam. Consultant/Consulting Fees/Other Remuneration; Eisai, Biomarin, GeneTx

All other planners not listed above have no financial relationships with ineligible companies to disclose.

The PIM planners and others have nothing to disclose. The ASHG Staff have nothing to disclose.