

Welcome!

We will begin at 12:00 pm (ET).



Audio Setting can be adjusted:



- Click the Settings cog
- Click Audio
- Choose your speaker and microphone

- Phone lines will be muted.
- Send questions through the Q&A feature.
- After a brief introduction and presentation by each panelist, questions submitted in the Q&A feature will be answered.
- This webinar will be recorded for future viewing.

Undergraduate Educator Network Webinar Series

Preparing the Next Generation of Educators: Pathways and Professional Development in Higher Education Teaching

June 12, 2026
12:00 PM (ET)

Education & Experiential Opportunities Committee (EEOC) Members



Kymberly Gowdy, BS, MS, PhD
Moderator, EEOC Member

Associate Professor, Internal Medicine
Ohio State University



Greg Landry, BS, PhD, DABT
Panelist, EEOC Co-Chair

Associate Professor, of Pharmacology & Toxicology, Director of BS
Pharmacology/Toxicology Program
Massachusetts College of Pharmacy & Health Sciences



Panelists



Jason Diaz, PhD
The Wistar Institute



Mercedes Arana, PhD
National Institute of Environmental Health Sciences



Greg Landry, PhD, DABT
Massachusetts College of Pharmacy & Health
Sciences



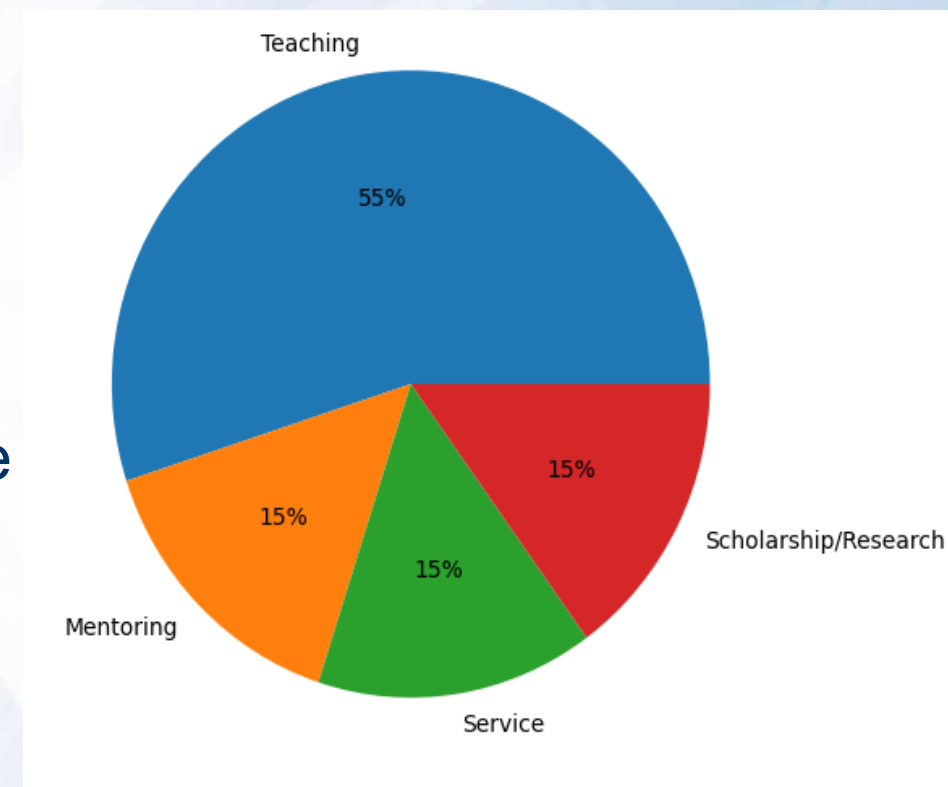
Questions and Comments

- Panelists will introduce themselves and present program information
- Submit questions and comments through the Q&A feature. Enter panelist's name to direct a question to them.
- Panelists will do their best to get through all questions and comments.



