

PCAST Advancing Nutrition Workshop – Session 1

Gaps & Goals:

- Lack of Equity and Diversity in Nutrition Workforce
- Crucial Evidence Gaps in Nutrition Research
- *Lack of fundamental understanding of basic nutrient requirements necessary for various populations to achieve optimal health*

Opportunities at the Ground Level



Peko Tsuji, PhD, MPH, MS
Professor & Chair
Department of Biological Sciences
Towson University
ptsuji@towson.edu

ASN Inclusion, Diversity,
Equity, Accessibility
(IDEA) Committee
Chair 2023-2024

Current Lack of Fundamental Understanding:

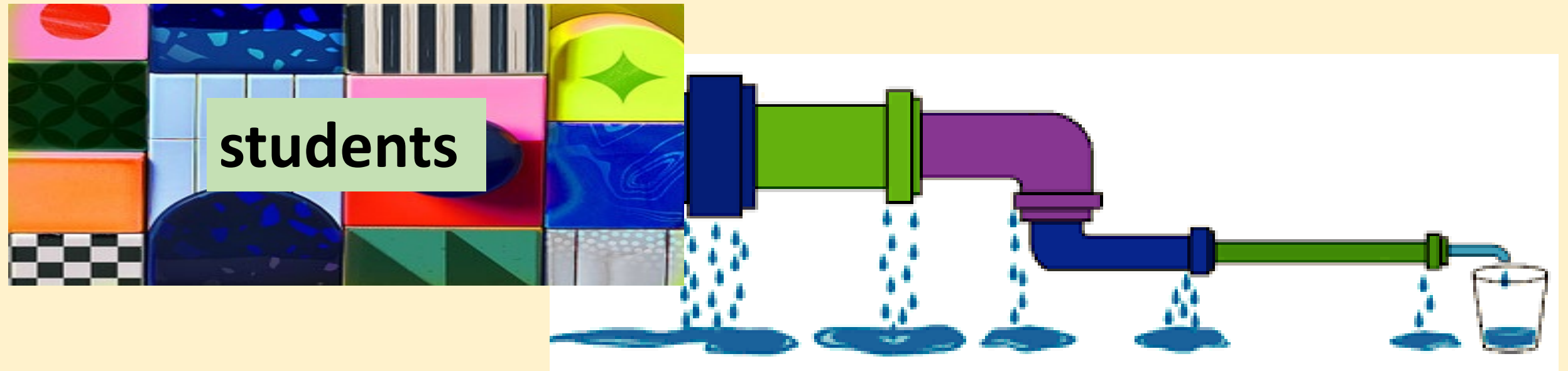
- Of basic nutrient requirements necessary for various populations to achieve optimal health
- How nutrients and dietary bioactives interact and improve human health.

Research needed to:

- identify/refine biomarkers for metabolic and other diet-related disease outcomes
- increase understanding of how to add precision to nutrient/bioactive recommendations based on individuals' requirements/responses, and genetic/racial/ethnic backgrounds.
- **How do we get more researchers interested in nutrition & biomarker research that relates to diverse genetic/racial/ethnic backgrounds?**
- **How do we make more funding available for this type of research?**
- **How do we create a pipeline of diverse experts?**

Goal: Increase & Diversify the Nutrition Research Workforce & Institutions

- Increase number and diversity of talent within nutrition research
- Increase federal efforts to recruit/nurture wide representation in nutrition research
 - next generation nutrition researchers more closely resemble US population
 - research topics and solutions more equitable and diverse.



Increasing Diversity in the Nutrition Research Pipeline



TU Research Enhancement Program

Course-based
Undergraduate
Research
Experiences



Needed support:

- Additional funding for lab supplies
- Additional programs nation-wide
- Improved coordination of federal & regional nutrition research
- Establish federal-public-private partnerships
- Provide comprehensive mentoring (faculty & students)
- **Nutrition-focused research programs!**

Increasing Diversity in the Nutrition Research Pipeline

- ~100 colleges offering major in nutrition
- 45 PhD programs in Nutrition & Dietetics PhDs in USA
 - Tufts, Cornell, Boston, Colorado State, Johns Hopkins, McGill, Harvard, Purdue, UConn,

1) <https://www.usnews.com/best-colleges/nutrition-major-1905>;
<https://blog.collegevine.com/us-colleges-with-nutrition-major>
2) <https://www.phdportal.com/study-options/269779075/nutrition-dietetics-united-states.html>



