UAB Department of Genetics and HudsonAlpha Institute for Biotechnology

2017 Annual Scientific Retreat

Friday, October 27, 2017 at the Jackson Center

http://www.uab.edu/medicine/genetics/research/scientific-retreats

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Speaker Biographical Sketches

Greg Cooper, PhD
Greg Cooper, PhD, is a faculty investigator at the HudsonAlpha Institute for Biotechnology. Throughout his career, Cooper has focused on understanding the structures, functions and evolutionary histories of individual human genomes and finding ways to translate that understanding into useful predictions about human health and disease. Cooper earned a PhD in genetics from Stanford University in 2006. He completed postdoctoral research at the University of Washington in 2009 before joining HudsonAlpha in 2010.

Brian Spurlock, BS
Brian has a B.S. from the University of Mississippi with majors in Biological Sciences and Chemistry. He completed an undergraduate thesis on an organometallic synthesis in the labs of Dr.s Keith Hollis and Daniell Mattern. He has also worked with AGO2, UBF, and Malagasy ants before landing in Dr. Kasturi Mitra's lab where he is a Ph.D. candidate studying the role of mitochondria in maintaining ovarian tumor initiating cells. He is also a veteran improv comic and for two years produced a live student news broadcast for Ole Miss so if he bombs today, it will not be the first time. He ultimately wants to obtain a faculty position at an undergraduate institution and split his time between teaching and research.

Nick Cochran, PhD
Nick Cochran, PhD, is a postdoctoral fellow in the lab of Richard Myers, PhD, at HudsonAlpha. He completed his undergraduate in chemical engineering at Auburn in 2010 and his PhD in neuroscience from the University of Alabama at Birmingham in 2015. Nick joined the Myers Lab in 2015 to investigate genetic risk factors and causes of neurological diseases.

Nathaniel Robin, MD
Dr. Robin is a Professor of Genetics at the University of Alabama at Birmingham. He completed his MD degree and a pediatric residency at Albert Einstein College of Medicine in Bronx, New York. He was a clinical fellow in the Division of Human Genetics and Molecular Biology and the Division of Biochemical Genetics at The Children’s Hospital of Philadelphia, Pennsylvania,

where he also served a research fellowship in the laboratory of Max Muenke.

Dr. Robin has two primary activities within the Department of Genetics. First, he has an active clinical genetics practice. While he sees patients for any indication, his main interests are in clefting and craniofacial genetics, and genetic cardiovascular disease, including Marfan syndrome. His other role is as an educator. He is the director of the genetics residency programs, and supervises all the educational activities of the department with respect to the UAB School of Medicine as well as all other UAB residency programs. Dr. Robin is also very active in the pre-clinical education at the UAB School of Medicine, where he is co-director for the Fundamentals I module and lectures throughout years 1-4. He is past President of the Medical Genetics Residency Directors' Group.

Matthew Might, PhD – Keynote Speaker

Dr. Might is the Inaugural Director of the Hugh Kaul Personalized Medicine Institute, the Hugh Kaul Endowed Chair of Personalized Medicine, and both a Professor of Medicine and Professor of Computer Science at the University of Alabama at Birmingham.

Dr. Might has served as a Strategist in the Executive Office of the President at the White House for both the prior and current administration. He is the Chief Science Officer of NGLY1.org and a Co-Founder and Scientific Advisor to Pairnomix, LLC.

He was previously an Associate Professor of Computer Science and Adjunct Associate Professor of Pharmaceutical Chemistry at the University of Utah. He received his Ph.D. in Computer Science from Georgia Tech in 2007. He tweets from @mattmight and blogs at blog.might.net.

Laura Lambert, PhD

Dr. Lambert is a postdoctoral fellow serving as Assistant Director of the Transgenic and Genetically Engineered Models (TGEMs) Core after completing her Ph.D. in Genetics, Genomics and Bioinformatics.

Her expertise is in molecular biology as related to the production and analyses of genetically modified animals, including strategic design as well as microinjection and microsurgical techniques. Her future goal is to become a laboratory director within the field of genetics.

Jozef Lazar, MD, PhD

Jozef Lazar, MD, PhD, joined the HudsonAlpha Institute for Biotechnology as a faculty investigator in 2015. Lazar earned his MD from the Medical School of Comenius University in Martin and PhD from Comenius University in Bratislava, Slovak Republic and completed a postdoctoral fellowship in genetics and biochemistry at the National Institutes of Health in Bethesda, Md. After joining the Medical College of Wisconsin in Milwaukee in 2002, Lazar found a new passion in the area of genetic dissection of complex diseases such as kidney failure, hypertension, type II diabetes mellitus, skin cancer and myocardial ischemia using genetically modified animal models. He has published more than 70 peer-reviewed articles in top scientific journals including Nature, Proceedings of the National Academy of Sciences, Journal of Biological Chemistry, Endocrinology and Genome Research.

