On May 9th graduates, colleagues, family, and friends gathered for the annual Masters in Genetic Counseling (MSGC) graduation party. The event celebrated the hard work and accomplishments of the graduate students who earned their master’s degree in genetic counseling in Spring 2015.

Jiani Chen, Alleigh Hebner, Kristina Hermann, and Kathryn Matthews, enjoyed cake and conversation with faculty, staff, and fellow students. The Section of Genetics is very proud of its graduates and wishes them all the best in their professional genetic counseling careers and future endeavors.

To learn more about the graduates’ research projects and current employment see “MSGC Graduation” on page 3...

Dr. Dharambir Sanghera (pictured below), in collaboration with various consortia, recently published two papers in *Nature*: 1) New genetic loci link adipose and insulin biology to body fat distribution; 2) Genetic studies of body mass index yield new insights for obesity biology (see page 5).
On April 17 and 18, the Section of Genetics hosted the 41st Annual Advances in Pediatrics, “New Frontiers in Genetics,” sponsored by the University of Oklahoma College of Medicine Department of Pediatrics and the Oklahoma Chapter of the American Academy of Pediatrics (AAP). Members of the section worked diligently to create a successful event. Conference presenters representing the Genetics Section included: Dr. Sanjay Bidichandani, Dr. Klaas Wierenga, Dr. Shibo Li, Dr. Susan Hassed, Dr. Susan Palmer, and genetic counselors Melissa Hall, Elizabeth Fanning, and Alexandria Wadley. The keynote speaker was Kelly Ormond, M.S., CGC, LGC, Director of the Human Genetics and Genetic Counseling Program and Professor in the Department of Genetics at Stanford University School of Medicine. She is the past President of the National Society of Genetic Counselors (2004-2005) and was the 2009 recipient of the Strategic Leader Award. Her presentation was entitled “Interpretation of Genetic Variation in the Postgenomic Era”. Other presenters at the conference included Dr. Andrew Wagner from the Section of Obstetrics and Gynecology, Lisa Caton, R.N. from the Oklahoma State Department of Health Screening & Special Services, and Dr. Eve Switzer, President of the Oklahoma Chapter of the AAP.

The goal of the conference was to provide physicians with current evidence-based practice guidelines relevant to the field of pediatric genetics and maternal-fetal medicine. Presentations ranged from the basic “ABC’s of Genetics” to “Latest Trends in Reproductive Genetics,” “Exome and Nextgen Sequencing Applications” and “Development of Rational Therapies for Genetic Diseases.” Practice based topics included sessions on “When to Refer a Patient/Family to the Geneticist,” “Pedigree and Family History,” “Gene Testing” and “Follow-Up of Abnormal Newborn Screening for Inborn Errors of Metabolism.”

Several teaching formats were employed by the teaching faculty including the Audience Response System (“Clickers”), panel discussions, and small group breakout sessions. Participants received up to 10 Continuing Professional Development credits. Conference presentations are found at oumedicine.com/pediatrics/www/annual-cme-event.
Each MSGC graduate completed an original thesis in addition to their coursework and clinical responsibilities. The titles of their projects as well as their current employment information are listed to the right.

The MSGC graduates also received numerous awards and recognitions. Kristina Hermann’s thesis abstract was accepted as a poster presentation for the NSGC Annual Education Conference in October. Alleigh Hebner’s thesis abstract was accepted at the Central Association of Obstetricians and Gynecology meeting in October and won a “best poster” award at Pediatrics Research Day.

All four students presented their research projects at the Graduate Research Education and Technology (GREAT) symposium and Pediatrics Research Day.

“Molecular Cytogenetic Characterization of Subtelomeric Rearrangement Cases by Performing CGH Microarray”
Jiani Chen, MS
Pediatric Genetics, OUHSC—Oklahoma City, OK

“The Utility of Genomic Sequencing in Assessing Gamete Donors Used in Donor Assisted Conceptions”
Alleigh Hebner, MS
Lucile Packard Children’s Hospital, Stanford University—Palo Alto, CA

“Genetic Counseling Program Websites: Influence on Student Application Decisions”
Kristina Hermann, MS
MidMichigan Health—Midland, MI

“Visualization of Retinoic Acid Signaling in the Developing Chick Eye”
Kathryn Matthews, MS
Munroe Meyer Institute, University of Nebraska Medical Center—Omaha, NE

For more information about the Genetics Section visit: www.ouhsc.edu/genetics
"I’m grateful for all the scientific work and effort—and it gives me the warm fuzzies to know that they have a heart to see the human side of FA, beyond their microscopes and data numbers. So grateful. Thank you, sir."

-Mother of Sam Brown

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Sanghera DK and Blackett P (2015). Vitamin D status, genetics, and diabetes risk. In: Diabetes and Molecular Nutrition edited by Didac Mauricio, MD, PhD, ELSEVIER, 525 B Street Suite. 1800 San Diego, CA. (Accepted)


Dawn Cooper, Administrative Coordinator, receives a Department of Pediatrics Bravo Award. She was nominated by the Section of General & Community Pediatrics for her outstanding role in helping organize Pediatrics Research Day

2nd year MSGC students Jessica Anderson, Drew Cratsenberg, and Sarah Montgomery (picture taken by Dianne Samad), take a break from studies with a night of bowling.
The Section of Genetics welcomed members of the 2015 “Gene Team,” summer students who are interested in the clinical and research aspects of genetics. They are typically funded by various programs, both local and national, and are expected to perform clinical or lab-based research over the summer. They range from high school students to undergraduates to medical students.

