

# Chemistry and Biochemistry Virtual Open House

## Department Overview



UMBC

Fall 2024

# Where We Are?

National  
Cancer  
Institute

Office of Naval  
Research

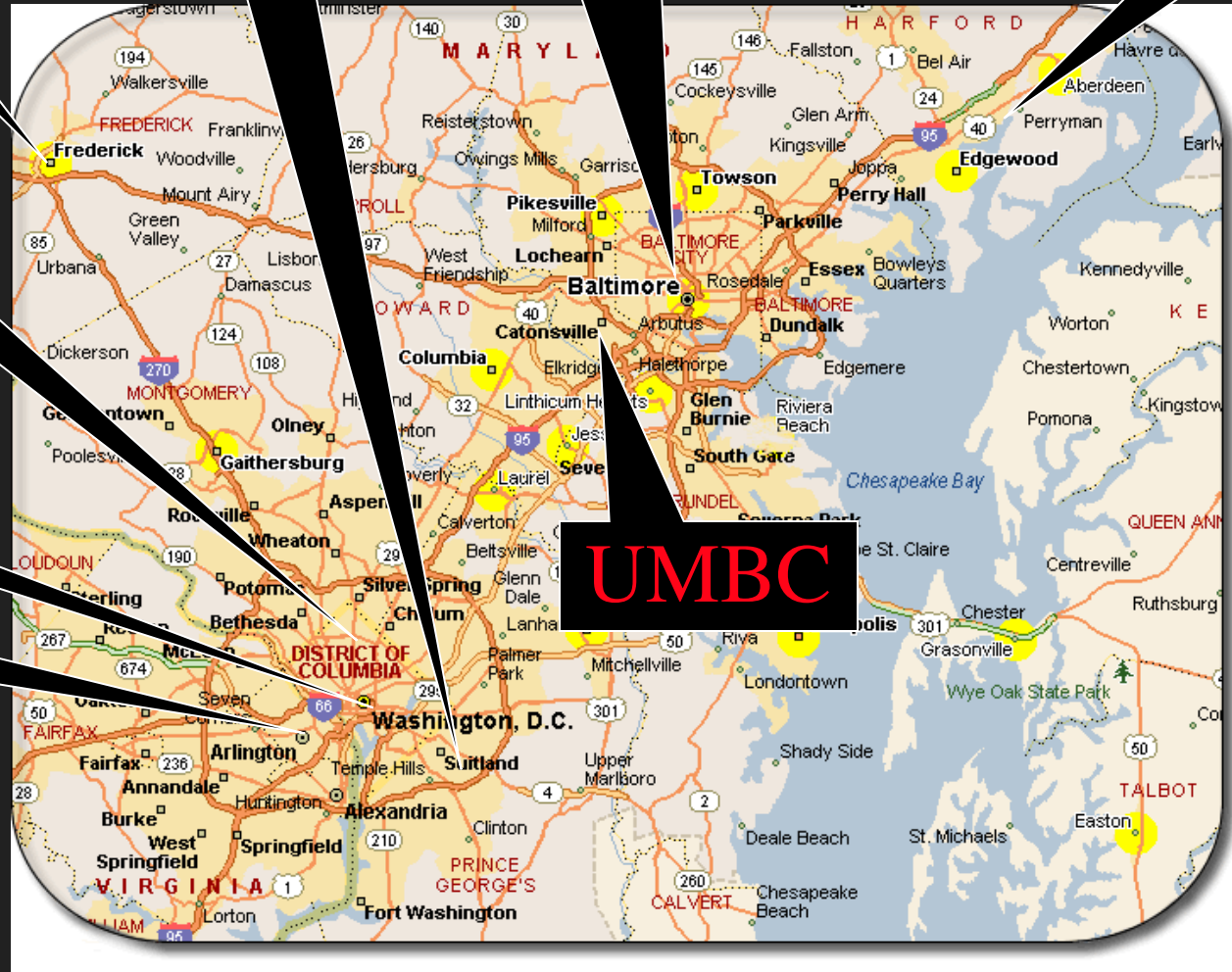
University of Maryland  
Baltimore (UMB)