Increasing Diversity in the Nutrition Research Pipeline

- More programs & support at **Historically Black Colleges & Universities**



HBCUs: 107
19 states, DC, VI
~228,000 students

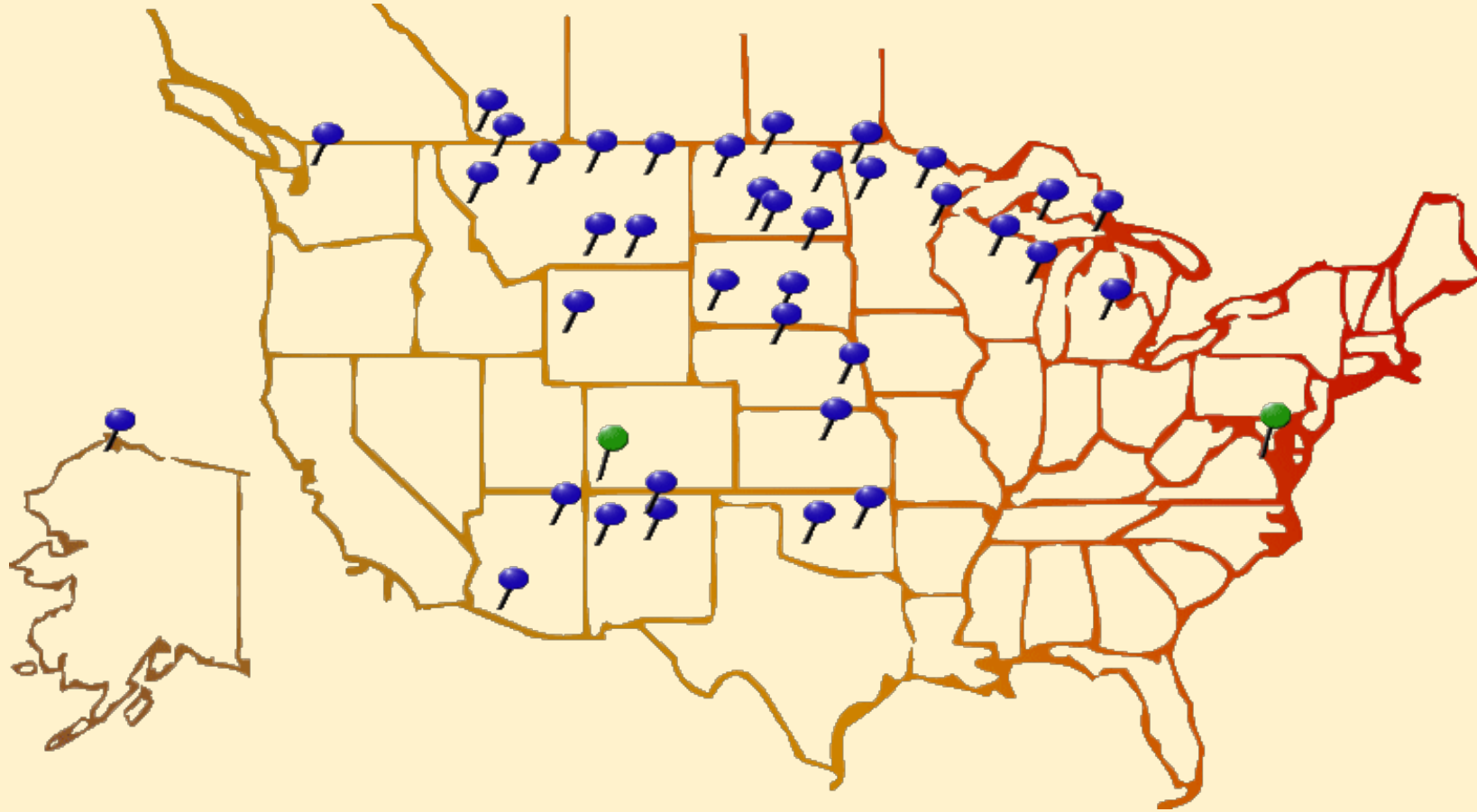
Key

- STATE WITH HBCUs
- STATE WITHOUT HBCUs
- HBCU LOCATION

U.S. Virgin Islands

Increasing Diversity in the Nutrition Research Pipeline

