CONTINUING EDUCATION: CME AND CEU
Poster Sessions are not eligible for CME or CEU credits

For questions, contact ashgmeetings@ashg.org.

Each attendee seeking credit must claim their time spent in a session by using the online Self-Reporting system. After the meeting, you can access the self-reporting system by going www.ashg.org/2017meeting and click on education credits link to complete the application. The number of CME or CEUs awarded for each session are included in the session description.

Education Credits

Continuing Medical Education (CME) Credit

Accreditation
This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American College of Medical Genetics and Genomics and American Society of Human Genetics. The American College of Medical Genetics and Genomics is accredited by the ACCME to provide continuing medical education for physicians.

Credit Designation
The American College of Medical Genetics and Genomics designates this live activity for a maximum of 31 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

CE (Continuing Education for non-physicians): This activity has been approved for CE credits. * This certificate is accepted by the ABMGG for certification.

Genetic Counselors Credits
The National Society of Genetic Counselors (NSGC) has authorized to offer up to 3.1 CEUs or 31. Category 1 contact hours for the event 2017 ASHG Meeting. The American Board of Genetic Counseling (ABGC) will accept CEUs earned at this program for the purposes of genetic counselor certification and recertification. (Maximum 3.1 CEUs or 31 Category 1 contact hours)

Genetic counselors MUST claim credit hours online by December 1, 2017. CEU certificates are sent from the National Society of Genetic Counseling. They will be emailed by NSGC after ASHG sends the report to NSGC of those who have claimed CEUs.

P.A.C.E. CEU's – Laboratory Directors and Laboratory Personnel
ASHG is approved as a provider of continuing education programs in the clinical laboratory sciences by the American Society for Clinical Laboratory Science (ASCLS) Professional Acknowledgment for Continuing Education (P.A.C.E.®) Program. The American Society of Human Genetics designates the 2017 ASHG Annual Meeting for a maximum 31 contact hours. ASHG is approved by the California Department of Health Services through the ASCLS P.A.C.E.® Program as CE Provider # 0006 (31.0 P.A.C.E.).

Content Validation and Fair Balance

1. ASHG follows the ACCME policy on Content Validation for CME activities, which requires:
a) All recommendations involving clinical medicine must be based on evidence that is accepted within the profession of medicine as adequate justification for their indications and contraindications in the care of patients. 
b) All scientific research referred to, reported or used in CME in support or justification of patient care recommendations must conform to the generally accepted standards of experimental design, data collection and analysis.

2. Activities that fall outside the definition of CME/CE; “Educational activities that serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients, the public, or the profession” (source: ACCME and AMA) will not be certified for credit. CME activities that promote recommendations, treatment, or manners of practicing medicine or pharmacy that are not within the definition of CME/CE or, are known to have risks or dangers that outweigh the benefits or, are known to be ineffective in the treatment of patients.

3. Presentations and CME/CE activity materials must give a balanced view of therapeutic options; use of generic names will contribute to this impartiality. If the CME/CE educational materials or content includes trade names, where available, trade names from several companies must be used.

Off-Label or Unapproved Use of Drugs or Devices
It is the policy of the ASHG to require the disclosure of all references to off-label or unapproved uses of drugs or devices prior to the presentation of educational content. The audience is advised that this continuing medical education activity may contain reference(s) to off-label or unapproved uses of drugs or devices. Please consult the prescribing information for full disclosure of approved uses.

Disclosure Statement
In accordance with the Accreditation Council for Continuing Medical Education (ACCME) and the policy of the American Society of Human Genetics (ASHG), speakers and moderators presenting in sessions that offer CME and CEU credit must disclose, prior to the start of their presentations, the existence of any relevant financial interest and/or other relationship(s) they might have with the manufacturer(s) or provider(s) of any commercial product(s) or service(s), including diagnostic laboratories to be discussed during their presentation. These disclosures are included below. Speakers with disclosures are required to provide a slide that states any relevant financial relationships (or lack thereof), and to state these to the audience at the start of their presentation. All disclosures have been peer reviewed by the ASHG Program Committee subcommittee.

