

# Driving Diversity

*Current Status and Opportunities:  
URM Training Data from Academic Medical  
Centers*

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# What trends do we see now in GREAT?

- Diversity of our PhD Programs
- Numbers in the pipeline, PhD; MD/PhD
- Time to degree for URM *vs* non-URM
- Diversity of Postdoctoral trainees
- URM Trainee Career Trajectories

# Old News: AAMC 1995 "snapshot"

## 7.3% URM, PhD & MD/PhD training

- AAMC Paper: "Profile of the Graduate Student Population in U.S. Medical Schools"; 1995 survey, 80 schools provided demographic data on 10,208 students.

SW Ammons & DE Kelly, *Academic Medicine* 72(9):820-830, 1997

Demographics of students (excludes 2576 international)

- **71% White American**
- **4% Hispanic American**
- **3% African American**
- **0.4% American Indian**
- **15% Asian; 7% Other**

*1995 -students in training: URM = 7.3% US; 6.1% Total*

# Methods - GREATMAIL listserv survey

- Survey conducted by Roger Chalkley, Joel Oppenheim and Nancy Thompson
  - Initiated: February, 2008
- 35 institutions responded prior to April 1 with data on PhD and/or MD/PhDs
- Several asked for follow-up after admissions season
- Follow up: August, 2008, repeated original questions and requested additional data to aid in interpretation

# Enrollment & Degree

- **Enrollment and Degree Questions:**

- # URM matriculating & year since tracking

- # still in training

- # graduated with PhD; with MD/PhD

- # graduated with other degree, such as Masters

- # Changed to professional program, transferred

- # Left without degree

Time to degree for URM and non-URM

# Outcome Questions

- **Outcomes for those who earned PhD or MD/PhD**
  - # in academic research
  - # in industrial research
  - # in postdoctoral training
  - # science administration
  - # other; just finishing; left science; unable to locate; residency/fellowship (MD/PhD); research foundation/institute; clinical practice; medical school

# August Follow-up Questions to aid Data Interpretation

- # Total (URM + majority) current PhD and MD/PhD students in your program
- # Total current postdocs in your biomedical departments
- # URM among current postdocs
- # International current postdocs

# 42 Institutions Contributing

Albany Medical College*	Ponce Med School - Puerto Rico	U. Florida College Med.
Baylor College of Medicine	Rockefeller*	U. Maryland Sch. Med.*
Brown University*	Stony Brook University*	UMDNJ*
Eastern Virginia Med. School*	SUNY – Buffalo*	U. Miami Miller SchMed*
Emory University	SUNY – Upstate*	Univ. Minnesota*
Harvard Medical School	Tufts - Sackler	Univ. Pennsylvania
Indiana Univ. School Medicine	Uniformed Services U.	U. Texas- Galveston
Johns Hopkins Med. School	U. Alabama-Birmingham*	UT Southwestern Med*
Mayo Graduate School*	U. Arkansas for Med Sci*	University of Utah*
Medical U. of South Carolina*	UCLA*	University of Virginia*
Mt. Sinai School of Medicine*	UC-SD*	Vanderbilt*
Northwestern*	UC-SF*	Washington U. St. Louis*
NYU – Sackler*	University of Chicago	
Ohio State University*	University of Cincinnati*	* = Contributed <u>both</u> PhD & Postdoc data
Penn State College Medicine*	U. Conn. Health Center*	10 MD/PhD programs reported data separately

# GREAT Survey: URM Graduate Training

**2716 URM Matriculated**  
PhD and MD/PhD Programs

**Time frames for data reported:**

*(3 institutions tracking PhD and MD/PhD in different time frames):*

Before 1980:	3	earliest = 1969 (U Miami)
From 1980's	12	
From 1990's	39	
From 2000's	45	