What does a Teaching Career in Higher Ed Involve?

- Key Responsibilities can include:
 - Teaching
 - Can be undergraduate or postgraduate
 - Curriculum Development
 - Academic advising and career guidance
 - Scholarship & Research
 - Amount can vary based on institution and appointment
 - Institutional Service





Types of Teaching Careers in Academia

Career Type	Primary Focus
Teaching Professor/Lecturer/Instructor	Teaching and curriculum development
Rank by Institution	Undergraduate teaching
Professor of Practice	Professional expertise and teaching
Community College Faculty	Teaching-focused with diverse learners
Teaching Faculty at a Research-Intensive University	Teaching mostly postgraduate learners (MD, Masters, PhD, DVM, etc.)
Educational Specialist/ Curriculum Director	Program leadership and assessment

How to Become Competitive for a Teaching Career

- In graduate school and/or during postdoctoral training:
 - serve as a teaching assistant (TA)
 - guest lecture when possible
 - mentor undergraduates
 - seek formal training in pedagogy
 - develop independent course modules
 - obtain teaching certificates when available



Jason Diaz, PhD

Education Program Director, Teaching, Learning & Collaboration
Hubert J.P. Schoemaker Education and Training Center | The
Wistar Institute

Co-Director, PennPORT | Perelman School of Medicine |
University of Pennsylvania



Jason Diaz, PhD

Cell & Mol Bio PhD → IRACDA Post Doc → Teaching Assistant Professor → Program Director

What I do in my current role:

- Training Program Administration (HS & UG)
 - Grants/Funding
 - Program Management (recruitment, running the program, collaboration)
 - Assessment
 - Reporting
- Professional Development for Graduate Students & Post Docs
- Outreach (Public, Lawmakers, Societies)



Develop Your Teaching Skills & Explore Careers

Many different faculty and teaching-related roles:

- Community Colleges (primarily teaching)
- Primarily Undergraduate Institutions (PUIs)
- R1/R2 institutions (more research than teaching)

Ways to develop your Skills:

- Centers for Teaching and Learning
- Mentorship (connect with undergraduate coordinators)
- Instructor of Record
- ****Evaluation**** (student and faculty)



NIH NIGMS IRACDA and Beyond

IRACDA Structure

- 3-4 years of salary support for postdoc
- Mentored teaching experiences at minority-serving partner schools
- Blend of traditional research postdoc and undergraduate teaching training

IRACDA mechanism is being sunset by NIH.

New mechanism to come out Fall 2026.

Email us at PennPORT@penncmedicine.upenn.edu



Mercedes Arana, PhD

Director, Office of Fellows' Career Development (OFCD)
Office of the Scientific Director,
National Institute of Environmental Health (NIEHS)

**From Bench to Classroom:
Preparing Trainees for Teaching Roles**



My JOURNEY

- 1st Generation College Student
- Attended Florida State University, BS
- Worked as a Research Technician–University of Miami School of Medicine
- Graduate Student–University of Miami School of Medicine, Biochemistry & Molecular Biology Dept.
- Postdoc–NIEHS
- Biologist, lab bench scientist/lab manager–NIEHS
- Transitioned to current role, leading the Office of Fellows' Career Development

Mission

- **To provide fellows in training at the NIEHS with the professional skills and career development opportunities needed to excel in their future careers, regardless of their career path chosen.**



Teaching as a Fellow at the NIH

- Standard NIH research training fellowships primarily fund research, finding teaching opportunities requires proactive involvement.
- NIH fellows have multiple avenues to gain formal/informal teaching and mentoring experiences.
- Dedicated initiatives designed to build a pedagogy portfolio.