Diagnostic and Testing Labs and Commercial Interest
ASHG CME activities adhere to the Accreditation Council for Continuing Medical Education (ACCME) Standards for Commercial Support. A commercial interest is any entity producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on, patients. The ACCME does not consider providers of clinical service directly to patients to be commercial interests - unless the provider of clinical service is owned, or controlled by, an ACCME-defined commercial interest. Diagnostic laboratories, whether not-for-profit or for-profit, that are not owned by device manufacturers are exempted from this CME requirement. However, they are still expected to be fair and balanced in their presentations.

HIPAA Compliance by Speakers
The ASHG supports medical information privacy. While the ASHG is not a “covered entity” under HIPAA 1996 and therefore is not required to meet these standards, ASHG wishes to take reasonable steps to ensure that the presentation of individually identifiable health information at ASHG-sponsored events has been properly authorized. All presenters have completed a form indicating whether they intend to present any form of individually identifiable healthcare information. If so, they were asked either to attest that a HIPAA-compliant consent form is on file at their institution, or to send ASHG a copy of the ASHG HIPAA compliance form. This information is on record at the ASHG Administrative Office and will be made available upon request.

Disclaimer
The opinions and recommendations expressed by faculty, authors, and other experts whose input is included in this program are their own and do not necessarily represent the viewpoint of ASHG.
MODERATOR, SPEAKER, COMMITTEE MEMBERS AND AUTHOR DISCLOSURES

In accordance with the Accreditation Council for Continuing Medical Education through the joint providership of the American College of Medical Genetics and Genomics (ACMG) and ASHG, all faculty, speakers, and moderators must disclose any relevant financial interest and/or other relationship(s) they might have with the manufacturer(s) or provider(s) of any commercial product(s) or service(s) to be discussed during their presentation: receiving a salary, royalty, intellectual property rights, consulting fee, honoraria, ownership interest (e.g., stocks, stock options, or other ownership interest, excluding diversified mutual funds), or other financial benefit. Financial benefits are usually associated with roles such as employment, management position, independent contractor (including contracted research), consulting, speaking and teaching, membership on advisory committees or review panels, board membership, and other activities for which remuneration is received or expected. If a member of the ASHG 2017 Program Committee indicated a relationship that could be perceived by some as a real or apparent conflict of interest in planning the program, the committee member refrained from discussion.

**Speaker Conflict of Interest:** An alphabetical list of committee members involved in the programming of the meeting, as well as invited session speakers and platform presenters who have disclosed relevant financial interest(s) or other relationships with companies or organizations that may be perceived to bias the presentation, is below. This information allows the listener/attendee to be fully knowledgeable in evaluating the presentation, and is required to meet CME and CEU requirements. All speakers have a conflict of interest slide automatically inserted into their presentation. For speakers who indicated a conflict, the disclosure information they provided during abstract submission or completion of the online conflict of interest form is used automatically. The following presenters have indicated a relationship that within the context of their presentation could be perceived by some as a real or apparent conflict of interest, but do not consider that it will influence their presentation. The disclosures have been reviewed and conflict of interest resolved. The number following each company name represents the specific relationship from the list below.

1. Major stockholder/ownership interest
2. Grant/Research Support (External)
3. Salary/Employment/Royalty(ies)/Honoraria
4. Consultant/consulting fees/other remuneration
5. Speakers bureau
6. Non-remunerative positions of influence such as officer, board member, trustee, or public speakerperson
7. Receipt of intellectual property
8. Other ________________________________

●If a presentation is in a platform session, the abstract number is added in parentheses.
●Disclosures will also be included in presentation slides.

PC=Program Committee; SI=Social Issues Committee; IE=Information and Education Committee; S=Staff; SR=Slide Review Committee

**Committee Member Disclosures**

Carroll, June (IE) Assurex - 2
Dewan, Andrew (PC) Health Management Academy - 4
Giovanni, Monica (IE) – Mc-Graw Hill Publisher - 3
Higgins, Anne (PC) Quest Diagnostics - 4
Ponting, Chris (PC) WT Saner Institute -2
Martin, Christa (PC) – NIH -2; Simons Foundation -2; Jackson Laboratory – 4; ACMGG -6; Misericordia Univ. Autism Center -6
Mendenhall, Eric (PC) – Mass General Hospital - 7
Committee Members with Nothing to Disclose

The following is an alphabetical list of program providers who had no relevant financial relationship to disclose.

