2017 | ACMG Annual Clinical Genetics Meeting

ACMG American College of Medical Genetics and Genomics
Translating Genes Into Health®

NAMA 2.0 at the 2017 ACMG Annual Meeting

Held in Phoenix, Arizona, March 21-25, 2017

Date of Release: April 3, 2017
Expiration Date: April 3, 2020 (CME, NSGC, P.A.C.E.®)
Estimate Time of Completion: 4.5 hours
Course must be completed by the expiration dates

COURSE DESCRIPTION

By popular demand, NAMA at the SIMD is back again this year. The North American Metabolic Academy is a philanthropically funded intensive training program for Medical Genetics residents. In this session, faculty from NAMA will present a selection of tropics from the NAMA curriculum that will allow ACMG attendees to take advantage of this unique program to update geneticists on physiology and clinical management of disorders of carbohydrate and fatty acid metabolism. The session will begin with a basic presentation on hypoglycemia and gluconeogenesis from world-renowned biochemical geneticist Dr. Jean-Marie Saudubray, and will use the NAMA curriculum to provide talks on glycogen storage disorders and fatty acid oxidation disorders. It will end with an interactive session including audience participation on applying these principles to the diagnosis and management of patients with inborn errors of metabolism.
Dr. Georgianne Arnold (Introduction to Hypoglycemia and Gluconeogenesis) declined to release her slides but you will be able to listen to her presentation.

LEARNING OBJECTIVES

At the conclusion of this course, participants should be able to:

- Characterize the basic mechanisms of glucose homeostasis
- Differentiate among the various glycogen storage disorders
- Recognize basic principles of fatty acid oxidation disorders
- Apply basic principles of glucose and fatty acid metabolism to disorders of glucose homeostasis
- Apply principles of glucose homeostasis to diagnose the cause of hypoglycemia
- Recognize the role of lactose and fructose restriction in glycogen storage disease type 1
- List the most common disorders of fatty acid oxidation
- Discuss the role of carnitine in the treatment of disorders of fatty acid oxidation
- Characterize the cause of hypoglycemia in fatty acid oxidation disorders

TARGET AUDIENCE

All healthcare professionals interested in the diagnosis, management, treatment and prevention of genetic conditions and increasing their understanding of the genetic basis of common, chronic health problems affecting both children and adults will find the programming applicable to their practice. These select sessions from the ACMG Annual Meeting are targeted for the following professionals:

- Medical and clinical geneticists
- Physicians of all specialties with an interest in genetics, genomics and the genetic basis of disease
- Genetic counselors
- Laboratory geneticists, directors, technicians and technologists
- Researchers
- Pathologists
- Educators
- Nurses
- Dietitians
- Physician assistants
- Biotechnology and pharmaceutical development professionals
- Fellows, Trainees and Students
- Public health professionals
- Genetic/consumer advocates
- Others with an interest in the science and art of medical genetics and genomics

SESSIONS

- Introductions and Short Course Overview- Mark Korson, MD, Jerry Vockley, MD, PhD, FACMG
- Introduction to Hypoglycemia and Gluconeogenesis: Georgianne Arnold, MD, FACMG
- Primer on Fatty Acid Oxidation Defects: Jerry Vockley, MD, PhD, FACMG
- Interactive Workshop on Hypoglycemia: Mark Korson, MD
- Primer on Glycogen Storage Diseases: David Kronn, MD, FACMG

Accreditation:

The American College of Medical Genetics and Genomics is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Credit Designation:

The American College of Medical Genetics and Genomics designates this activity for a maximum of 4.5 *AMA PRA Category 1 Credit*s™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Genetic Counselor Credit

The National Society of Genetic Counselors (NSGC) has authorized American College of Medical Genetics and Genomics to offer up to 4.5 Category 1 contact hours for this OnDemand course. The American Board of Genetic Counseling (ABGC) will accept CEUs earned for this course for the purposes of genetic counselor certification and recertification. Reporting of credits is sent to NSGC quarterly. Additional fee (~$25) applies for NSGC credit that is billed by NSGC.

P.A.C.E. CEUs – Laboratory Directors and Laboratory Personnel

ACMG 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 College of Medical Genetics and Genomics designates this course for a maximum of 4.5 contact hours. ACMG is approved by the Florida Board of Clinical Laboratory Personnel as CE Provider. ACMG is approved by the California Department of Health Services through the ASCLS P.A.C.E.® Program as CE Provider #275.