Local Partnerships & Community Outreach

- Building partnerships with local community colleges and undergraduate institutions to offer fellows part-time teaching opportunities in introductory science courses.
- Fellows can engage with local school districts for science fair judging, after-school STEM clubs, or classroom demonstrations (Annual **DNA Day**)



Opportunities

- **Summer Internship Program (SIP) Leadership:** Postbacs, graduate students, and postdocs can lead lectures and science workshops for summer students at the high school, undergraduate, and graduate levels.
- **Journal Discussion Clubs:** Postdocs and graduate students can develop curricula and lead discussion-based science groups for summer cohorts.
- **FAES Courses:** The Foundation for Advanced Education in the Sciences (FAES) hires advanced NIH fellows as adjunct instructors for evening and weekend courses in specialized scientific topics.

Certificate Programs (from NIH/Office of Training & Education):

- **Teaching Science Certificate Program:** A 9-week program and short courses, such as *Teaching Science in Higher Education*, that provide a strong foundation in science education and teaching practices.
- **Mentoring Certificate Program:** Prepares NIH postdocs and graduate students to effectively mentor postbacs and summer interns.



Greg Landry, PhD, DABT

Associate Professor, of Pharmacology & Toxicology, Director of BS Pharmacology/Toxicology Program

Massachusetts College of Pharmacy & Health Sciences, Boston, MA

- ❖ Get to teach undergraduate Toxicology I & II (my favorite part!)
- ❖ Run a research lab driven by my interests and agenda (Don't *have* to write grants here)
 - ❖ Diethylene glycol—Continue my PhD Advisor's research (discovered my passion)
 - ❖ Heavy metal-induced CaOx crystallization
 - ❖ Antidote development (grape/raisin intoxicosis in dogs)
 - ❖ Train MS, PhD, undergraduates, pharmacy students, etc.
 - ❖ Write & Publish

Service, administration, committees, academic politics (my least favorite!)

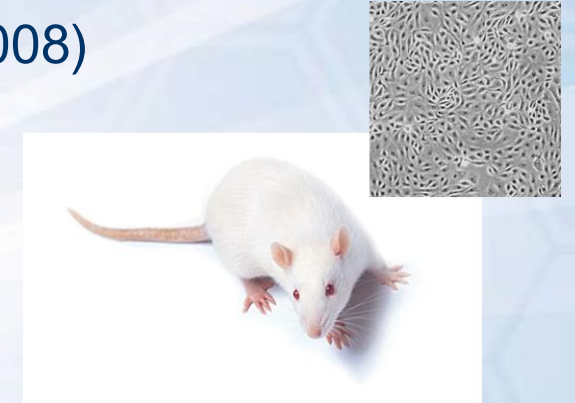


How did I get here?!

- ✓ BS in Microbiology/Molecular Biology; minor in Chemistry (2004-2008)
 - ✓ Southeastern Louisiana University; Hammond, LA
 - ✓ S.U.P.E.R. Internship LSUHSC-S (Ken McMartin)
- ✓ PhD in Pharmacology, Toxicology, & Neuroscience (2008-2013)
- ✓ Louisiana State University-Health Sciences Center; Shreveport, LA

- ❖ Stayed 1 year post-PhD graduation to teach/research (2013-2014)
 - ❖ Louisiana State University-Health Sciences Center; Shreveport, LA

- ❖ Postdoctoral Research Fellowship in Physiology & Biomedical Engineering/Nephrology & Hypertension (kidney stone research!) (2014-2016)
 - ❖ Mayo Clinic College of Medicine; Rochester, MN
 - ❖ University of Glasgow; Glasgow, Scotland, UK





1° Teaching Institutions

- ✓ Teaching experience a must: Course from beginning to end; 'Instructor of record' if possible
 - Adjunct, night courses, laboratory courses, etc.
- ✓ Course administration, i.e., grade responsibility, student/classroom management, lecture preparation de novo, basic course teaching experience/**potential**
 - Doesn't *have* to be Toxicology
- ✓ 'Teaching' others in your research laboratories often **not** considered experience
- ✓ Student response to you—Search Committee Interview important
- ✓ Assessment structure—be sure questions reflect content, course level, & institution
- ✓ HigherEdJobs.com, Chronicle of Higher Education, etc.—Searchable: location, type, etc.
 - Adjunct positions in your area if you meet accrediting credentials
 - <https://www.higheredjobs.com/>
- ✓ Autonomous contribution to departmental teaching load (Chair does not have to micromanage)
- ✓ Match process important (Teaching should be **1st priority**; should be genuine)