Aisch, Reid (PC)    Doucet, John (IE)    McInerney, Joseph (S)
Allain, Dawn (PC)    Delozier, Dawn (IE)    Mefford, Heather (PC)
Anderson, William (S)    Dougherty, Michael (S/IE)    Minhinnett, Pauline (S)
Arking, Dan (PC)    Furey, Terrence (PC)    Musunuru, Kiran (PC)
Avramopoulos, Dimitrios (PC)    Gambello, Michael (PC)    Newman, Dina (IE)
Balkite, Elizabeth (IE)    Garrison, Nanibaa’ (SI)    Norris, Alexi (IE)
Barker, Lucia (S)    Gelbart, Marnie (IE)    O’Leary, James (S)
Bombard, Yvonne (SI)    Godfrey, Maurice (IE)    Ormond, Kelly (SI)
Brothers, Kyle B. (SI)    Greene, Emily (S)    Padmanabhan, Nalini (S)
Chanock, Stephen (PC)    Grubs, Robin (PC)    Pal, Tuya (IE)
Chen, Yimang (S)    Hassold, Terry (PC)    Pulliam, Kanika (S)
Cody, Jannine (IE)    Jamal, Lella (SI)    Scacheri, Peter (PC/SR)
Corradin, Olivia (PC)    Kidd, Jeffrey (PC)    Scholes, Derek (S/SI)
Crawford, Greg (PC)    Klein, Ophir (PC)    Sklar, Pamela (PC)
Cummings, Besse (PC)    Lappalainen, Tuuli (PC)    Tang, Hua (PC)
Davis, Erica (PC)    Levy, Howard (SI)    Tabor, Holly (S)
Dewan, Andrew (PC)    McCormick, Jennifer B (SI)    Wheeler, David (PC)
Doherty, Daniel (PC)    McGovern, Peggy (S)    Zhou, Wujun (S)

INVITED SPEAKER AND PLATFORM SPEAKER DISCLOSURES

Following is a list of invited and platform speakers who disclosed a commercial relationship

Poster author conflicts are not listed because we do not offer educational credits for posters