Andrew Hardigan, BA
Andrew Hardigan graduated from Colby College in 2010 and is currently a sixth year student in UAB's Medical Scientist Training Program (MSTP). After finishing the first two years of medical school he joined the laboratory of Dr. Richard Myers at the HudsonAlpha Institute for Biotechnology to pursue training in genomics. His thesis work involves the use of various technologies and methods such as whole-exome sequencing and genome-wide CRISPR screening to address translational questions including genetic mechanisms of drug resistance in cancer and the identification and functional validation of de novo variants in pediatric intellectual disability.

Thomas May, PhD
Thomas May, PhD, researches issues at the intersection of medicine, public health and moral/social/political philosophy, with a special interest in issues related to autonomy and healthcare. He has focused on issues of how autonomy relates to self-identity and well-being; the role of autonomy in deciding how rights to genomic information, as well as rights to genomic ignorance, should be framed; and the assessment of risk within the context of other-regarding implications that emerge from genomic information. May's approach is to carefully parse the relevant considerations, outcomes and justifications salient to healthcare decision-making, and through this to balance potential benefits and risks in a way that is appropriately contextualized to the patient, condition and provider circumstances that frame decision-making. In addition to publishing two books and many articles on autonomy in leading philosophy journals, he has published on related topics in Nature, Science, Pediatrics, Vaccine, American Journal of Public Health, and Milbank Quarterly.

May has served as an advisor to the the National Vaccine Program Office, the Florida Department of Health; the State of Illinois Guardianship and Advocacy Commission, and the State of Wisconsin on Emergency Preparedness. He has twice chaired the Ethics Forum of the American Public Health Association, and has served on the American Philosophical Association's Committee on Philosophy and Medicine.

May earned his PhD in philosophy from Bowling Green State University in 1994 followed by fellowships at the University of Minnesota Center for Biomedical Ethics and in the department of bioethics at the Cleveland Clinic Foundation. He was the director of the Clinical Ethics Center at Memorial Medical Center/Southern Illinois University School of Medicine from 1997 until 2001 and joined the Medical College of Wisconsin (MCW) in Milwaukee in 2000 where he was director of graduate studies in bioethics, held the Ursula Von der Ruhr endowed chair in bioethics and served on an advisory board overseeing identification of appropriate candidates for a cooperative MCW-Children's Hospital of Wisconsin pilot program for whole genome sequencing of children suffering from health conditions of unknown cause.

Bruce Korf, MD, PhD
Dr. Korf is Wayne H. and Sara Crews Finley Chair in Medical
Genetics, Professor and Chair of the Department of Genetics, Director of the Heflin

Center for Genomic Sciences at UAB, and Co-Director of the UAB-HudsonAlpha Center for Genomic Medicine. He is a medical geneticist, pediatrician, and child neurologist, certified by the American Board of Medical Genetics (clinical genetics, clinical cytogenetics, clinical molecular genetics), American Board of Pediatrics, and American Board of Psychiatry and Neurology (child neurology). Dr. Korf is past president of the Association of Professors of Human and Medical Genetics, past president of the American College of Medical Genetics and Genomics, and current president of the ACMG Foundation for Genetic and Genomic Medicine. He has served on the Board of Scientific Counselors of the National Cancer Institute and the National Human Genome Research Institute at the NIH. His major research interests are molecular diagnosis of genetic disorders and the natural history, genetics, and treatment of neurofibromatosis. He serves as principal investigator of the Department of Defense funded Neurofibromatosis Clinical Trials Consortium. He is co-author of *Human Genetics and Genomics* (medical student textbook, now in fourth edition), *Medical Genetics at a Glance* (medical student textbook, now in third edition), *Emery and Rimoin's Principles and Practice of Medical Genetics* (now in 6th edition), and *Current Protocols in Human Genetics.*

Jenny Morgan, BS

Jenny Morgan is a genetic counseling intern with a passion for providing quality, compassionate patient care and for advancing genetics literacy, education, and research in Alabama and beyond. She studied mathematics, biology, and secondary education as an undergraduate at Auburn University and, after teaching for several years, began her graduate training in genetics at UAB, where her research focused on developing curative genetic therapies for hemoglobinopathies. Subsequently, Jenny combined her classroom and laboratory experiences to develop advanced, hands-on, inquiry-based science programs for Birmingham-area middle school and high school students. Upon completing her genetic counseling training, Jenny hopes to both work as a clinical genetic counselor and to focus her educational outreach efforts on attracting underrepresented minority students to genetics and genetic counseling professions.