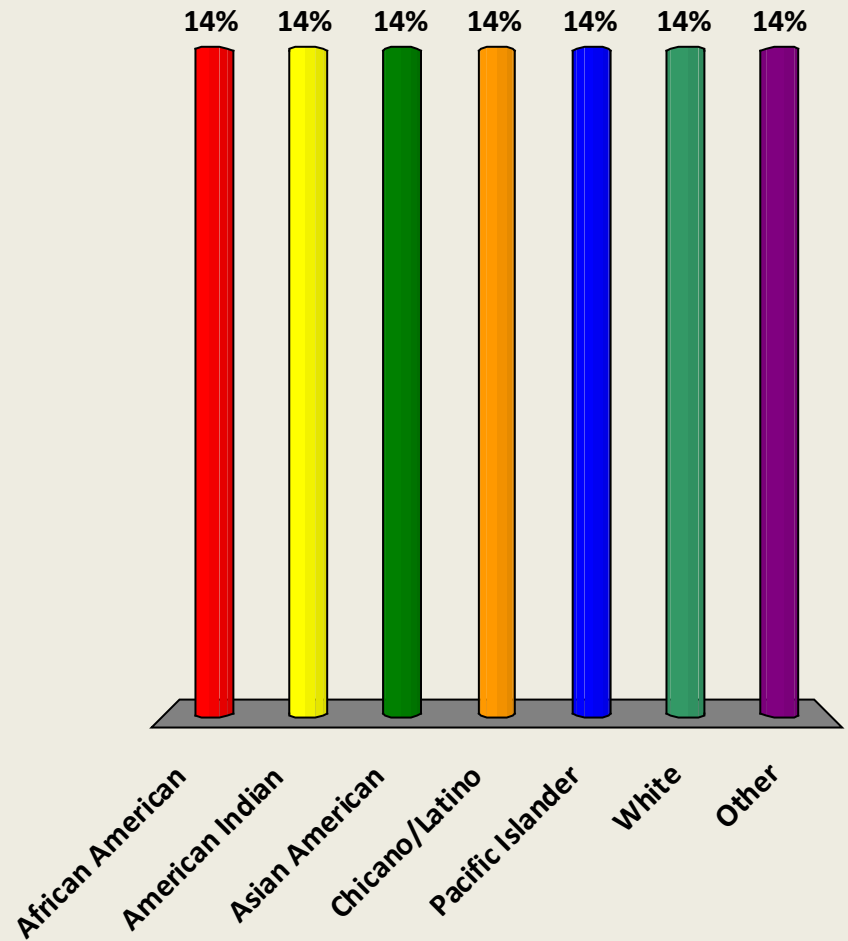# Meeting the California Challenge:
The University of California's Partnership to Advance Faculty Diversity in STEM

Keeping Our Faculty of Color Symposium

April 15, 2013—University of Minnesota

Percentages:

African American	6.0%
American Indian	0.7%
Asian American	30.9%
Chicano/Latino	32.1%
Pacific Islander	0.4%
White	27.1%
Other	2.8%