- More programs & support at Tribal Colleges & Universities



TCUs: 35

15 states

~15000 students

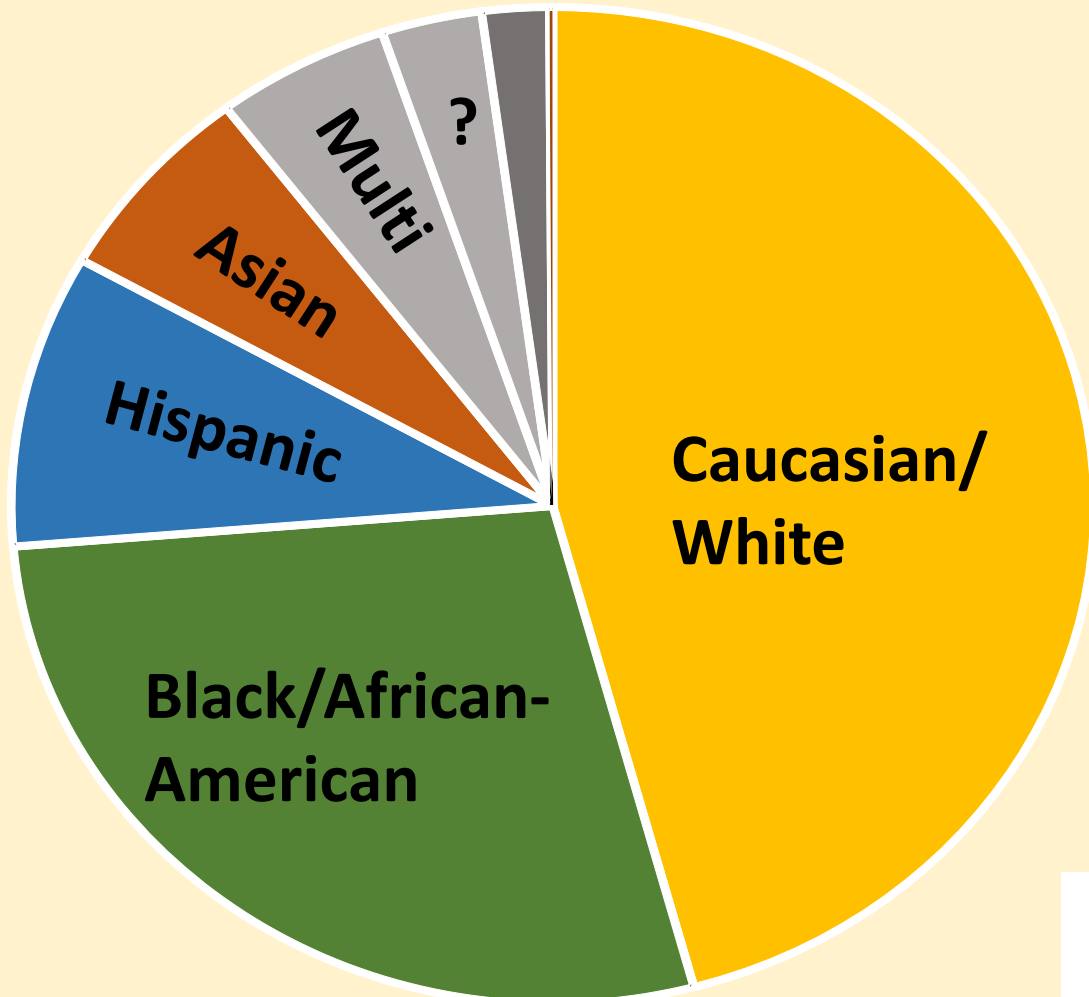
Nutrition programs: 0*

- 1) <https://tribalcollegejournal.org/map-of-tribal-colleges/map-tribal-colleges/>
- 2) <https://tribalcollegejournal.org/pdfs/Degree-Programs-at-Tribal-Colleges-and-Universities.pdf>