HIPAA Compliance

The ACMG supports medical information privacy. While the ACMG is not a "covered entity" under HIPAA 1996 and therefore is not required to meet these standards, ACMG wishes to take reasonable steps to ensure that the presentation of individually identifiable health information at ACMG-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 ACMG a copy of the ACMG HIPAA compliance form. This information is on record at the ACMG Administrative Office and will be made available on request.

Content Validation

ACMG follows the ACCME policy on Content Validation for CME activities, which requires:

Content Validation and Fair Balance

1. ACMG 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 Uses of Products

When an off-label use of a product, or an investigational use not yet approved for any purpose, is discussed during an educational activity, the accredited sponsor shall require the speaker to disclose that the product is not labeled for the use under discussion, or that the product is still investigational. Discussions of such uses shall focus on those uses that have been subject of objective investigation.

Disclaimer: *ACMG educational programs are designed primarily as an educational tool for health care providers who wish to increase their understanding of the application of genomic technologies to patient care. The ACMG does not endorse, or recommend the use of this educational program to make patient diagnoses, particular by individuals not trained in medical genetics. Adherence to the information provided in these programs does not necessarily ensure a*

successful diagnostic outcome. The program should not be considered inclusive of all proper procedures and tests or exclusive of other procedures and tests that are reasonably directed at obtaining the same results. In determining the propriety of any specific procedure or test, a healthcare provider should apply his or her own professional judgment to the specific clinical circumstances presented by the individual patient or specimen.

2017 ACMG Program and Education Committee Members Disclosures

Members of the ACMG Staff, Education and Program Committees involved in planning the 2017 ACMG Annual Clinical Genetics Meeting are required to disclose relevant relationships which could be perceived by some as a real or apparent conflict of interest in planning. All disclosures have been reviewed and conflicts of interest resolved by the Education Committee COI sub-committee or the Executive Director and CME Associate Director and conflicts of interest are disclosed. In the cases where a conflict existed then the committee member refrained from the discussion.

Following is a list of program and education committee members who have disclosed one or more such relationships and names of companies with which those relationships exist:

EC = Education Committee; PC = Program Committee; S = ACMG Staff

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 spokesperson (All Committee Members Below are on ACMG Committees –Members with other affiliations are listed) 7. Receipt of intellectual property 8. Other

Georgianne L. Arnold, MD, FACMG - Horizon, 2; Recordati, 2; Biomarin, 2; Actelion, 2; SIMD, 6; ACGME, 6; AAP, 6; ASHG, 6 (PC)
Karen W. Gripp, MD, FACMG – Wiley Publishing Inc., 3; FDNA, 4; Novartis, 4 (PC)
Fuki M. Hisama, MD, FACMG – Horizon Pharmaceuticals, 4; ABMGG, 6 (PC)
Christine A. Curtis, PhD, FACMG - CSI Laboratories, 3 (EC)
Thomas E. Mullen, PhD, MS, FACMG - Good Start Genetics Inc., 3 (EC)
Christian P. Schaaf, MD, PhD, FACMG - Springer Publishing Company, 3 (PC), (EC)
Katrina M. Dipple, MD, PhD, FACMG – ACGME, 6; AAP, 6; ASHG, 6; LA BioMed DSMB, 4; SIMD 6 (PC)

Following is a list of committee, education members and staff who have no relationships to disclose:

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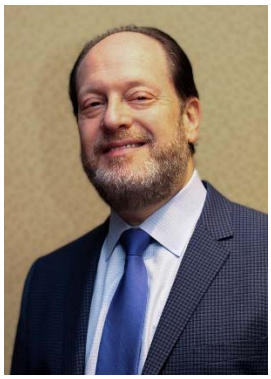
Michael S. Watson, PhD, FACMG (PC), (EC), (S)
Penelope Freire, CMP (PC), (S)

SPEAKERS AND MODERATORS

Faculty Disclosures:

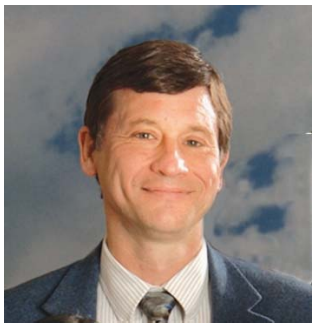
As a sponsor accredited by the ACCME, the American College of Medical Genetics and Genomics must ensure balance, independence, objectivity and scientific rigor in all its sponsored educational activities. All faculty participating in a CME-certified activity are expected to disclose to the audience any relevant financial interest(s) or other relationship(s) with the manufacturer(s) of any commercial product(s), provider(s) of commercial services or any commercial supporters, including diagnostic laboratories, of the activity discussed in an educational presentation. Relevant financial interest(s) or other relationship(s) can include such things as grants or research support, consultancy, major stock holder, etc. The intent of this disclosure is not to prevent a planner or speaker with a relevant financial or other relationship from course planning or making a presentation, but rather to provide learners with information on which they can make their own judgments. It remains for the audience to determine whether the speaker's interests or relationships may influence the presentation with regard to exposition or conclusion. All conflicts of interests have been reviewed and resolved by the education and CME subcommittee.

