The Children’s Hospital Foundation (CHF), in conjunction with the Department of Pediatrics, has announced that Klaas J. Wierenga, MD has been named as the McLaughlin Family Chair in Pediatric Genetics. Dr. Wierenga is an Associate Professor of Pediatrics in the Section of Genetics. He joins Dr. John Mulvihill, Kimberly V. Talley Chair in Pediatric Genetics and Dr. Sanjay Bidichandani, Claire Gordon Duncan Chair in Pediatric Genetics as the third CHF endowed chair in the section.

Dr. Wierenga first earned two MSc degrees in Biology and Medicine at Groningen State University in the Netherlands, followed by his medical degree in 1991. He completed his Medical Genetics residency at the University of Miami and is board certified in Medical Genetics and Medical Biochemical Genetics. He joined OUHSC in June 2009.

He currently serves as the Program Director for the Medical Genetics and Genomics Residency Program, the Medical Director for the Masters of Science in Genetic Counseling Program and the Co-Program Director for the Heartland Regional Collaborative. Since 2011, he has been the co-Director of the College of Medicine course entitled “Molecular and Cellular Systems”. Dr. Wierenga is also the Principal Investigator for three clinical trials focusing on the safety and efficacy of an experimental drug for the treatment of PKU, a metabolic disorder that is usually managed by dietary modification.

Dr. Wierenga has an on-going interest in discovering new disease causing genes using next generation sequencing. One of his recent collaborations led to the discovery of a gene associated with non-ketotic hyperglycinemia.

Additionally, he is expert in SNP array technology, which provided the opportunity to develop an online SNP array evaluation tool (with a collaborator at the University of Miami), which now has 3,000 registered users.

Dr. Bidichandani said “Dr. Wierenga will continue to enhance the care of children in Oklahoma with genetic conditions through his commitment to healthcare, education and research.”

“CHF’s endowed chair program is a very unique partnership that we have here at the University of Oklahoma Health Sciences Center,” said Dr. Morris R. Gessouroun, Interim Chairman of the Department of Pediatrics and the Patricia Price Browne Distinguished Chair in Pediatrics. We are grateful to the McLaughlin Family and many other donors that helped fund this endowment. CHF has funded pediatric research and education programs in Oklahoma since its inception in 1983.
In December 2016, the Section of Genetics welcomed Michele Polan, M.D. as its newest full-time, clinical geneticist. Dr. Polan is certified by the American Board of Medical Genetics and Genomics (AMBGG) in Clinical Genetics and Medical Biochemical Genetics.

Dr. Polan will see patients in the Pediatric Specialty Clinic in the OU Children’s Physicians Building.

Dr. Polan moved from Ohio to join the Genetics team at OUHSC. She completed her biochemical genetics fellowship at the Children’s Hospital of Pittsburgh and her clinical genetics residency at Nationwide Children's Hospital in Columbus, OH.

Originally from Poland, Dr. Polan worked as a Radiation Oncologist after completing medical school and before immigrating to the United States.

Her interest in genetics developed as she prepared to move to the United States. It became evident that since medical school, genetics had grown from a predominantly research based field to a rapidly expanding clinical field and this ignited her interest.

As new patients begin to fill Dr. Polan’s schedule, she looks forward to answering patient’s questions and helping to manage their care. She knows that many of her patients will have multiple, complex problems and are often seeking a confirmed diagnosis. She spends time with the patient and their families, gathering their information, consulting with other specialists, so that she can put the pieces of the puzzle together to find the answer.

There are many pieces of the puzzle in metabolic disorders. When seeing a patient with a possible metabolic disorder, Dr. Polan seeks to identify in the underlying problem and hopes to prevent serious complications that frequently happen with untreated metabolic disorders. As a geneticist certificated in Medical Biochemical Genetics, she knows that diagnosing a possible metabolic disorder takes more than just examining the patient clinically, but most often involves additional biochemical and molecular laboratory tests. Moreover, continued surveillance is always key.

In her free time, Dr. Polan enjoys classical music and gardening. She resides in Edmond with her husband, Charles, two children and a dog.

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A new clinical provider and an associate lab director join OUHSC

The Genetics Laboratory recruited Xinjing Wang, M.D., Ph.D. as the new Associate Director. Dr. Wang has American Board of Medical Genetics and Genomics (AMBGG) certification in Clinical Molecular Genetics and Clinical Cytogenetics. He was previously the Director of the National Eye Institute DNA Diagnostic Laboratory at the National Institutes of Health.