**Major Finding: Sizable portion of URM admitted are currently training!**

**1253 of 2716 matriculated  
are still in training:  
*46.1% overall***

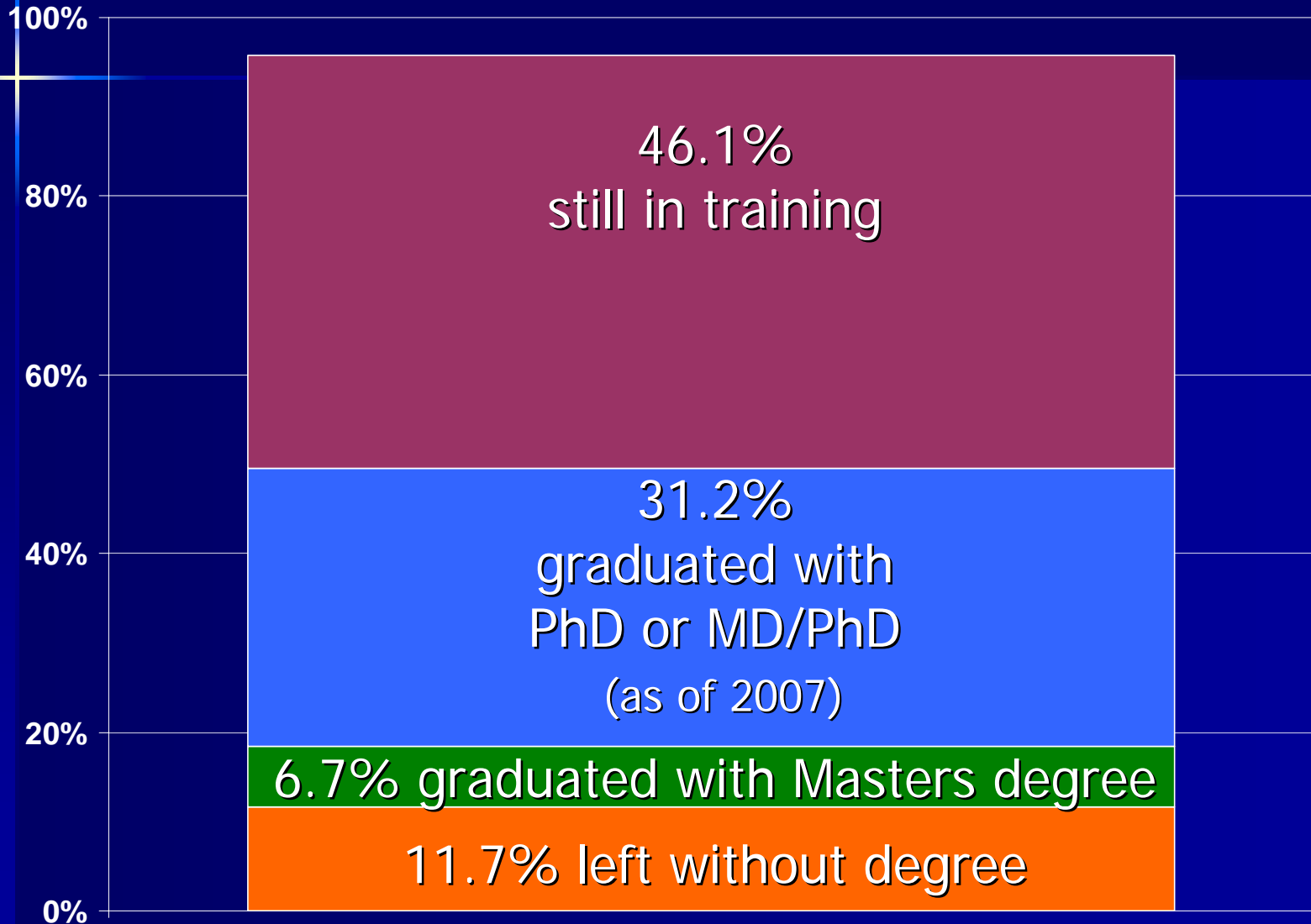
1197 of 2586 matriculated PhD students = 46%  
56 of 130 matriculated MD/PhD students = 43%