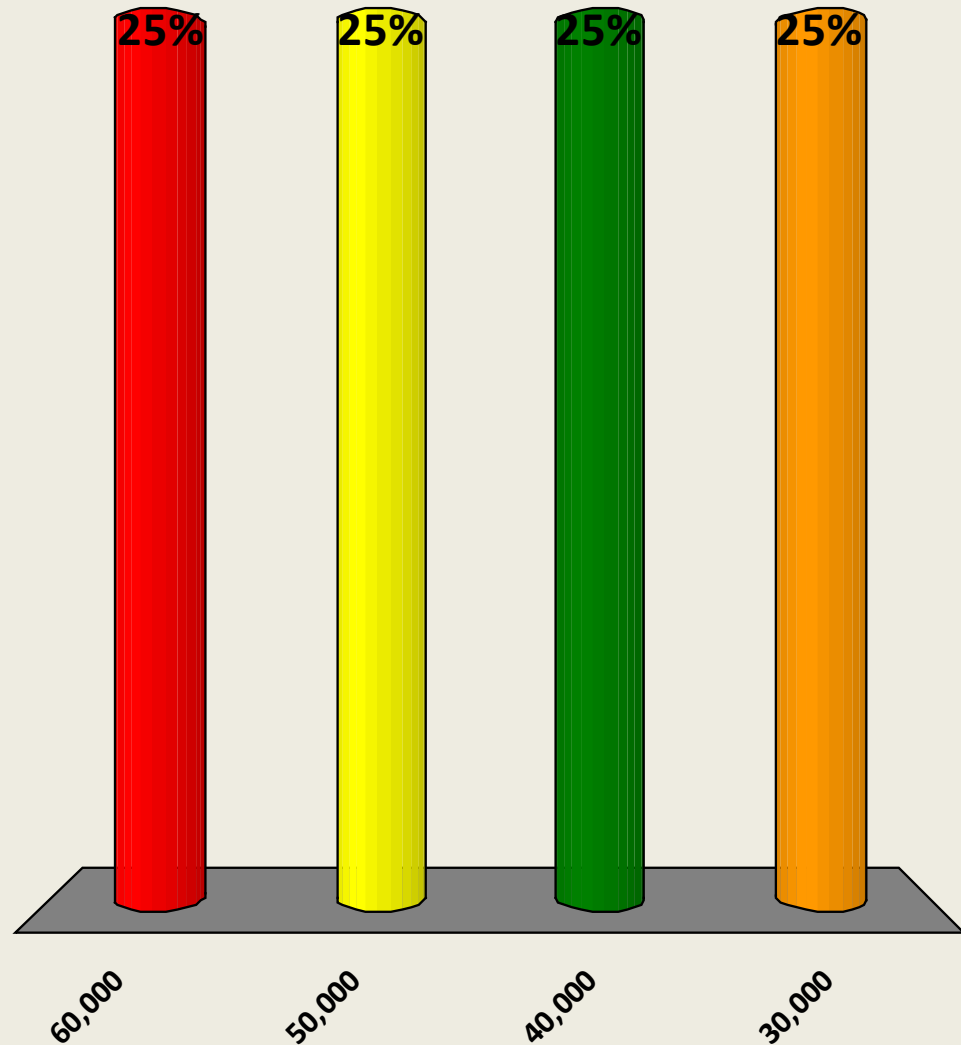# How many graduate and professional students are there at UC?

A. 60,000

✓ B. 50,000

C. 40,000

D. 30,000

Among the 6,187 postdoctoral scholars at UC in fall 2012, what percentage are non-U.S. citizens?

A. 15%

B. 30%

C. 40%

D. 50%

✓ E. 67%
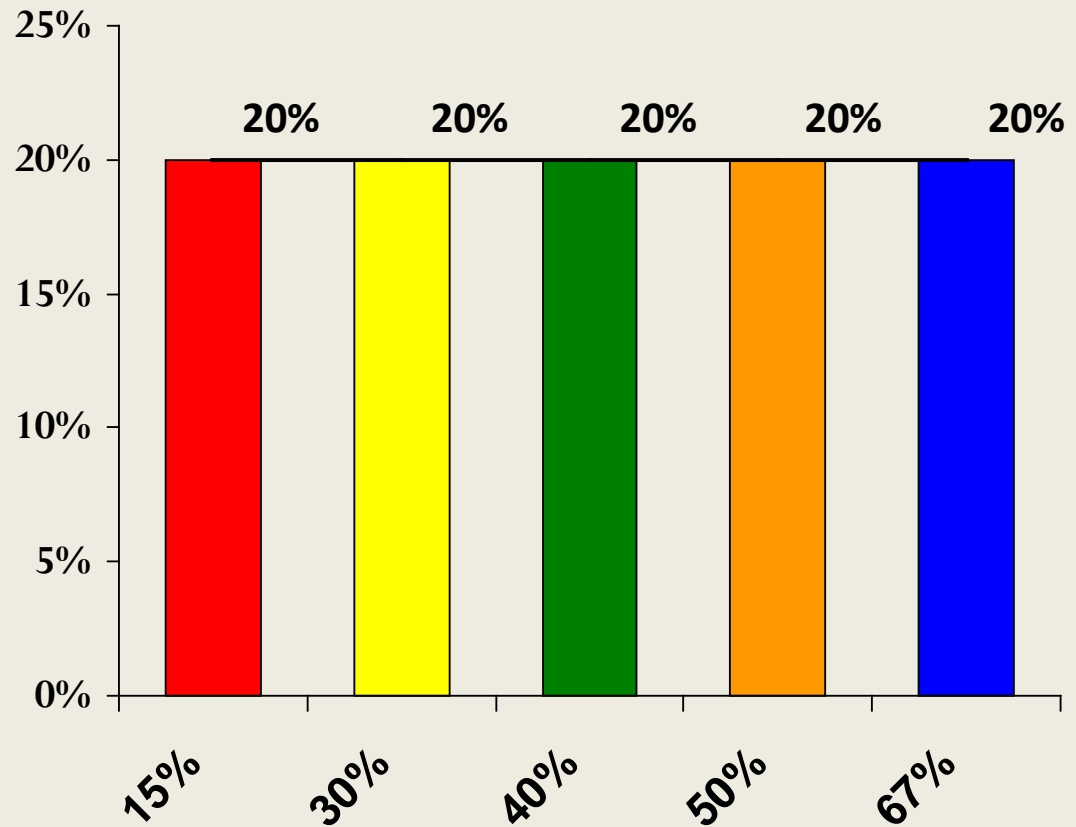
What Percentage of Ladder-Rank Faculty at UC (They Number 9,500) Self-Identify as White?