Dr. Wang earned his MD at Beijing University and completed his PhD studies at SUNY in Buffalo, NY. His post-doctoral research was focused on genetic analysis of CFTR gene related disorders. His laboratory fellowship training was completed at Johns Hopkins University. He has experience teaching ACGME Genetics Residency trainees and directing ACGME Molecular Genetic Pathology Fellowship programs.

Dr. Wang’s research interests include molecular diagnosis of rare inherited disorders, functional genomics for undiagnosed familial disorders using next generation sequencing technologies, and advanced technologies for molecular diagnosis on neoplastic disorders.

Dr. Shibo Li, Director of the Genetics Laboratory, is looking forward to building on Dr. Wang’s expertise to expand the clinical services offered and types of research performed in the Lab.

For more information about the Genetics Section visit: www.ouhsc.edu/genetics
The 2nd year students in the Genetic Counseling Program submitted abstracts for their original thesis research for inclusion in the Graduate Research Education and Technology (GREAT) Symposium events.

Kimberly Branham: Possible Novel Exterior Phenotype to Identify Individuals At-Risk for Lynch Syndrome

Rebekah Bressi: Analysis of Parental Perspectives Regarding the Diagnostic Process for their Child With Autism

Tavanna Porter: From Adversity to Advocacy: A Parenting Continuum After a Child’s Diagnosis of Down Syndrome **Graduate College Award for Scientific Achievement**

Marissa Satern: Experiences of Individuals Adjusting to a Recent Diagnosis of Autosomal Dominant Retinitis Pigmentosa

Anna Wright: Attitudes Toward Carrier Testing in Families Affected by Mucopolysaccharidosis

Additionally, abstracts were submitted from the Bidichandani lab and the Sanghera lab.

Layne Rodden: A CRISPR-Cas9 based approach for targeted epigenetic modification in Friedreich ataxia **O. Ray Kling Award for Scientific Achievement**

Bishwa Sapkota: Post-GWAS follow-up of candidate genes of diabetic dyslipidemia using NGS and functional studies in Zebrafish

Team Skinny Genes

Members of the Sections of Genetics and Community Pediatrics formed a team named, Skinny Genes, to join the OU Fit 3rd annual FitStart wellness challenge.

Team members are: Matthew Grim, Melissa Jones, Janice Lawrence, Robert McCollum, Shona Whitehead and Karen Wood.

During the 8–week challenge, team members were expected to have the following daily averages:
- 7 hours of sleep
- 6,000 steps
- 3 servings of vegetables

The goal of the FitStart challenge is to teach employees how to fuel their bodies, move more, become leaner, and live healthier all while having fun.

For more information about the Genetics Section visit: www.ouhsc.edu/genetics


Above Left: Melissa Jones participates in the Annual Ugly Christmas Sweater Contest. Above: Bishwa Sapkota enters his guess for the Holiday Potluck game.

Above: Dr. Klaas Wierenga chats with Garfield Simon, post-doctoral fellow in the Biochemical lab.

Left: Shunfei Lu, Yogesh Chutake and Janice Lawrence were the winners of the “guess the jar content” contests.

Left: Members of the section enjoy socializing during the annual holiday potluck. Right: Genetics Section Business Advisor, Matt Grim, talks with Hongcheng Wang, ABMGG lab trainee.

Above Left: Tavanna Porter receives her award for her thesis work at GREAT. Below Left: Layne Rodden receives the O. Ray Kling award at GREAT. Above: The MSGC Class of 2017 served as Advocate Leaders at the 2017 ACMG meeting in Phoenix, AZ. Above Right: Brian Lettenmaier and Garfield Simon work to process samples in the Biochemical Genetics Laboratory.

For more information about the Genetics Section visit: www.ouhsc.edu/genetics
New Funding:
Title: Is FXN DNA Methylation a Determinant of Response to HDAC Inhibitor Treatment in Friedreich Ataxia
Grantor: Friedreich’s Ataxia Research Alliance [01/01/2017 - 06/30/2018]
PI: Sanjay Bidichandani
Amount: $129,972

Out and About

Clockwise from top left: The MSGC Class of 2017 at the GREAT Symposium. Layne Rodden with her award winning poster at GREAT. Young Mi Kim with her poster at the 2017 ACMG meeting. Tavanna Porter and Rebekah Bressi play ball at ACMG. Hua Wang with her poster at ACMG. Members of the Section of Genetics gather for dinner during the ACMG meeting. Hongcheng Wang with his poster at ACMG.