# 7.7 % total PhD students now in training are URM

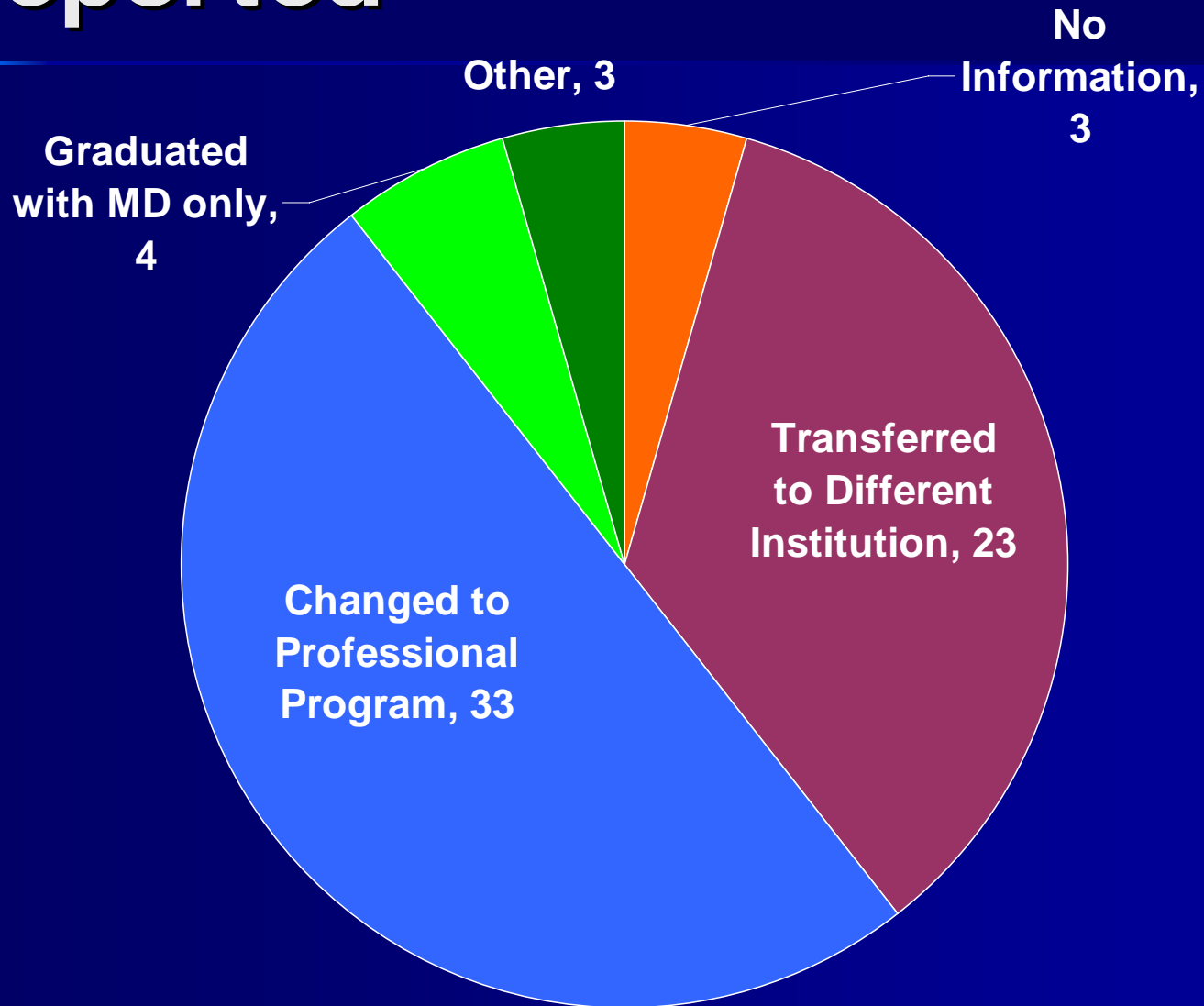
- 646 URM of 8418 total\* =7.7%
- 23 institutions reported both total number of PhD and or MD/PhD students and number URM students still in training (as of AY '07-08)
- *\*No adjustment for international students;  
% URM of US/PR will thus be higher*