A. 85%

✓ B. 75%

C. 65%

D. 55%

25%   25%   25%   25%

85%   75%   65%   55%
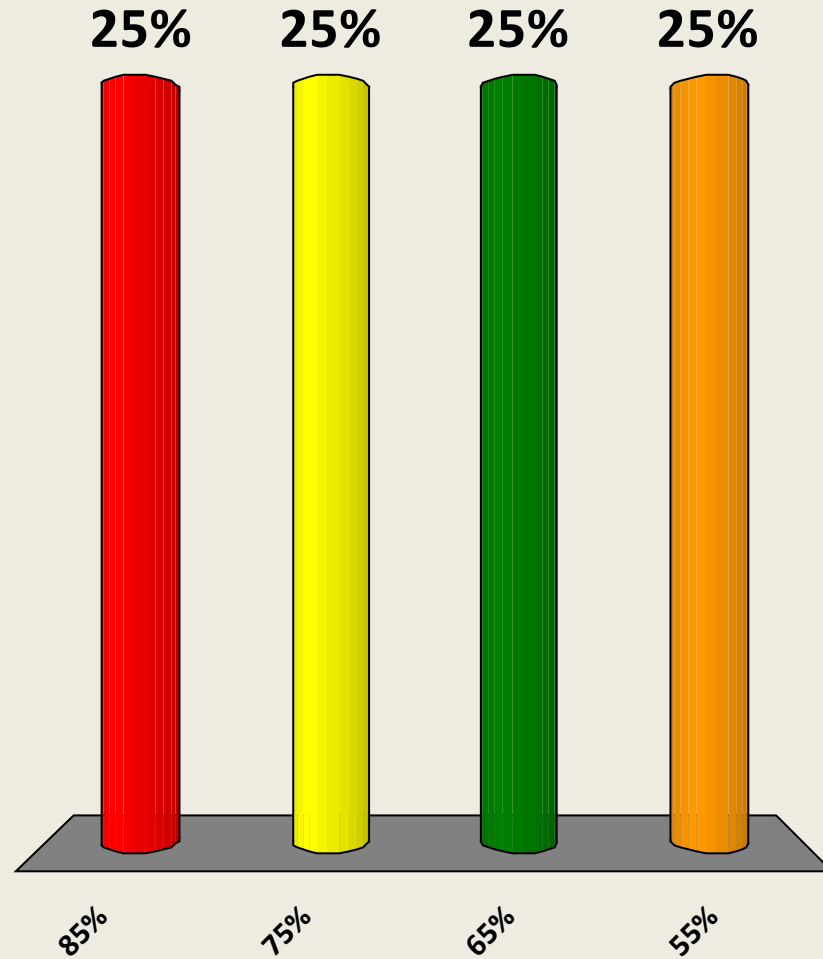
UC ADVANCE PAID

Susan Carlson

**Vice Provost, Academic Personnel, University of California Office of the President
Professor of English, University of California Davis**

What is the average number of new ladder-rank faculty hired at all UC campuses in the last ten years?