U.S. Army  
Research Laboratory

National  
Institutes of  
Health (NIH)

Department  
of Energy

National Science  
Foundation

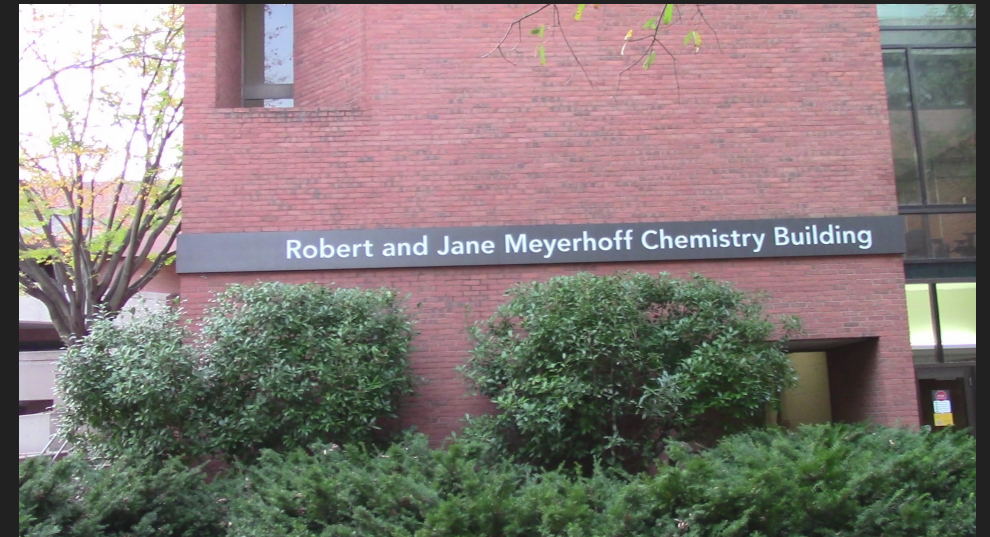


**UMBC**

# Who Are We?

## UMBC Chemistry and Biochemistry

- Medium Size Research University
- 18 Research Active Faculty
- ~ 60 graduate students
- Student-centric program
- Strong external research support and connections with NIH, NSF, DoD, DoE and other local institutions



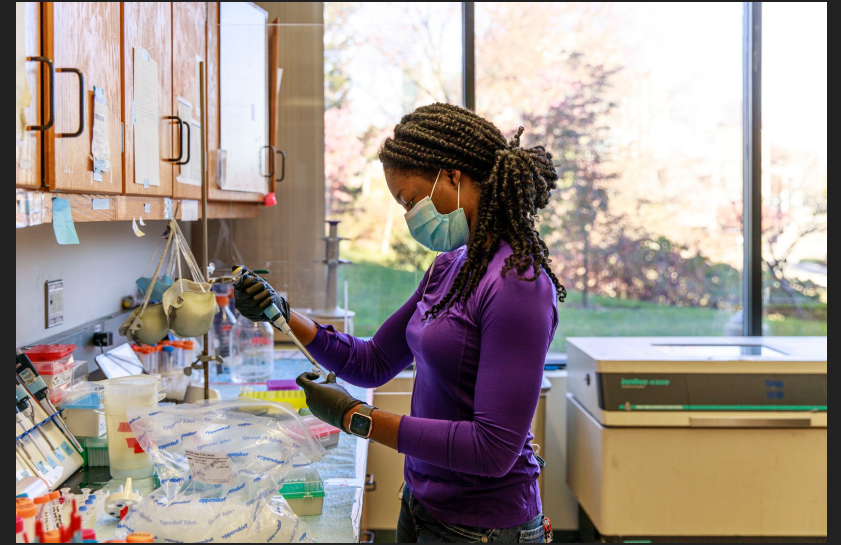
# What Does Mid-sized Mean for You?