Moderator/Speaker: Mark Korson, MD,
Medical Director, Genetic Metabolic Center for Education
No financial relationships to disclose.



Dr. Korson graduated from the University of Toronto School of Medicine and completed his pediatric residency nearby at The Hospital for Sick Children. After a fellowship in genetics and metabolism at Boston's Children's Hospital, he became director of the Metabolism Clinic at Children's until 2000. In 2000, Dr. Korson became director of the Metabolism Service at Tufts Medical Center's Floating Hospital for Children, as well as Associate Professor of Pediatrics at Tufts University School of Medicine until 2014. In 2015, Dr. Korson co-founded the Genetic Metabolic Center for Education (GMCE), a comprehensive, multi-modal initiative for improving the level of care for children and adults with metabolic disease. Dr. Korson promotes an educational approach to address the growing crisis in metabolic health care due to the shortage of available clinicians to treat this patient community. Before the GMCE was established, between 2007 and 2011, Dr. Korson directed the Metabolic Outreach Service, based at Tufts Medical Center, for which he traveled on a regular basis to five teaching hospitals in the northeastern US that had no on-site metabolic service. Also in 2007, Dr. Korson co-founded the North American Metabolic Academy, an annual one-week intensive course about metabolic disease for genetic and metabolic trainees; to date, more than half of all American genetic trainees have enrolled in this course. NAMA is sponsored by the Society for Inherited Metabolic Disorders.

Moderator/Speaker: Jerry Vockley, MD, PhD, FACMG
University of Pittsburgh
Financial relationships to disclose: (Self) research grants related to Fatty Acid Oxidation but does not received personal income for any of these disorders.



Dr. Vockley received his undergraduate degree at Carnegie-Mellon University in Pittsburgh, Pennsylvania, and received his degree in Medicine and Genetics from the University of Pennsylvania School of Medicine. He completed his pediatric residency at the University of Colorado Health Science Center, and his postdoctoral fellowship at Yale University School of Medicine. Before assuming his current position, Dr. Vockley was Chair of Medical Genetics in the Mayo Clinic School of Medicine. He is currently the Cleveland Family Professor of Pediatric Research, and Chief of Medical Genetics at the University of Pittsburgh. He is the founder of the Plain Communities Translational Medicine program at the Children's Hospital of Pittsburgh. Dr. Vockley is internationally recognized as a leader in the field of inborn errors of metabolism. His current research focuses on the molecular architecture of mitochondrial energy metabolism, in which he is breaking new ground in describing the role of dysfunction of mitochondrial energy metabolism in common conditions. Dr. Vockley has served on numerous national and international scientific boards including the Advisory Committee (to the Secretary of Health and Human Services) on Heritable Disorders in Newborns and Children where he was chair of the technology committee. He also serves as chair of the Pennsylvania State Newborn Screening Advisory Committee and the American College of Medical Genetics Therapeutics Committee. He is a past president of the Society for the Inherited Metabolic Disorders (SIMD), and is the co-founder of the North American Metabolic Academy. He is founder of the International Network on Fatty Acid Oxidation Research and Management (INFORM). He is also a volunteer medical advisor for several parent and family support groups including the Fatty Acid Oxidation Family Support Group, Save Babies through Screening, United Mitochondrial Disease Foundation, and the Organic Acidemia Support Group.

Speaker: Georgianne Arnold, MD, FACMG
Associate Medical Director, Genetic Metabolic Center for Education
Financial relationships to disclose: (Self) Grant research support from Horizon, Recordati, Biomarin, Actelion, ACGME, SIMD, AAP, ASHG

Dr. Georgianne Arnold is Associate Medical Director of the Genetic Metabolic Center for Education and is active in both the consultative services and educational programs. Dr. Arnold previously served as Professor of Pediatrics as well as Clinical Director of the Division of Medical Genetics (2010 – 2016) at the University of Pittsburgh Medical Center. She brings 25 years of experience in the diagnosis and care of patients with inborn errors of metabolism. She has extensive experience in teaching including students, residents and faculty, and was a charter faculty member at

the North American Metabolic Academy (the premier training conference for genetic trainees on this continent). Dr. Arnold has published more than 50 peer reviewed articles and book chapters, has presented papers at national and international meetings, and was awarded the Shapira Award in 2010 for “A Delphi clinical practice protocol for the management of very long chain acyl-CoA dehydrogenase deficiency.” She is sought after as a teacher with a gift for making metabolism understandable for all audiences. Dr. Arnold graduated from SUNY Upstate Medical University and and completed pediatric residency at Children’s Memorial Hospital at Nothwestern University. She completed her fellowship in genetics and metabolism in 1991 at the University of Colorado. She was Associate Professor of Pediatrics at the University of Rochester School of Medicine and Dentistry until 2010 where she directed care for patients with metabolic and genetic disorders.