A. 475

✓ B. 450

C. 425

D. 325
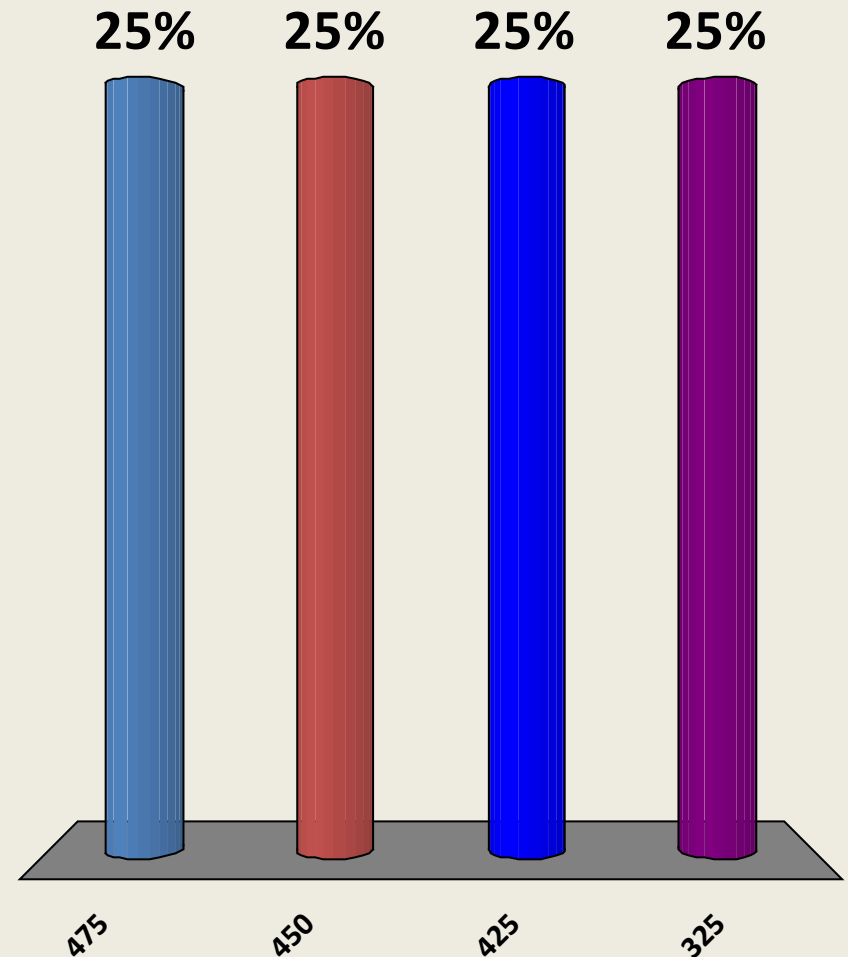
What was the number of applicants for ladder-rank faculty positions at UC in 2011-12 (hint: there were 353 hires)?