- We are big enough to have internationally recognized research program and state-of-the-art and one-of-a-kind facilities
- Sufficiently small to maintain a close student-mentor relationship



# Diverse Research Portfolio

- Biochemistry
  - Dr. Songon “Song” An
  - Dr. Deepak Koirala
  - Dr. Herana Kamal Seneviratne
  - Dr. Aaron Smith
  - Dr. Mike Summers
- Analytical Chemistry
  - Dr. Chengpeng Chen
  - Dr. Brian Cullum
  - Dr. Minjoung Kyoung
  - Dr. William LaCourse
  - Dr. Herana Kamal Seneviratne



# Diverse Research Portfolio

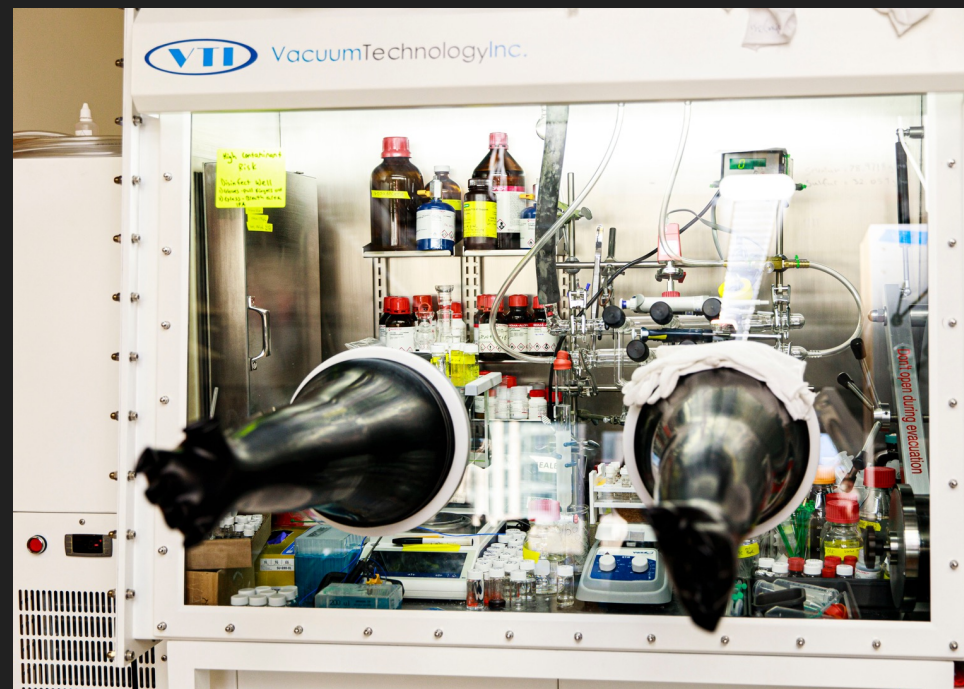
- Organic Chemistry

- Dr. Lisa Kelly
- Dr. Marie-Christine Daniel-Onuta
- Dr. Marcin Ptaszek
- Dr. Katherine Seley-Radtke
- Dr. Paul Smith



