Available Mentors

Yehenew Agazie - He studies the Src homology phosphotyrosyl phosphatase 2 (SHP2) in signaling pathways and its role in cancer.

Andrey Bobko - He is interested in the developing of new probes and approaches for in vivo multifunctional spectroscopy and imaging using electron and nuclear magnetic resonance techniques.

Jianhi Du - Dr. Du's lab is interested in identifying new metabolic mechanisms in retinal degenerative diseases and developing biochemical approaches for treatment using mass spectrometry, patient stem cell-derived retinal cells and animal models.

Valery Khramtsov - His lab is devoted to the development and application of new magnetic resonance approaches to biomedicine, including EPR spectroscopy and imaging and OMRI or PEDRI.

Saravanan Kolandaivelu - The focus of the Kolandaivelu Laboratory research is to identify the mechanism behind biogenesis and/or maintenance in the photoreceptor outer segment. Additionally, the lab studies the importance of the post-tranlational lipid modification "palmitoylation" in retinal proteins associated with blinding diseases.

Roberta Leonardi - Her lab studies the role of small metabolites in regulating pathways important for providing energy to cells and controlling glucose homeostasis.

Qiang Ma - His research seeks to understand: (1) the function and mode of action of xenobiotic-activated receptors (XARs) in mediating pathologic responses to xenochemicals; and (2) the mechanism underlying lung fibrosis and cancer due to inhalation of chemicals, particles and fibers, and nanomaterials.

Elena Pugacheva - Her lab studies the focal adhesion scaffolding proteins and their role in proliferation, invasion, and tumor progression.

Vazhaikkurichi Rajendran - His lab is investigating the electrolyte transport processes that regulate colonic fluid movement during physiological and pathophysiological conditions. We focus to identify the Ca2+-activated intermediate conductance (also known as KCNN4) K+ channel isoform that provides the driving force for Cl- secretion in several fluid secreting epithelial cells.

Vishy Ramamurthy - His lab studies the biochemical mechanisms that result in photoreceptor cell death; Protein methylation; Gene therapy for blinding diseases.

Aaron Robart - His lab uses a combination of biochemistry and structural biology to understand the architecture and catalytic mechanisms of RNA molecular machines.

David Smith - His lab is studying the workings of the proteasome - a giant molecular machine that uses energy to selectively destroy proteins. This research aims to identify drugs that target the proteasome, which could be useful to treat cancer and various neurodegenerative diseases.

Peter Stoilov - Alternative pre-mRNA splicing in cancer progression; Drugs targeting alternative splicing as cancer therapeutics; High-throughput research methods.

Mark Tseytlin - His lab is developing new spectroscopic and imaging methods for in vivo Electron Paramagnetic Resonance (EPR).

Bradley Webb - His lab is studying the cell biology of metabolic enzymes. The lab is currently addressing questions regarding the localization, regulation, and structure/function of enzymes in the glycolytic pathway.

http://medicine.hsc.wvu.edu/biochemistry/faculty-and-staff/available-mentors/

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"The education I received (at WVU) prepared me to think critically, independently, and in group settings. I have used this throughout my career, whether it was as a post doctoral fellow, a research scientist with a pharmaceutical consulting firm, or currently, as a clinical scientist with a medical device firm. This solid foundation will be beneficial, no matter what career path is chosen."
Jason Waggoner, Ph.D. ,
Clinical Scientist, Ethicon

"I remember when I went off to my post-doc… I was the "go-to" person (for) molecular biology techniques, and the only one who knew how to fix the equipment! I was trained – not only in state-of-the-art experimentation, but also very important pragmatic issues of running a lab."
Leslie Bruggeman, Ph.D.,
Associate Professor, Case Western Reserve University

"The training that I received at WVU was an invaluable tool for my... professional career in science. My transition from Biochemistry to Molecular Immunology… was easy even though I was not a trained immunologist."
Debbie Hodge, Ph.D.,
Staff Scientist, National Cancer Institute

Where are our graduates?