A. 45,000

✔ B. 40,000

C. 35,000

D. 25,000

25%	25%	25%	25%
45,000	40,000	35,000	25,000
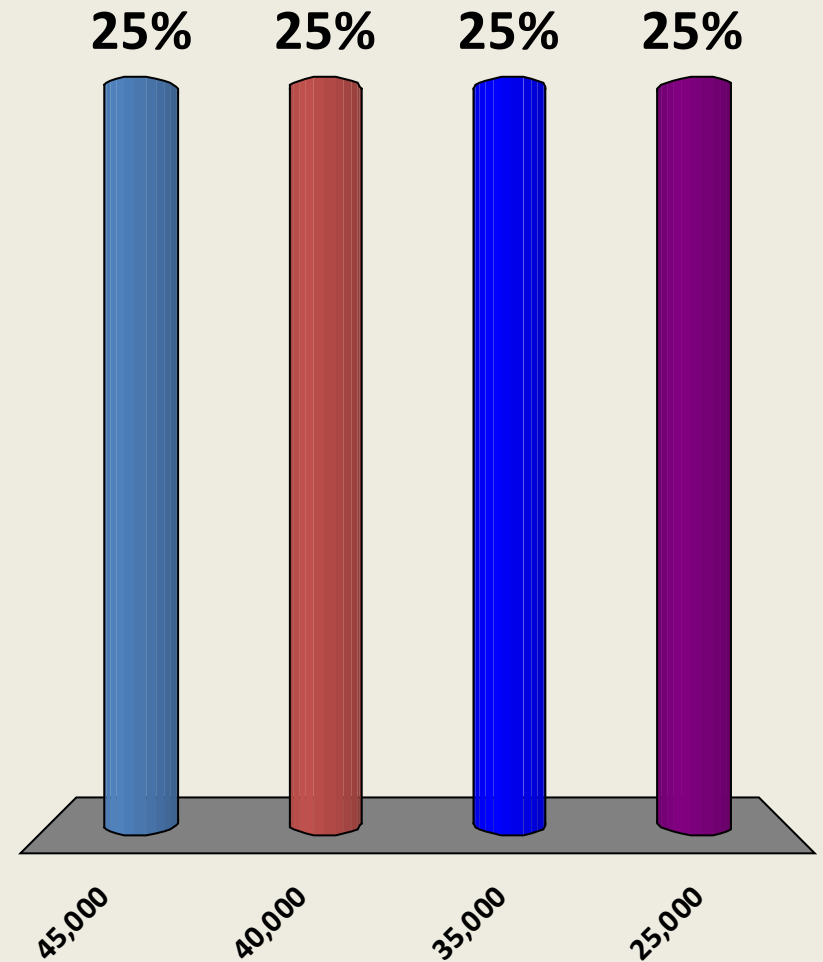
Meeting the California Challenge: UC ADVANCE PAID

- Support from **10** Chancellors and systemwide Provost
- Takes advantage of networks and prior collaborations among **10** campuses
- Capitalizes on the ability to compile data across **10** campuses
- Focus on recruitment data and Roundtable meetings

New Ladder- and Equivalent-Rank Faculty Hires by Race, Ethnicity and Citizenship, Universitywide, 2007-2012