- Inorganic Chemistry

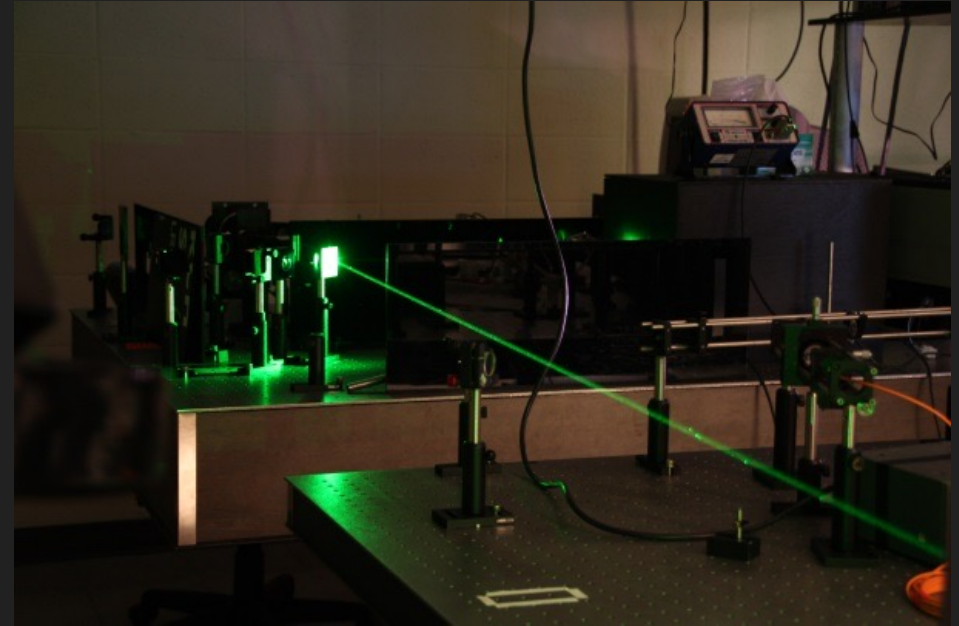
- Dr. Joseph Bennett
- Dr. Marie Christine Daniel-Onuta
- Dr. Zeev Rosenzweig



# Diverse Research Portfolio

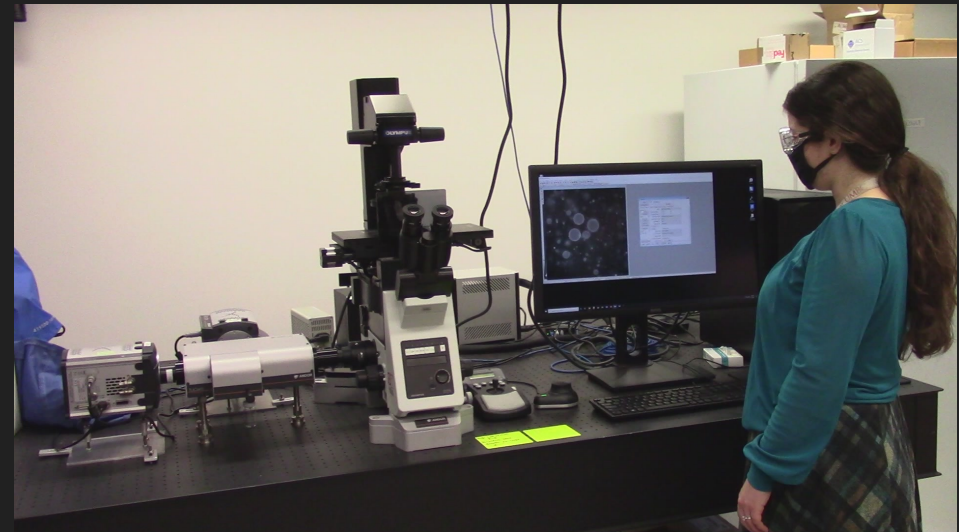
- Physical Chemistry

- Dr. Bradley Arnold
- Dr. Christopher Geddes
- Dr. Lisa Kelly
- Dr. Joel Liebman