Several Gene Teamers are being mentored by Dr. Sanjay Bidichandani: Omid Roostaeyan is a first year OU medical student and a scholar supported by the Oklahoma Shared Clinical & Translational Resources (OSCTR) Summer Research Training Program. Canisia Tatah is an undergraduate, premed major at Southwestern Oklahoma State University in Weatherford, OK. She is supported by the Summer Undergraduate Research Experience (SURE) program at OUHSC. Maddyson Allgood is a high-school student at the Oklahoma School of Science and Mathematics (OSSM) and is being supported by their Investigative Research Scholars Program for on-going research experience this summer and fall. Parker Beaver and Logan Andrews, both from Edmond North High School, are research volunteers in the Bidichandani lab.

Several Gene Teamers are being mentored by Dr. Klaas Wierenga: Aamina Shakir is a first year OU medical student and a scholar supported by the nationally-competitive American College of Medical Genetics and Genomics Foundation (ACMGF). She continues our three-year streak of hosting an ACMGF scholar in the Section of Genetics. Aleze Krumholz, is a first year OU medical student. Michael Rippenberger is an undergraduate attending Vanderbilt University and is being supported for his work this summer. Jennifer Jett will be starting medical school at OUHSC in the fall and is shadowing and Viraj Prabhu, an OUHSC student, is volunteering this summer.

Clockwise from top: Michael Rippenberger; Jennifer Jett; Omid Roostaeyan, Parker Beaver, Yogesh Chutake, Logan Andrews, Christina Lam, Dr. Bidichandani, and Canisia Tatah; Maddyson Allgood; Aamina Shakir and Aleze Krumholz. (Not pictured: Viraj Prabhu)
The Section of Genetics was well represented at Pediatrics Research Day held on May 8. Bishwa Sapkota, PhD, was chosen to give an oral presentation, entitled “Genetic variants in metformin pathway genes affect metformin response.” His mentor is Dr. Dharambir Sanghera. Yogesh Chutake, PhD, won a “best poster” award for his presentation entitled, “Reversal of Epigenetic Promoter Silencing in Friedreich Ataxia by a Histone Deacetylase Inhibitor.” His mentor is Dr. Sanjay Bidichandani. Alleigh Hebner, MS, also won an award for her poster entitled, “The Utility of Genomic Sequencing in Assessing Gamete Donors Used in Donor Assisted Conceptions.” Her mentor was Dr. Andrew Wagner.

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Sanjay Bidichandani, MBBS, PhD, was invited to present a seminar entitled “Reversal of Epigenetic Promoter Silencing in Friedreich Ataxia” at BioMarin Pharmaceutical, Novato, California (June 8, 2015).


Sanjay Bidichandani, MBBS, PhD, served as Chair of the session entitled “Neurogenetics, Neurodegeneration and Psychiatric Genetics” and made a platform presentation entitled “Reversal of Epigenetic Promoter Silencing in Friedreich Ataxia” at the 6th World DNA and Genome Day Conference in Nanjing, China (April 25-28, 2015).

Sanjay Bidichandani, MBBS, PhD, was invited to present the plenary presentation entitled “The Epigenetic Defect in Friedreich Ataxia” at the International Congress on Friedreich Ataxia, New Delhi, India (April 11, 2015).

Gene Hallford, PhD, in collaboration with Dr. Amanda Pogie, PI, has received a Pediatric Emergency Care Applied Research Network (PECARN) grant.

Sanjay Bidichandani, MBBS, PhD, was featured in an OCAST Radio Network interview hosted by Gary Owen and Tessa North on the Oklahoma Innovations Program to discuss genetics research. The interview aired at 5 p.m., Sunday, June 21, on KTOK AM 1000.

Carrie Guy, MS, and Susan Hassed, PhD, with Alix Darden, PhD, had “Transition Curriculum: An educational framework for supporting genetic counseling students,” accepted as a platform presentation at the National Society of Genetic Counselors Annual Education Conference.

Sanjay Bidichandani, MBBS, PhD, was invited to present a seminar entitled “Epigenetic Promoter Silencing in Friedreich ataxia” in the Department of Chemistry at the South Dakota School of Mines and Technology, Rapid City, SD (May 12, 2015).

Dharambir K. Sanghera, PhD, FAHA, participated in Diabetes Roundtable, organized by the Physicians Committee for Responsible Medicine, as an expert in molecular/genetic epidemiology at Washington DC on April 10th, 2015.

Sanjay Bidichandani, MBBS, PhD, served on the panel to review applications for the Presbyterian Health Foundation Seed Grant for Collaborative Research.

Ashley Taylor, Physician Assistant II, attended the annual Neurofibromatosis Conference hosted by the Children’s Tumor Foundation in Monterey, California (June 6-9, 2015).

Sanjay Bidichandani, MBBS, PhD, served as a grant reviewer for the Oklahoma Shared Clinical and Translational Resources “Pilot Grants” Program at OUHSC.

John J. Mulvihill, MD, was a member of the Steering Committee for Childhood Cancer Survivor Study, June 10-11.