PhD Programs organized in the Institute for Biomedical Sciences (IBS)

• Explore new areas & approaches
• Present & publish discoveries
• Become trusted colleagues

knowledge, research training & career skills for the future
Great time to be at GW!

Exiting PhD projects

CORE FACILITIES
- Bio-repository
- Biostatistics Center
- Flow Cytometry
- Genomics Center
- Nanofab & Imaging
- Pathology

Transforming Health Care Education
And
Expanding Research
To Improve Lives

A Strategic Plan for SMHS
2015-2018

School of Medicine & Health Sciences
The George Washington University

GW Cancer Center

DC CFAR
District of Columbia
Center for AIDS Research

Clinical and Translational Science Institute
at Children's National

CETI
 Mimetic

The Research Center
for Neglected Diseases of Poverty
IBS umbrella to 5 PhD programs

Core courses
Career development

Research rotations
Choose mentor & program

Cancer Biology
Genomics & Bioinformatics
Microbiology & Immunology
Neuroscience
Pharm/Phys

Specialized coursework
Grant-style qualifier
Dissertation research

See our IBS faculty trainers
We provide year-round stipend, tuition, and health insurance throughout the PhD.

See [Programs of Study](smhs.gwu.edu)
Great student outcomes

Year 1
IBS core & rotations
Choose program & mentor

Year 2
PhD coursework & research
Grant-style qualifying exam

Year 3-5
Dissertation research
Fellowships & conferences

Avg 5 pubs, 1.6 as 1st author
Avg time to degree= 5.0 yrs

Current national fellowships

<table>
<thead>
<tr>
<th>Student</th>
<th>Fellowship</th>
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<tbody>
<tr>
<td>Julie Ahn</td>
<td>NIH F31</td>
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<tr>
<td>Aparna Baxi</td>
<td>NIH F31</td>
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<tr>
<td>Katherine Blackmore</td>
<td>NIH F31</td>
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<tr>
<td>Jacob Samsel</td>
<td>NIH IARF</td>
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<tr>
<td>Indra Sarabia</td>
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<tr>
<td>Erin Bonner</td>
<td>Isa. Molina Fndn</td>
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<td>Stephanie Gomez</td>
<td>NIH F31</td>
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<tr>
<td>Amy Hwang</td>
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<td>Tony James</td>
<td>NIH IARF</td>
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<tr>
<td>Jessica Schenk</td>
<td>AHA</td>
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<tr>
<td>Nicole Bonan</td>
<td>T32 Cancer Biology</td>
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<tr>
<td>JT Howard</td>
<td>Gates Millennium</td>
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</table>
Cancer Biology Research Areas

- Molecular signaling in carcinogenesis
- Cancer immunology
- Epigenetics and chromatin remodeling

Recent PhD Dissertation Titles:

Eden Dejene “**Regulation of Poly(A)-specific ribonuclease Activity by Reversible Lysine Acetylation**” with mentor Edward Seto, PhD

Sulgi Lee “**Identification and Characterization of Tumor Specific Antigens in Pediatric Diffuse Midline Gliomas**” with mentor Javad Nazarian, PhD

Jacqueline Moy “**Differential alternative splicing of a novel FGFR3 variant involved in African American prostate cancer disparities.**” with mentor Norman Lee, PhD

Stephanie Perkail “**Tumor Suppressor BRCA1 Associated Protein-1 (BAP1) in Pancreatic Cancer**” with Mentor Alexandros Tzatsos, MD PhD
Genomics & Bioinformatics Research

- Genetic and Epigenetic Basis of Diseases
- Autism, cardiovascular & pulmonary
- Systems & “omics” for complex disorders

Recent PhD Dissertation Titles:

John Torcivia “An Exploration of Cancer Associated Non-coding Variations in Whole Genome Sequencing Data” with mentor Raja Mazumder, PhD

Matthew Bendall “Characterization and Quantification of the Human Endogenous Retrovirus Transcriptome” With mentors Keith A. Crandall, PhD/ Douglas F. Nixon, MD, PhD

Konstantinos Karagiannis “Separation and Assembly of RNA virus High Throughput Sequencing Data into Discrete Full Length Sub-Population Genomes” with mentor:: Raja Mazumder, PhD

Ljuba Caldovic
lcaldovic@childrensnational.org

Eric Vilain
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Raja Mazumder
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smhs.gwu.edu
PhD Microbiology and Immunology

- Molecular parasitology
- HIV pathogenesis
- Vaccine development
- Tumor immunotherapy

Recent PhD Dissertation Titles:


Shabnum Patel “Immunotherapeutic Strategies for Human Immunodeficiency Virus-1 (HIV-1)” with mentor Catherine M. Bollard, PhD

John Huang “Prime, Kick, and Kill: Establishing a Proof of Concept for a Novel Approach to Purging Latent Reservoirs of Human Immunodeficiency Virus-1” with mentor R. Bradley Jones PhD
Neuroscience Research Areas

- Synaptic circuitry & plasticity
- Neurodevelopmental Disorders
- Cortical development
- Glial cell biology & disease

Recent PhD Dissertation Titles:

Thomas Forbes “Environmental Enrichment Ameliorates Perinatal Brain Injury and Promotes Functional White Matter Recovery” with mentor Vittorio Gallo, PhD

Alejandra Fernandez “Disrupted Mitochondrial Metabolism Alters Cortical Layer II/III Projection Neuron Differentiation” with mentor Anthony-Samuel LaMantia PhD

Julieta Lischinsky “Embryonic transcription factor expression predicts neuronal identity and innate behavioral activation patterns in the limbic system” with mentor Joshua Corbin PhD
Pharmacology & Physiology Research

- Cardiovascular Physiology
- Obesity and Metabolic Diseases
- Anxiety and PTSD

Recent PhD Dissertation Titles:

Adam Swiercz “Contributions of the Renin Angiotensin System to Fear Memory and Fear Conditioned Cardiovascular Responses” with mentor Paul J. Marvar, PhD

Adam Horn “Role of Mitochondria in Plasma Membrane Repair and Pathogenesis of Muscular Dystrophy” with mentor Jyoti K. Jaiswal PhD
How do you join the GW IBS?

Application deadline December 1

Research experience important
Strong academic record, especially in science
Statement / 3 Short Response / CV
Mention faculty of interest

LORs about research-new prompts
GRE scores not required

Class of 15 students from about 200 applications

See application & admissions details
What will you discover?

Visit our webpage
Email a Graduate Program Director
Contact IBS program faculty
Ask the program administrator

Apply by December 1

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