



COLUMBIA UNIVERSITY
MEDICAL CENTER

Columbia University Medical Center

Med into Grad Program

Ron Liem



Ph. D. Programs at Columbia University Medical Center

Integrated Program in Cellular, Molecular and Biomedical
Studies

Program in Biomedical Informatics

Program in Neurobiology and Behavior

Programs in Basic Cell and Molecular Biology

Programs in Molecular Basis of Health and Disease



Programs in Molecular Basis of Health and Disease

Cellular Physiology and Biophysics

Nutritional and Metabolic Biology

Pathobiology and Molecular Medicine

Pharmacology and Molecular Signaling



Required Course: Mechanisms of Human Disease

- New graduate course required for all students in the Programs in Health and Disease
- Directed by Ron Liem and Steve Spitalnik from the Pathology department
- Focused on four organ systems and related diseases (sickle cell disease, Alzheimer's Disease, Cystic Fibrosis and Cardiovascular disease)
- Discussion from patient interviews, histology, genetics, cell biology, physiology, pathology, therapeutics
- Course will be expanded to a full year course with four additional organ system/diseases covered



Columbia's Med Into Grad program

Program Director:

Ronald Liem

Program co-Directors:

Steven Spitalnik

Howard Worman

Chief Resident (Medicine): James Peacock

- Students are selected from the current first and second year students in the Programs in Molecular Basis of Health and Disease, Integrated program and Neurobiology program
- Selected students will be supported for one year and have a special curriculum for the year



Med into Grad: Clinical program

- Clinical program will include medical rounds, discussing cases with the medical attending with emphasis on differential diagnosis, diagnostic/treatment plan and to varying degrees pathophysiology
- General Medicine Clinic: each of the four chiefs in Medicine runs a clinic every other week and our Med into Grad students will be attending this clinic.
- Graduate students will be assigned mentors in medicine, pediatrics, neurology, psychiatry or pathology based on the students interests. The mentors will have a major effort in an active research program in laboratory or translational research on mechanisms of disease.



Additional conferences and clinics

- “Medicine chief rounds” where senior residents teach basic fundamentals to the medical students and interns (topics range from anemia, acid base, asthma, shock, ekg etc).
- Medicine department basic science group: journal club or case presentation format highlighting clinically relevant basic science research.
- Pathology department “Chief of Service”: journal club format highlighting recently published papers of interest to the presenting resident.
- Grand Rounds (Medicine, Neurology or other services)



Additional Course work

- Responsible conduct of research
- Biomedical Statistics
- Seminar/journal club; each program has one for their students
- “Cellular Tissue and Architecture”, aka Histopathology for graduate students. Required for students in the Pathobiology program, recommended for all Med into Grad students.



Our first class of Med into Grad students





Our first class

Donald Chang, Cellular Physiology & Biophysics

Alexis Hill, Neurobiology & Behavior

Zachary Carpenter, Pharmacology and Molecular Signaling

Akil Pukerin, Pharmacology and Molecular Signaling

Jason Vevea, Pathobiology and Molecular Medicine

Colleen Lau, Cellular, Molecular and Biomedical Studies

Preeti Putcha, Pathobiology and Molecular Medicine

Tessa Hirschfeld-Stoler, Cellular, Molecular and Biomedical
Studies