Speaker: David Kronn, MD, FACMG
Regional Medical Genetics Center
No financial relationships to disclose.

Dr. David Kronn is an Associate Professor of Pathology and Pediatrics at New York Medical College, and Director, Medical Genetics, Boston Children’s Health Physicians, Valhalla, New York. He is Director, Inherited Metabolic Disease Center and Biochemical Genetics Laboratory at Westchester Medical Center. In 1996 he established the Inherited Metabolic Disease Center at Westchester Medical Center. He is active in the New York Mid Atlantic Consortium (NYMAC), participating on their Advisory Committee, and on the Newborn Screening and Emergency Preparedness Work Group. His active areas of interest include standardization of newborn screen diagnoses and therapeutic interventions in Lysosomal Storage disorders. He is currently active in the North American Metabolic Academy (NAMA). Dr. Kronn has been named to New York Magazine’s Best Doctors.

Participation Instructions

1. Participant logs into ondemand.acmg.net
2. Once logged in the participant will access the session they would like to view. They will be asked if they would like to claim credit for the meeting, or if they will not claim credit for the meeting. Then, this information (Course description) will appear, and participant will have to attest that they have read the information. They will then click Continue.
3. After that, the participant will be able to select the credit types to claim.
4. For each session with a post-test, the participant will need to mark and complete the matching pre-test.
5. Then the participant will watch the session presentations.
6. Participant will complete viewing all session content. "Check marks" indicate which presentations have been viewed.
7. After viewing all presentations within a session, participant will click the "Claim Credit for Session" button under the CME dropdown at the top of the page.
8. Participant should take and then successfully pass the post-test. If they do not pass with a score of 80% or higher, they will have unlimited tries to pass the post-test.
9. Participant will continue the steps above to earn credits for additional sessions.

10. If a session does not have a test attached, the participant will not need to take a pre- or posttest, but will have to complete a Concurrent or Plenary session-specific evaluation to claim credit.
11. To print their certificate, the participant will click the "Print Certificate" button under the CME dropdown at the top of the page. Participant must complete the meeting evaluation (one time only) before they can access their certificate. Participant will then choose their certificate(s). The certificate(s) will be automatically updated as they earn new credits.

Stream Requirements	
Network	For best results, use a hardwired network connection instead of wireless
Full Screen Viewing	If you would like to view the webcast full screen, display the tool bar at the bottom and click the double arrow in the far right corner. The screen will enlarge to the full screen of you system. To restore the size, press the "ESC" key
Refresh Browser Window	If the webcast freezes and does not recover in 3-4 seconds, refresh browser window
Freezing or Stuttering Issues	Adjust the amount of bandwidth needed by putting your mouse anywhere over the video window. A tool bar will appear at the bottom. On the right side you will see a "HD" button, click on that button and you will see a list of options. The top is "auto", with decreasing numbers below. Select a lower bandwidth (such as 360p) to see if your webcast improves
For Technical Support call	1-800-504-5379

Mobile Viewing Requirements	
Android Devices	Android 2.3+ with Adobe Flash Player 10.2 or better installed Install Flash Player
Apple Devices	iOS 4+

Online Viewing Requirements

Bandwidth	512kbps
Required Hardware and Software	Screen resolution of 1024X768 or larger Sound card and speakers/headphones
Browser	Microsoft Internet Explorer 7.0 or better Mozilla Firefox 4 or better Safari 5 or better
Windows	Operating System: Windows 8 desktop mode, Windows 7; Windows Vista; Windows XP Service Pack 2 or 3 x86 or x64 (Browsers must be in 32-bit mode) 1.6-gigahertz (GHz) or higher processor 512MB of RAM
Mac OS	Operating System: Apple Mac OS X 10.4.8 or above Intel Core™ Duo 1.83GHz or faster processor 512MB of RAM

Registration and Fees

ondemand.acmg.net
ACMG Members and ACMG Trainees: ($100)
Non-members ($120)
Additional fee (~$25) applies for NSGC credit that is billed by NSGC.

Questions regarding CE credit should be directed to education@acmg.net.

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