Questions & Comments

Submit questions and
comments through the
Q&A feature

SOT Undergraduate Toxicology Resources



Meetings & Events ▾ Publications & News ▾ Awards & Funding ▾ Careers ▾ **Education ▾** Endowment Fund ▾

Recorded Presentations

- » Plenary Lectures
- » Career Sessions and Webinars
- » Eminent Toxicologist Lectures
- » *In Vitro* Toxicology Lectures
- » Webinars


Resources for Educators

- » Undergraduate Educator
- » Introduction to Toxicology Slides
- » ToxScholar Outreach
- » K-12 Outreach Materials

Internships

- » Resources for Students
- » Support for Hosts

SOT Video Library



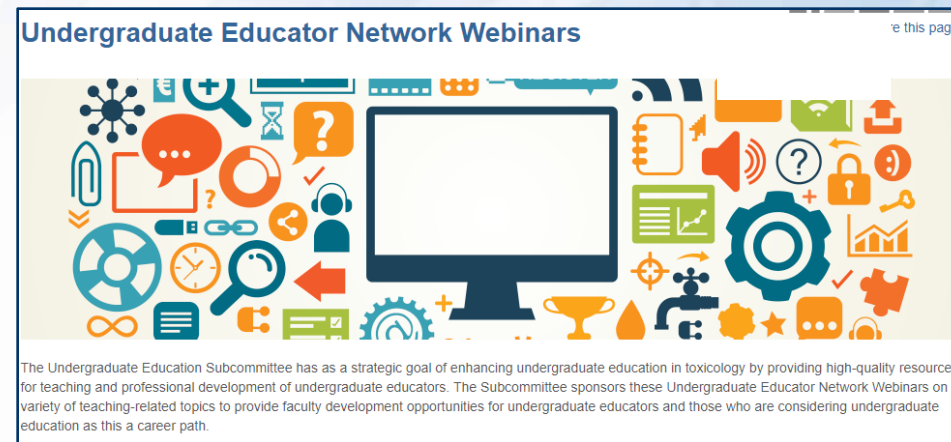
View the Society's collection of presentation recordings, interviews, and more.

[Read More](#)



Undergraduate Educator Network Webinars

- Embracing Our Student's Technologies: From AI to Specs
- Strategies for Boosting Student Undergraduate Engagement in the Classroom
- Approaching Scientific Controversies in Toxicology and Public Health
- Publishing Teaching Resources for the Toxicology Professor
- Enhancing the Undergraduate Research Experience for BOTH Mentor and Mentee
- Adopting the Undergraduate Toxicology Learning Framework
...and more!

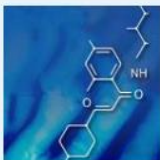


www.toxicology.org/education/edu/ugWebinars.asp



ToxMSDT Learning Resources

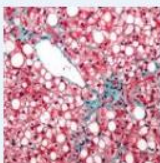
✓ UPDATED! Biochemistry: A Toxicology Module



Investigate how enzymes and metabolism adjust when toxicants

Access Module

✓ UPDATED! Pathophysiology: A Toxicology Module



Learn the basics of the physical and functional changes (pathoph

Access Module

✓ NEW! Lead in Drinking Water: A Toxicology Case Study



Explore how legacy uses of lead in water supply pipes became a

Access Case Study

- For undergraduates
- Independent learners
- Formal or informal education
- Seven units available

<https://toxmsdt.vetmed.ucdavis.edu/toxicology>





Undergraduate Educator Network Webinars

Thank you for participating today!

Please provide feedback via the
link that will be sent by email.

UEN Webinar recordings available at
www.toxicology.org.

Questions? Contact Shannon@toxicology.org