

Biomedical Research Workforce Pipeline, Diversity, and Training Programs

GW and CNHS 2020 (please send updates/corrections to Dr. Alison Hall, akhall@gwu.edu)

Pre-College

Health Careers Opportunity Program (HCOP) Led by Dr. Reamer Bushardt. Health sciences-focused high school academy through public-private partnership at TC Williams High School & partnership with Alexandria city public schools. Students in the academy are exposed to health care topics such as medicine and surgery, emergency health services, medical laboratory sciences, biomedical informatics, rehabilitative sciences, and pharmacy. 25 students per year. Health Resources and Services Administration grant.

The DC Health and Academic Prep Program (DC HAPP), led by Dr. Yolanda Haywood. Pre-college program for underrepresented, rising high school seniors (currently enrolled juniors) with an interest in a medical education and career. During a four-week summer experience and clinical internships during the academic year, DC HAPP scholars learn about potential healthcare professions, and are mentored through the college application process.

The GW SMHS Upward Bound Program, led by Jessica Castillo, serves grades 9-12 from partnered public and private charter schools in Wards 5, 6 and 7 in the District of Columbia. The program identifies students with an interest in medical and allied health careers and offers Saturday Academy, Tutorial Services, Summer Institute, SAT seminar and student ambassador program.

Mentored Experience To Expand Opportunities in Research version High School led by Dr. Naomi Luban et al. provides high school students from underrepresented groups the opportunity to participate in an experiential research project at Children's National Medical Center and its Children's Research Institute. This six-week summer experience is designed to encourage students to take the required steps toward careers in STEM and biomedical research fields. This program is supported by NIH R25 HD090722-02.

Colaco Scholar Program led by Dr. Naomi Luban. Philanthropically supported program takes 1 to 2 high school students from area high schools with specific interest in laboratory medicine and chemistry. Most students are recruited from private high schools in DC and Thomas Jefferson High in Virginia per the donor's requirements.

Sheik Zayed Summer Student Innovators Program This formal program recruits college and some high school students for a summer experience in bioengineering robotics and innovation research. Contact Kolaleh Eskadanin for more detail.

Discover Science with Dr. Bear Led by Dr. Naomi Luban. This STEAM focused program will bring preventative health, science, mathematics and robotics to children and families in out of school time using hands-on inquiry-based art and science activities in the DC Public Library System (available at seven DCPL branches with afterschool and weekend activities). The Dr. Bear's Cubs Summer Science experience runs from June 22-26, 2020 and will accept between 20-25 students entering grades 3 through 5. R25 GM129225-02.

College

Summer Program Advancing Research on Cancer (GW SPARC) led by Drs. Alison Hall and Edward Seto. GW-SPARC engages about 10 undergraduates from diverse groups in a 10-week mentored summer research experience at the GW Cancer Center. The program fosters active engagement in cutting-edge research, exposure to contemporary cancer research techniques, understanding of health disparities and impact of cancer in different communities, and preparation for research careers.

Harlan Undergraduate Research Fellowship. Wilbur V. Harlan Research Fellowship program supports GW undergraduate biology majors with stipend of \$5,000 to support their independent research program in the laboratory of a member of the Department of Biological Sciences.

Summer Research Opportunity in Chemistry. The A. D. Britt, Madeleine Reines Jacobs, and Charles R. and Elma M. Naeser Scholarships honor outstanding GW students in the field of chemistry by supporting summer research opportunities in one of the Department's research laboratories.

Luther Rice Undergraduate Research Fellowship supports GW undergraduates in discovery- and inquiry-based education throughout the undergraduate experience.

CRI Summer Student Program Informal program of medical student, doctoral, college, and some high school students linked to a CRI investigator, which provides some stipends, a summer lecture program that covers all CTS competencies, Redcap and CITI training and allows students to shadow, attend grand rounds, clinical rounds and become a member of a research team. Summer poster session and awards. About 110 students. Contact Kersten Hildebrandt.

Medical Student

MD Pre-Matriculation Program is a four-week program for about a dozen incoming medical students who are invited by the Committee on Admissions to develop skills needed to successfully navigate through the medical school curriculum.