Increasing Diversity in the Nutrition Research Pipeline

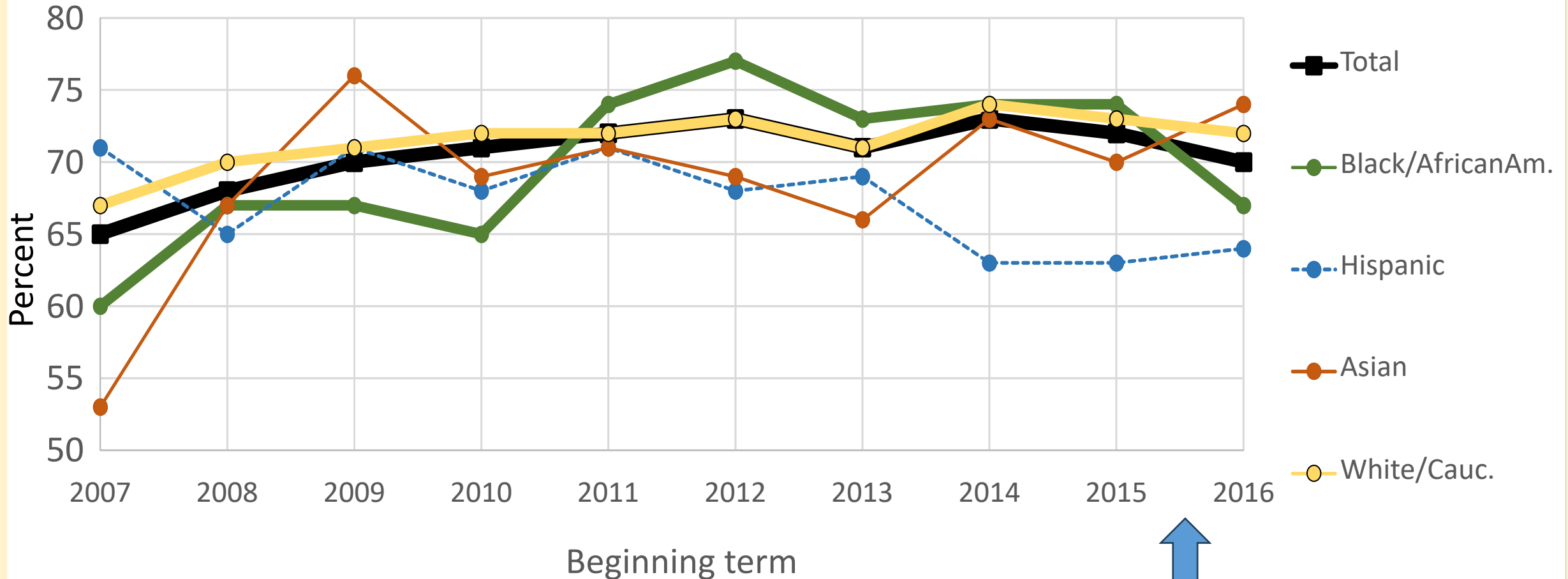
- More programs & support at **Comprehensive Universities**

Ethnicity of Enrolled Undergraduates: Towson University – Autumn 2022



Towson University (2022):
19,793 students

Towson University 6 yr graduation rate

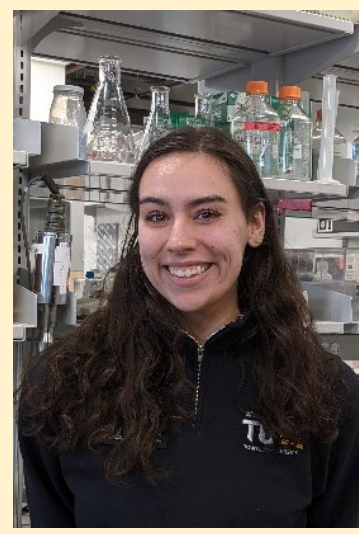


Graduation
during/after pandemic

Training the next generation of nutrition/biomedical scientists requires federal & state support, programs at universities



in BS or MS program at TU



MS program at TU



Medical school at NYITCOM



Lab Tech



PhD Program at PennState

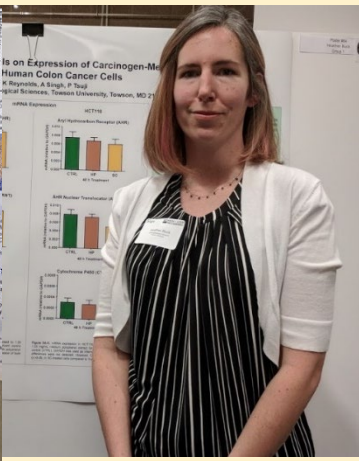
- Native American
- Asian American
- Cuban American
- Mexican American
- African American
- 1st generation US
- Nigeria
- Zambia/Uganda
- Nepal
- Germany
- China
- Canada
- Orthodox Jewish
- Muslim
- Christian
- 1st generation college
- Mothers



PhD Program at UVA



MS program at TU



PhD program at UMB



Academic Advisor



Lab Tech



Medical School

Training the next generation of nutrition/biomedical scientists requires federal & state support, programs at universities

Current federal (NIH) programs available to build pipelines of **biomedical** scientists:

- Bridges-to-Baccalaureate
- Bridges-to-Doctorate (ours is 1 of only 15 in the U.S. and the only one in Maryland)



- Similar programs **specific to nutrition sciences?**
- These programs are expensive, **funding needed to build the pipeline**
- Increase **Undergraduate Nutrition Research Programs** (*e.g.*, CUREs)
- Scientific Research Officers need to be **diverse and/or support DEIA programs**

Gaps:

- **Lack of equity & diversity in workforce**
- **Crucial evidence gaps in nutrition research**

Goals:

- **Increasing diversity in the nutrition research pipeline**
- **Increase understanding of how to add precision to nutrient recommendations based on individuals' requirements/responses, and genetic/racial/ethnic backgrounds**

Needs:

- **Increase access to training and education opportunities**
- **Increase number and funding for training programs at HBCU, HSI, Tribal Colleges, Minority Serving Institutions, Comprehensive Universities,....**