- Theoretical/Computational Chemistry

- Dr. Joseph Bennett
- Dr. Joel Liebman



# Diverse Research Portfolio

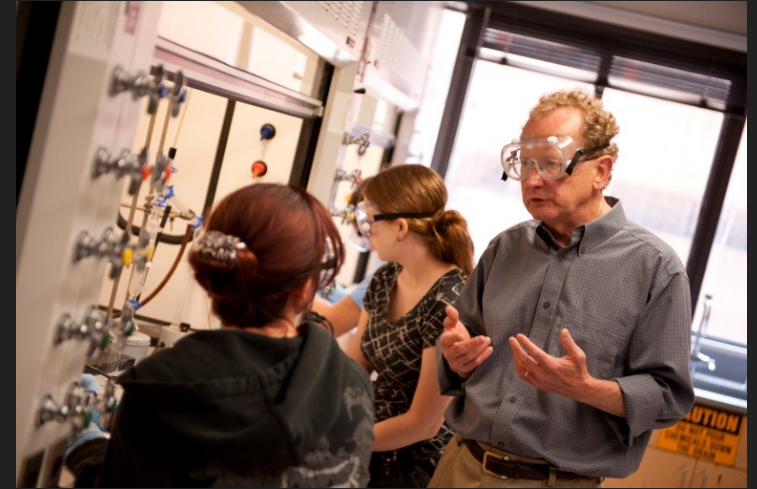
- Nanomaterials for biosensing and drug delivery
- Drug design and synthesis
- Drug metabolism
- Intracellular biochemistry
- RNA structure and functions
- 4D superresolution microscopy
- Bioinorganic chemistry
- Structural biology
- Microfluidics and 3D bioprinting
- Organic photonics for biosensing and solar energy conversion
- Computational material chemistry
- Ultrafast spectroscopy for determining photochemical mechanisms

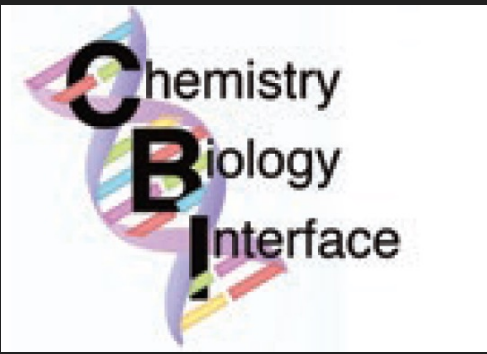




# Numerous Affiliated Programs

- Chemistry-Biology Interface (CBI) Program
- Meyerhoff Graduate Program
- SCIART (Science/Art) Program
- Career Centers and Workshops
- Extensive Collaboration Opportunity with Academic, Government, and Industrial Partners





# Chemistry/Biology Interface Graduate Program

- **Cross-disciplinary studies in both Chemistry and Biology**
- **Ph.D. will be obtained in either Chemistry or Biology with additional focus in other discipline**
- **Opportunity to do cutting edge research with state-of-the-art equipment and an internationally known faculty**
  
- **Program benefits include:**
  - **Research Assistantships**
  - **Biweekly seminars on topics at the Chemistry/Biology interface**
  - **Laboratory work in both Chemistry and Biology**
  - **Advanced coursework in both Chemistry and Biology**
  - **Travel to National Conferences**

# G-RISE/Meyerhoff Graduate Training Program

- Providing research experiences for underrepresented groups receiving a Ph.D. in biological sciences, biochemistry, chemistry, mechanical engineering, and psychology.
- Supported by the Minority Biomedical Research Support (MBRS) Branch of the National Institutes of Health (NIH) through the Initiative for Minority Student Development (IMSD) Program.
- Program benefits include:
  - All usual graduate program benefits + :
    - ✓ Monthly discussions & annual retreats
    - ✓ Community building & mentoring
    - ✓ Interaction within a diverse campus community



<https://meyerhoffgrad.umbc.edu/>

# After Graduation.....

Our Alumni Find Top Jobs in Diverse Areas of Research and Business of Their Choice:

- Academia (Harvard, UCLA, Johns Hopkins, U. Cin, etc.)
- National Research Labs (NIH, NCI, ARL, NRL, DOE, JHUAPL, NASA, etc)
- Chemical Industry (ThermoFisher, Shimadzu Sci., Leidos, BASI)
- Pharmaceutical Industry (Astrazeneca, GlaxoSmith Kline, Latham BioPham, US Pharmacopeia, AmbioPharm, etc.)