Mentored Experience To Expand Opportunities in Research (METEOR) program led by Dr. Hall offers a competitive fellowship for medical students from groups underrepresented in medicine who are interested in an academic research career to matriculate into GW's M.D. program. Up to 5 GW medical students appointed each year.

The Clinical and Translational Research Scholarly Concentration, led by Drs. Alison Hall and Naomi Luban engages some 50 medical students each year in a longitudinal, in-depth research opportunity to form new mentors, explore new research areas, reinforce research skills and build new research competencies.

Gill and Health Services Research Fellowships. Competitive summer fellowship support for GW medical students to engage in research projects.

Postdoc/ Resident/Fellow

Genetics and Genomics of Muscle Postdoctoral Training Program (Jaiswal) Research and training topics focus on understanding muscle tissue in health and disease (dystrophy and

damage), with an emphasis on genome-enabled approaches and translational research. 2 MD, 5 postdoc per year T32 AR056993. Ends 4/20/20.

Children's National Stimulating Access to Research in Residency (CNStARR) Program Led by Drs. Teach and Massaro, Freishtat, to recruit and retain outstanding pediatric residents with demonstrated interest in pursuing research careers in NHLBI: sickle cell disease, congenital heart disease, and pediatric lung disease; NIAID HIV and immunology. 80% support for six pediatric residents among two grants. Lisa Sheehy, Admin. NIH R38 AI140298-01 and NIH R38 HL143585-01.

Research, Education, and Advocacy in Child Healthcare (REACH) Informal Reach Resident Research Program Internal funding at CNHS for about 60 residents per year; Contact Dr. An Massaro.

Pediatric Resident Research Track. Internally supported track via ERAS match allowing up to 9 months of dedicated research time during residency training. Contacts Drs. An Massaro and Dewesh Agrawal.

Postdoctoral Training in Pediatric Clinical Pharmacology (van den Anker) Collaboration with the Office of Clinical Pharmacology at the FDA and the T32 training program in Clinical Pharmacology at Johns Hopkins University School of Medicine will be intensified, whereas a new collaboration with the T32 training program at the University of Maryland School of Pharmacy will be initiated 4 MD, 2 PharmD 2 PhD NIH T32 HD087969. Contact Dr. Johannes Van den Anker.

Junior Faculty

KL2 Mentored Career Development Core Scholars Led by Drs. Naomi Luban and Catherine Bollard. Select and train about 2 scholars per year, support from internal sources as well as Clinical and Translational Science Institute-CN KL2. NIH TR001877-03.

Pediatric Hematology and Transfusion Medicine Multidisciplinary Research Training at CNHS, led by Drs. Naomi Luban and Catherine Bollard. Focused on preparing trainees from diverse backgrounds for academic leadership and independently funded research careers. Each trainee in the program completes a Master's in Clinical and Translational Science (MsCTR) at the George Washington University (GWU) School of Medicine and Health Sciences or equivalent, and will devise, implement, and complete a research project under the joint oversight of a multidisciplinary mentorship team at the completion of the two- to three-year program T32 HL110841-06.

K12 Child Health Research Career Development Award at Children's National, led by Dr. Teach and Dr. Freishtat. Accepts 1 to 2 junior faculty members in pediatrics each year. K12 HD001399

Research Skills and Educational Initiatives:

Grantwriting for the Individual Investigator HSCI 6297 TR1 (Drs. Nasser, Hall). The complete process of a research grant proposal development. Online, 10 week, 3-credit-hour, 30-CME course. Accepts 5 registrants.

Grants Enhancement Program to improve grant applications submitted by investigators; includes review and feedback, monthly facilitated group meetings. Accepts 5 registrants.

Workshop: Statistical Package for the Social Science (Dr. Gordish-Dressman) One day hands-on workshop.

Data Analysis Workshop Series (GW Libraries, ongoing)

Building the Next Generation of Academic Physicians SMHS faculty from both GW and CN participate in this organization committed to recruit women and under-represented minorities into careers in academic medicine.

K Special Interest Group Seminar Series. Quarterly career development seminar/workshop series focused on various aspects of career development including grant preparation, mentoring, responsible conduct of research and invited speakers.