# Survey Results

*Accounts for 95.7% of matriculated students*



# All "Other" categories reported

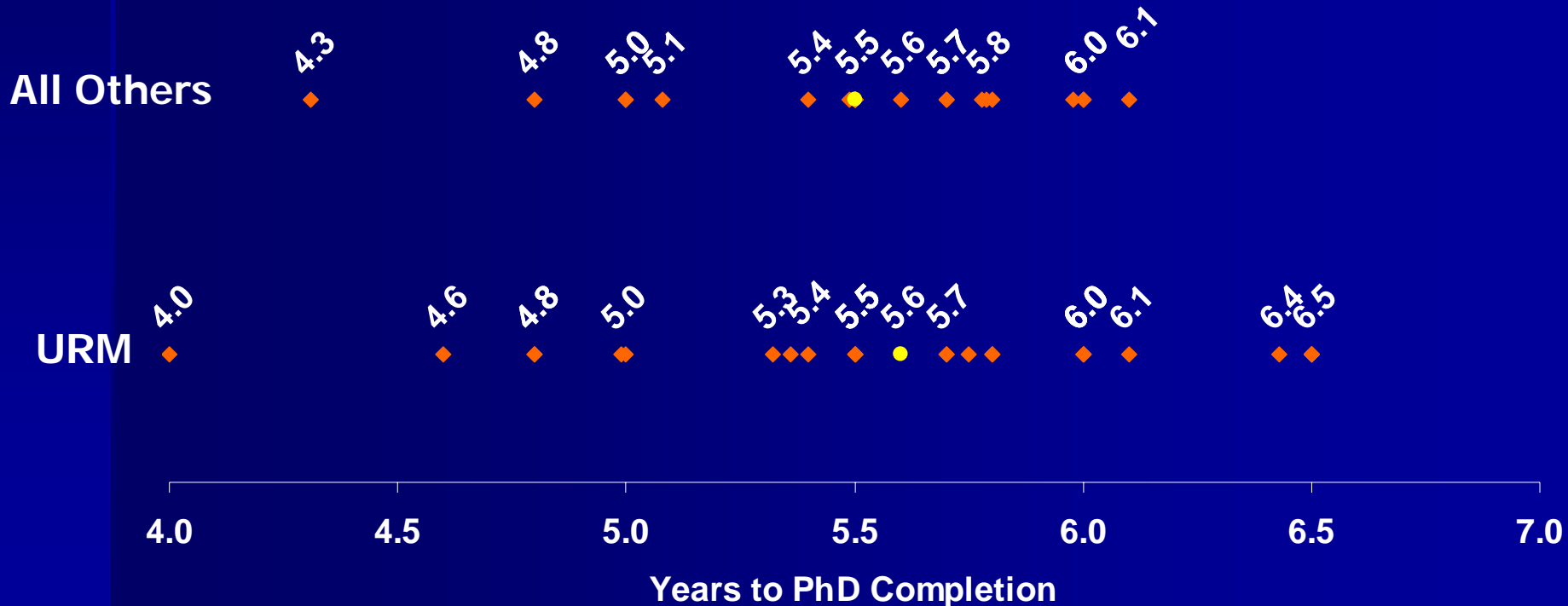


# Finding: Time to PhD Degree essentially the same

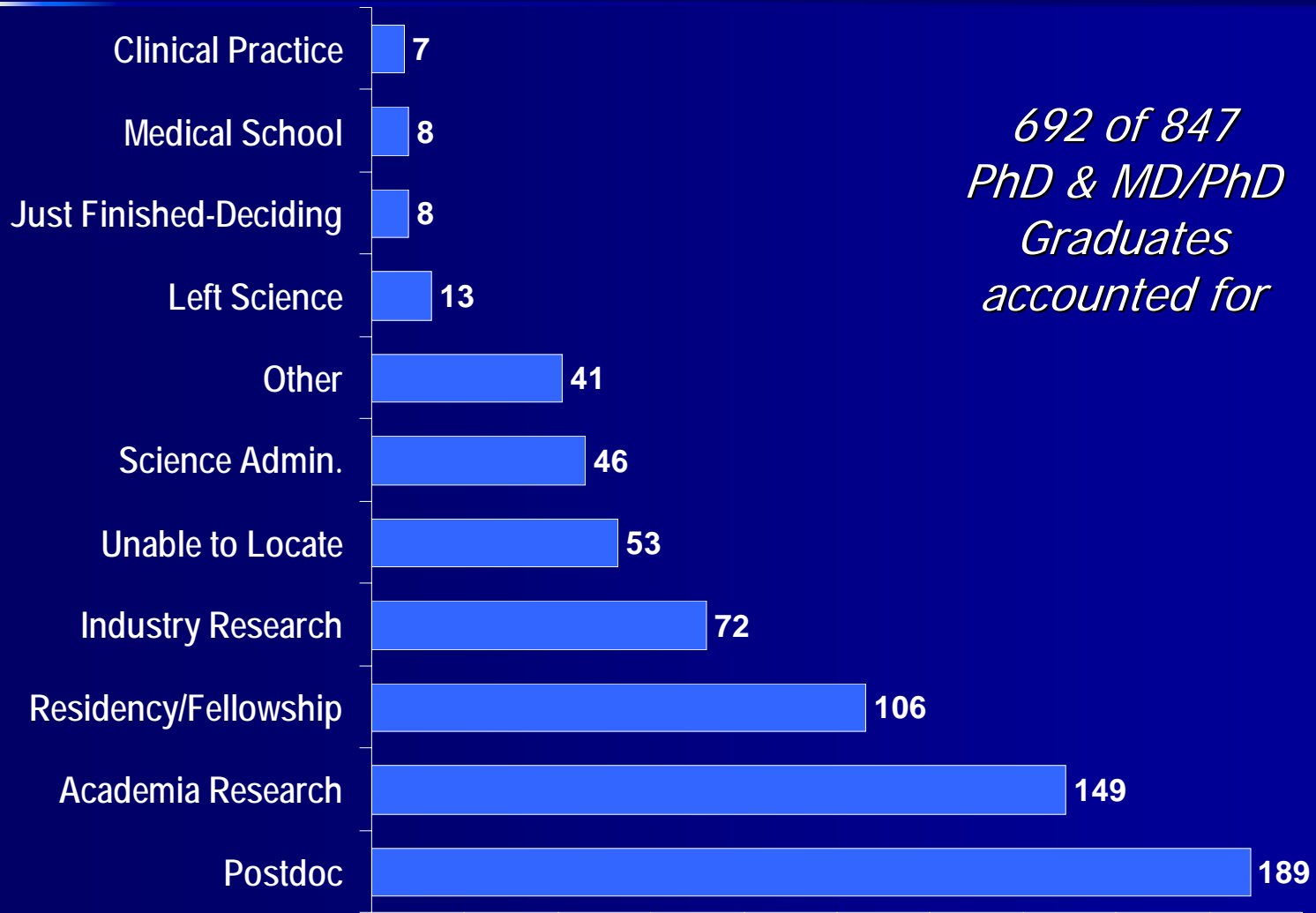
URM Average: **5.6 Years**

All Others Average: **5.5 Years**

No Significant Difference in Completion Times



# Career Outcomes for URM Graduates



# Postdoctoral Training

- 6475 = current postdocs in 23 institutions who also report # international and URM postdocs
- International postdocs = 4120 = 63.6%
- URM postdocs = 288 = 4.4% total  
11.4% of US/PR

*\*29 institutions reported 7720 total postdocs - no data from 3 large sites (some reporting clinical + basic biomedical sciences)*

# What is driving recent trend in URM PhD matriculation?

- Contribution of T32 Training Grants?  
**37 of 42 reporting institutions hold T32s:**  
**3054 predoctoral slots\***  
**2279 postdoctoral slots\***  
  
Top 10 institutions hold 62% of slots
- MARC, IMSD, Summer Research Programs, Leadership Alliance?

*\* NIH data, 2006*

# Are we losing URM in academic research?

- What was expected? Why?
- Do we have a drop-off of URM in postdoctoral positions?
- Are there differences in access to postdoc positions at research intensive institutions?
- Are non-academic careers more appealing?

# Why does this data matter?

- Changing demographics within US

Whites are currently 2/3 of US population

Today's minorities will be majority in 2043

- Need for racially and culturally diverse scientific workforce

Representative of the population at large

- Concern for health disparities

# A case study on career outcomes: not specific to URM PhD grads

- Mervis, J. Science 321:1622, 2008  
*Sept 19, 2008 NEWSFOCUS*
- Yale, class entering 1991 PhD program in Molecular Biophysics & Biochemistry
- 30 entered; 26 completed PhD

## **Where are they now?**

- Tenured academic: 1
- Academic science: 5 others (1 tenure track)
- Academic admin: 1
- Biotech Industry: 11
- Information Technology: 3
- Patent Law: 1
- Non-science own business: 1
- No Information: 3

# Time of Opportunity to Influence Career Choices

- Large # URM currently in training
- Networking of academic postdoctoral positions and faculty positions at research intensive universities
- Facilitate family friendly policies
- Professional development to maximize success in career advancement

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