They are postdocs:
Harvard, NIH, UC San Diego, Univ. of Cincinnati, Univ. of Wisconsin, University of North Carolina, Washington Universoty
They are faculty at:
University of Pittsburgh, University of Michigan
They are in industry:
Bayer, Pfizer, Merck

Questions?

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Room 3096, Health Sciences North
Phone: (304) 293-7751
Email: fbhillgartner@hsc.wvu.edu

The Bridge from Molecules to Life

Choosing Graduate Training In Biochemistry and Molecular Biology

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Why be a Biochemist?

Studying Biochemistry and Molecular Biology means that you are learning about how molecular events in cells and how the structure and function of molecules regulate the whole organism. It is a field where we ask, "how does that happen?" and not just, "what happens if?" This is a field for individuals with natural curiosity about how life works.

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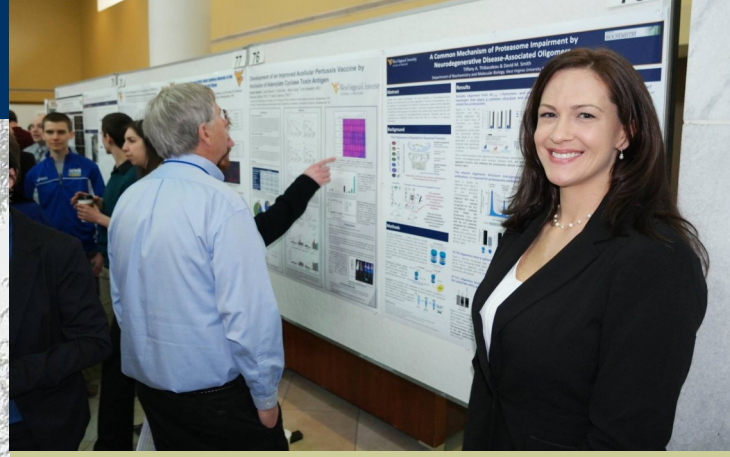

Curriculum Highlights

- *Flexible curriculum to allow time for electives*
- *Advanced courses are literature based*
- *Opportunities for students to invite seminar speakers*
- *Student organized journal club*
- *Accelerated Curriculum:*
  - Student defends Dissertation Proposal at the end of 2nd year
- *Opportunities to develop seminar and teaching skills*

http://medicine.hsc.wvu.edu/biochemistry/education/graduate-program/

Dr. Bradley Webb, Ph.D., one of our newest faculty members

PhD: Queens's University,
Postdoctoral Training: University of California, San Francisco

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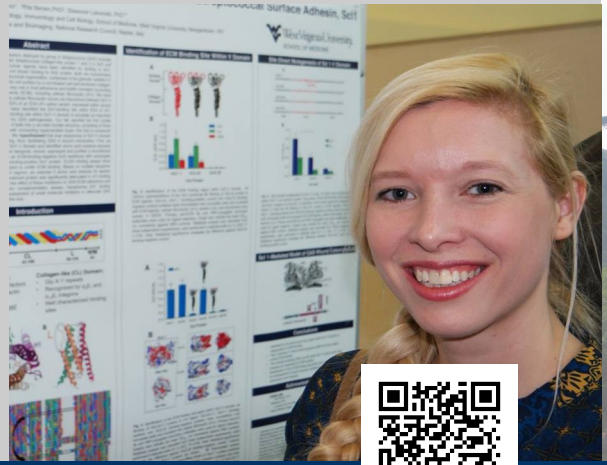
- Attendance of national and international conferences
- Developing speaking skills through research talks and seminar presentations.
- Developing teaching skills by mentoring undergraduates and giving lectures
- Obtaining top-notch laboratory skills
- Publishing in top tiered journals
- Applying for and receiving fellowships

- **Stephanie Shumar** - National Institute of Health F31 Fellowship

- **Ashley Brandebura** - National Institute of Health F31 Fellowship



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