

Get to Know NYCPM's Faculty: Kenneth H. Astrin, PhD *Associate Professor of Pre-Clinical Sciences*



Kenneth H. Astrin's entire career has centered on Human Genetics. After earning a BA in biology from the University of Chicago, he earned a PhD from the University of California at San Diego in Human Genetics. He then did a post-doctoral fellowship at Baylor College of Medicine in Houston Texas in Human Genetics and a second post-doctoral fellowship in the Department of Genetics and Genomic Sciences in the Mount Sinai School of Medicine. He then joined the Genetics faculty at Mount Sinai, rising to an Associate Professor and remaining at Mount Sinai (~30 years) until he became an Associate Professor of Preclinical Sciences at NYCPM in 2007. His research interests included Fabry diseases and Porphyrias, diseases of heme biosynthesis. He is presently a professorial lecturer at Mount Sinai, as well.

At NYCPM, Dr. Astrin teaches a year of Human Genetics to first-year students. In the first semester, Dr. Astrin emphasizes classical human genetics including modes of inheritance, types of mutations, population genetics and pedigree analysis. Each student does a family pedigree helped by a lecture by a genetic counselor from Mount Sinai who instructs students on how to take a professional family history. The second semester deals with molecular Human Genetics, including how human genes are identified, genetics of complex diseases (including Type 2 Diabetes) and screening/treatment of genetic diseases. Guest lecturers from Mount Sinai discuss pharmacogenetics and personalized/precision medicine. Why is Human Genetics important to future doctors of podiatric medicine? Because in the future, Dr. Astrin believes, podiatrists will use information from a patient's DNA sequence to determine his/her course of treatment. A doctor can check a patient's DNA sequences to see if the medication to be prescribed will be effective. Genetics, he says, will play an increasingly important role in everyone's lives, hence the popularity of 23andme.com, for example. More and more, people will have their DNA sequenced and then "precision medicine" treatments will be based on the results.

Dr. Astrin has seen increased knowledge of human genetics among the first year students. On the value of pre-clinical studies in students' early years, Dr. Astrin is definitive. When our graduates go out to their residencies, he said, they rotate in internal medicine, surgery, etc. so a strong foundation in pre-clinical medicine is important.

At NYCPM, Dr. Astrin serves on the Committee on Academic Standards and Policies, the Scholarship Committee, the Curriculum Committee, and is Chair of the Honor Council. He also, with Dr. Chusid, helps prepare second-year students for the APMLE Part I Boards.