Alaimo, J. T., Baylor Genetics Laboratories - 8; My academic department derives revenue from genetic testing offered at a commercial entity (77)
Boutet, S. C., 10x Genomics - 3, 8; Hold stock options (211)
Brudno, M., Gene42 Inc - 1 (Session 55)
Castellani, C. A., Canadian Institutes of Health Research (CIHR) - 2 (258)
Chang, D., Genentech - 3 (144)
DeBerardinis, R. J., Agios Pharmaceuticals - 4; General Metabolics - 1 (Session 82)
Diogo, D., Merck & Co., Inc. - 3 (363)
Dolzhenko, E., Illumina Inc. - 3 (119)
Dong, X., SingulOmics Corp. - 1; Spouse/Partner, SingulOmics Corp. - 1 (210)
Eichler, E., DNAnexus, Inc. - 8; Scientific advisory board (SAB) member (Session 53)
Esplin, E. D., Invitae - 3 (130)
Funt, S., Kite Pharma - 1; Urogen Pharma - 1; Genentech - 2; AstraZeneca - 2 (Session 79)
Gosalia, N., Regeneron Pharmaceuticals Inc. - 3 (100)
Hamosh, A., NHGRI/NIH - 2 (Session 55)
Haverfield, E., Invitae Corporation - 1, 3 (222)
Howie, B., Adaptive Biotechnologies Corp. - 1, 3 (Session 79)
Hurles, M., Congenica Limited - 1, 4, 6 (Session 55); Congenica Limited - 1, 4, 6 (Session 708)
Kay, D. M., Biogen, Idec - 2 (171)
Kaye, L., Ferring Pharmaceuticals, Inc - 2 (Session 76)
Kazazian, H., Transposagen, Inc. - 6 (Session 80)
Kennedy, S. R., TwinStrand Biosciences - 1, 4; Department of Defense - 2 (Session 80)
Kwok, P., Bionano Genomics, Inc. - 6 (26)
Lane, A. A., Stemline Therapeutics - 2; N-of-one - 4 (Session 78)
Li, J., Baylor Genetics - 3 (91)
Lincoln, S., Invitae - 1, 3; Illumina - 1 (230)
Lupski, J. R., Regeneron Pharmaceuticals - 4; Lasergen, Inc. - 8; 23 and Me - 8; Stock Options #Stock Ownership (Session 81)
MacArthur, D., Goldfinch Bio - 1, 4 (Session 49)
Magis, A., Arivale, Inc - 3 (343)
Mulqueen, R., Illumina, Inc. - 7 (212)
Narravula, A., CENTOGENE AG - 3 (217)
Nelson, M. R., GSK - 3 (361)
Plon, S. E., Baylor Genetics Laboratories - 6 (129)
Posey, J. E., Baylor Genetics - 8; Joint venture with my employer, BCM (34)
Qian, D., Ambry Genetics - 3 (82)
Rahman, N., Astra Zeneca - 4; Genomics plc - 4 (65)
Sathirapongsasuti, F., 23andMe Inc. - 3 (176)
Shringarpure, S., 23andMe Inc - 3 (160)
Song, K., GSK - 3 (341)
Staples, J., Regeneron Pharmaceuticals - 1, 3 (99)
Stuenkel, A. J., Ambry Genetics - 3 (52)
Tokita, E., Illumina Inc - 3 (218)
Tokita, M. J., Baylor Genetics - 8; Clinical molecular genetics fellowship program (43)
Torene, R., GeneDx - 3 (41)
Vadaparampil, S. T., Myriad Genetics Laboratories - 2 (70)
Vander Heiden, M., Agios Pharmaceuticals - 6; Aeglea Bio-Therapeutics - 6 (Session 82)
Weisenfeld, N. I., 10x Genomics, Inc. - 8; hold stock options (173)
Yerges-Armstrong, L. M., GlaxoSmithKline - 3 (364)

Following is an alphabetical list of invited session and platform speakers who have no relevant financial relationship(s) to disclose.

