

Climate Change at UMBC

1987: Black students protested - campus perceived as racist

Now:

- No. 1 origin of Black MD-PhDs
- No. 2 origin of Black STEM PhDs (behind Howard)
- considered a national model for inclusive excellence in STEM

Google: Hrabowski, 60 minutes



Meyerhoff Scholars Program

1989: 19 African American males

1990: Open to African American females

1996: Open to all students

Historical: ~ 71% URM, ~15% Caucasian,
~ 14% Asian

Outcomes

- 1,490** total Meyerhoff participants (71% URM)
- 1,150** graduates (91% STEM retained)
- 930** graduates pursued graduate or professional degrees

- 312** PhDs awarded (82% URM)
- 59** MD-PhDs awarded (90% URM)
- 265** STEM Masters awarded (86% URM)

- 258** currently enrolled in graduate schools (81% URM)

Students who declined:

Graduate with similar GPAs, but...

..... half as likely to graduate with
STEM degrees

..... 7 times less likely to complete
STEM graduate degrees

Maton et al., *J. Women Minor. Sci. Eng.* (2009)

Maton et al., *Mt. Sinai J. Med.* (2012)

Broader Impact

By 2005:

- > 400% increase in non-program African American STEM degrees
- African American STEM GPAs at graduation equal Caucasians (from 2.7 to 3.2)
- Meyerhoff components adopted within the broader curriculum (Freshman STEM courses, Library)

Summers & Hrabowski, *Science* (2006)

By 2018:

- UMBC African American graduation rates equal/exceed Caucasians (all majors)

Impact beyond UMBC



Jerome Adams (M4)
US Surgeon General



Sylvia Trent-Adams (PhD)
Principal Deputy Assistant
Secretary for Health

40 tenured or tenure-track faculty positions:



	LAST/FIRST	INSTITUTION	DEPT/SCHOOL
1	Adefeso, Omolola	University of Michigan	Chemical Engineering
2	Adekunle, Olugbemiga	Holyoke Community College	Science, Engineering, and Mathematics
3	Baker Frost, Deanna	Medical U. South Carolina	Rheumatology and Immunology
4	Bardliving, Cameron	Keck Graduate Institute	Bioprocessing
5	Battle Wills, Lauren	Charleston Southern University	Biology
6	Bell, Caryn	U. Maryland, College Park	African American Studies
7	Boykin-Wallace, Stephenie	U. Alabama Birmingham	Pediatrics
8	Cantarel, Brandi	UT Southwestern Medical Center	Bioinformatics
9	Coley, Brooke	Arizona State University	Engineering, Polytechnic School
10	Durant, Nefertiti Harmon	U. Alabama Birmingham	Pediatrics
11	Dzirasa, Kafui	Duke University	Psychiatry & Behavioral Sciences
12	Gilbert, Mileka	Medical U. of South Carolina	Pediatrics
13	Grant, Jason	Middlebury College	Computer Science
14	Gray, Christy	Johns Hopkins University	Anesthesiology and Critical Care Medicine
15	Grollman, Eric	University of Richmond	Sociology
16	Hall, Gentzon	Duke University	Nephrology, Dept. of Medicine
17	Harris, Clifton	Winthrop University	Chemistry
18	Harris, Dinari	Howard University	Chemistry
19	Jackson, John	Johns Hopkins University	Epidemiology
20	Jenkins, Lekelia (Kiki)	Arizona State University	School for the Future of Innovation in Society
21	Johnson, Delayne	Delaware State University	Mathematics Education & Literacy
22	Kennedy, Monroe	Stanford University	Mechanical Engineering
23	Krummel, Brian	Purdue University	Mathematics
24	Langdon, Yvette	Millsaps College	Biology
25	McCants-Price, Kellie	Anne Arundel Community College	Psychology
26	McKoy, Tyrone	Com. Coll. Baltimore County	Mathematics
27	McMillan, Charles	Southern New Hampshire U.	Information Systems/Graduate School
28	McMullen, Kyla	University of Florida	Computer Science
29	Myers, Oliver	Clemson University	Mechanical Engineering
30	Neeley, Lawrence	Olin College of Engineering	Mechanical Engineering
31	Pinnix, Chelsea	MD Anderson Cancer Center	Radiation Oncology
32	Posey, Avery	University of Pennsylvania	Systems Pharmacol. & Translational Therapeutics
33	Powell, Natasha	George Washington University	School of Medicine & Health Sciences
34	Stancil, Kimani	US Merchant Marine Academy	Mathematics and Science
35	Timmons (Vann), Jennifer	Western Michigan U.	Dept. of Surgery
36	Towles, Joseph	Stanford University	Bioengineering and Mechanical Engineering
37	Tweedy, Damon	Duke University	Psychiatry & Behavioral Sciences
38	Watkins, Crystal	Johns Hopkins University	Psychiatry, School of Medicine
39	Wilder, Julius	Duke University	Gastroenterology, Dept. of Medicine
40	Williams, Stacey	Notre Dame of Maryland U.	Pharmaceutical Sciences

Replicating Meyerhoff

Meyerhoff-like outcomes can immediately be achieved at large, predominantly majority research universities

- Requires like-minded administrative and faculty leadership**
- Facilitated by inter-institutional partnerships**

Sto. Domingo et al., *Science* **364**, 335 (2019)