For more information about the Genetics Section visit: www.ouhsc.edu/genetics
John Mulvihill, M.D. was recognized at the December 2016 meeting of the Congressionally Directed Medical Research Programs' (CDMRP) Neurofibromatosis Research Program for his many years of service to the committee. The mission of the program is to promote research directed toward the understanding, diagnosis, and treatment of NF1, NF2 and schwannomatosis to enhance the quality of life for persons with those diseases.

Recent Publications:


**Mulvihill JJ.** In Memoriam: Alfred G. Knudson, Jr., MD, PhD, PACMG (Hon). *The ACMG Medical Geneticist* Fall 2016, p 14.


For more information about the Genetics Section visit: [www.ouhsc.edu/genetics](http://www.ouhsc.edu/genetics)
**Layne Rodden**: (Graduate Research Assistant, Bidichandani Lab) won an OCNS travel award for her poster “A CRISPR-Cas9 based approach for targeted epigenetic modification in Friedreich ataxia” at the OCNS 25th Anniversary Symposium, November 3, 2016.

**Dr. Klaas Wierenga**: presented ”Dermatogenetics- an Introduction to Medical Genetics Applied to Skin Disorders”. At OUHSC Dermatology Grand Rounds, November 3, 2016.

**Dr. Dharambir Sanghera**: has been appointed to serve as Standing Committee member for NIH/NIDDK’s Scientific Review Group: Diabetes, Endocrinology and Metabolic Diseases-B Subcommittee (DDK-B). The period of her appointment will be from 2017 to 2021.

**Dr. Sanjay Bidichandani**: presented “Epigenetic defect in Friedreich’s ataxia” in the Ninth Annual Friedreich’s Ataxia Symposium at the Children’s Hospital of Philadelphia, October 17, 2016.

**Dr. Sanjay Bidichandani**: served as an expert reviewer for the Brain Canada Hudson Translational Team Grant Competition; the “Ataxia UK” research grants program and the Muscular Dystrophy Association’s Infrastructure grants program.

**Dr. Sanjay Bidichandani**: served as mentor for the “Academic Research Track” in the Career Paths in Genetics forum at the annual meeting of the American Society of Human Genetics, Vancouver, October 18-22, 2016.

**Dr. Sanjay Bidichandani**: served on the Muscular Dystrophy Association’s Research Advisory Committee, October 14-15, 2016; Washington DC.

**Drs. John J. Mulvihill and Sanjay Bidichandani**: served on the programmatic review and vision setting panel of the Congressionally Directed Medical Research Programs’ Neurofibromatosis Research Program, Washington DC; December 13-14, 2016.

**Dr. Sanjay Bidichandani**: served on the Board of Directors of the Friedreich Ataxia Research Alliance, Cambridge MA; December 9-10, 2016.

**Dr. Sanjay Bidichandani**: served on the selection committee to identify new inductees into the Academy of Teaching Scholars of the OU College of Medicine.

**Dr. Sanjay Bidichandani**: served on the Faculty Promotions and Tenure committee in the College of Medicine.

**Dr. John J. Mulvihill**: was co-presenter of the Pediatric Genetic Testing Webinar Series: Webinar Two: Testing Methods and Results sponsored by the American Academy of Pediatrics and the American Society of Human Genetics. (Recorded 01/19/2017). He also served on curriculum committee to organize the three part series.

**Dr. Gene Hallford**: presented “Recognition, Respect, and Reciprocity: The Importance of Community Engagement in Overcoming Barriers to Genetic Services Access in Underserved Populations Across the Heartland” at the Community Conversation –Special Satellite Meeting: Reaching Minority Populations: Genetics in the Frontiers held in conjunction with the ACMG Annual Meeting, March 21, 2017 in Phoenix, AZ.

**Dr. Sanjay Bidichandani**: presented “Friedreich ataxia is a natural candidate for gene therapy” in the FARA/FDA-CBER joint meeting at the FDA, Silver Spring, MD, January 23, 2017.

**Dr. Sanjay Bidichandani**: made a platform presentation “Epigenetic silencing in Friedreich ataxia is caused by hypermethylation of the FXN CpG island shore” at the Muscular Dystrophy Association’s National Scientific Conference, Washington DC, March 20, 2017.

**Dr. Sanjay Bidichandani**: presented “Lessons from an unlikely career in biomedical research” in the 2017 OUHSC - GREAT Symposium Workshop on Career Development, March 29, 2017.

**Dr. Sanjay Bidichandani**: served as a judge for the DNA Day national high school essay competition on human genetics & genomics conducted by the American Society of Human Genetics.