Abdalla, Moustafa
Adam, Shelin
Akbari, Ali
Akula, Nirmala
Albuisson, Juliette
Andreolletti, Gaia
Ang Houle, Armande
Armsby, Alyssa
Assimes, Themistocles
Atwal, Paldeep
Austin, Jehannine
Aybar, Umut
Bainbridge, Matthew
Baker, Samuel
Bakhtiari, Somayeh
Bamshad, Michael
Banchereau, Jacques
Banday, A Rouf
Barseghyan, Hayk
Bauer, Christopher
Beauchamp, Jonathan
Beaudet, Arthur
Beesley, Jonathan
Below, Jennifer
Bentley, Amy
Bhattacharya, Sanchita
Bhoj, Elizabeth
Bien, Stephanie
Biesecker, Barbara
Bis, Dana
Blangero, John
Blekhman, Ran
Bonder, Marc Jan
Borel, Christelle
Breuss, Martin
Brew, Benjamin
Brown, Carolyn
Brown, Christopher
Brue, Angeles
Caliskan, Minal
Campbell, Ian
Campeau, Philippe
Capra, John (Tony)
Carmona Mora, Paulina
Carvalho, Claudia
Castel, Stephanie
Ceyhan-Birsoy, Ozge
Chakravorty, Samya
Chatterjee, Sumantra
Chen, Anlu
Chen, Danfeng
Chen, Lin
Chen, Wei-Min
Chen, Xun
Chiang, Charleston
Choi, Jiyeon
Chong, Jessica
Chowdhury, Shimul
Chung, Wendy
Clark, David
Coban Akdemir, Zeynep
Cohain, Ariella
Colbran, Laura
Coleman, Jonathan
Collins, Francis
Concato, John
Coon, Hilary
Costello, Maura
Cox, Nancy
Cragun, Deborah
Crawford, Nicholas
Cremona, Maria
Cretu Stancu, Mircea
Crowe, James
Cuellar-Partida, Gabriel
Cummings, Besse
Cunningham, Sarah
Daly, Mark
Davenport, Emily
De Andrade, Kelvin Cesar
De Roeck, Arne
McBride, Kim
McCabe, Edward
McCague, Allison
McGinn, Daniel
Mears, Emily
Medland, Sarah
Melki, Judith
Meltz Steinberg, Karyn
Meng, Linyan
Mesman, Romy
Miao, Zong
Mias, George
Mighell, Taylor
Mikulasova, Aneta
Miller, Andrew
Miller, Clint
Milo Rasouly, Hila
Mirshahi, Uyenlinh
Mokhe, Karen
Moreno-De-Luca, Andres
Moy, Winton
Moyer, Cassandra
Mucaki, Eliseos
Mukherjee, Semanti
Mullegama, Sureni
Mulvihill, John
Nakayama, Tojo
Nallamilli, Babi Ramesh Reddy
Nandakumar, Satish
Natarajan, Pradeep
Nevin, Zachary
Nobrega, Marcelo
Norris, Alexis
O'Connor, Luke
O'Connor, Timothy
O'Donnell-Luria, Anne
Ong, Jue Sheng
Ongen, Halit
Pagant, Silvere
Palamara, Pier
Pan, David
Park, Jihwan
Park, Yongjin
Paul, Antoine
Pellicore, Matthew
Perez-Alcantara, Marta
Perfito, Nicole
Pet, Douglas
Peterson, Roseann
Piard, Juliette
Pineda, Silvia
Pizzo, Lucilla
Pollard, Martin
Poppen, Alex
Popadin, Konstantin
Posavad, Christine
Prasad, Rashmi
Prokisch, Holger
Pull, Sara
Qi, Zhihua
Quiver, Melanie
Radke, David
Rahm, Alanna
Raj, Srilakshmi
Ralph, Hannah
Ramdhani, Satesh
Rasmussen, Sonja
Raulerson, Chelsea
Ray, Debashree
Rebelo, Adriana
Reijnders, Margot
Reshef, Yakir
Reyna, Joaquín
Richter, Felix
Ripatti, Samuli
Robinson, Peter
Robles, Christopher
Romanoski, Casey
Rosenfeld, Jeffrey
Rubel, Meagan
Sadikovic, Bekim
Saeed, Sadia
Saferali, Aabida
Samango-Sprouse, Carole
Sasani, Tom
Satterstrom, F. Kyle
Savatt, Juliann
Schmitz-Abe, Klaus
Schutte, Brian
Schüle, Rebecca
Sebat, Jonathan
Sedlazeck, Fritz
Sharp, Andrew
Shen, Sipeng
Shi, Lisa
Shin, Joseph
Shin, Junghoon
Shirts, Brian
Shor, Tal
Sieberts, Solveig
Singh, Mayanglambam Dhruba
Sinnott-Armstrong, Nasa
Sisoudiya, Saumya
Skol, Andrew
Slavotinek, Anne
Sloan, Jennifer
Smith, Cynthia
Smith, Jeffrey
Snijders Blok, Lot
Snyder, Michael
Sobreira, Nara
Sorokin, Elena
Srivastava, Anshika
Stadler, Zsofia
Stankiewicz, Pawel
Stefansson, Kári
Stern, Aaron
Stone, Annjanette
Stott, Ryan
Stranger, Barbara
Strober, Benjamin
Sun, Benjamin
Szafranski, Przemyslaw
Tekola Ayele, Fasil
Telis, Natalie
Thiel, Christian
Thompson, Emma
Thompson, Michelle
Topka, Sabine
Trapnell, Cole
Tuke, Marcus
Turbitt, Erin
van Haaften, Gijs
Vasconcelos, Pedro
Veenstra, David
Veerapen, Kumar
Velez Edwards, Digna
Verma, Anurag
Vijai, Joseph
Vijay, Jinchu
Viñuela, Ana
Voight, Benjamin
Võsa, Urmo
Vossen, Liesbeth
Wadelius, Mia
Wainberg, Michael
Wakeling, Matthew
Walker, Susan
Walters-Sen, Lauren
Wang, Danxin
Wang, Jinghu
Wang, Xiao
Wangler, Michael
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