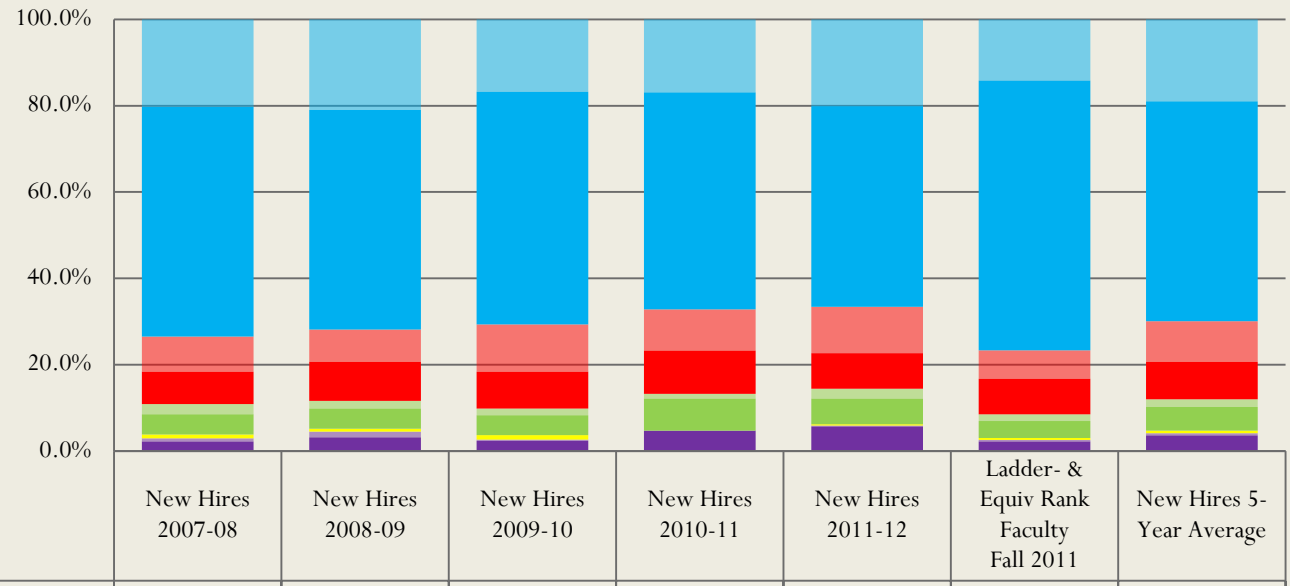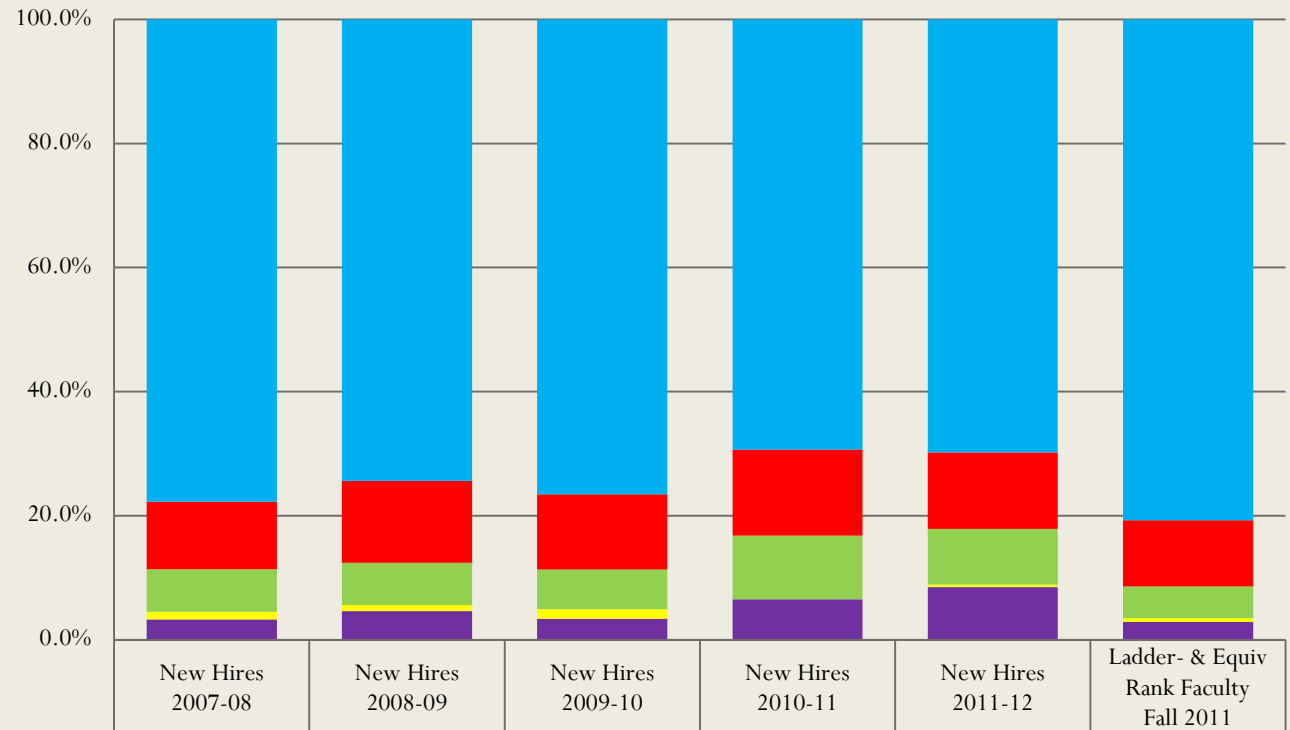|	New Hires 2007-08	New Hires 2008-09	New Hires 2009-10	New Hires 2010-11	New Hires 2011-12	Ladder- & Equiv Rank Faculty Fall 2011	New Hires 5-Year Average
White/Other-International	20.3%	21.0%	16.8%	16.9%	20.1%	14.2%	19.0%
White/Other-Domestic	53.2%	50.8%	53.9%	50.3%	46.5%	62.5%	50.9%
Asian-International	8.1%	7.5%	10.9%	9.5%	10.8%	6.6%	9.4%
Asian-Domestic	7.5%	9.0%	8.5%	10.1%	8.2%	8.2%	8.7%
Chicano/Latino/Hispanic-Int't.	2.4%	1.8%	1.6%	1.1%	2.3%	1.5%	1.8%
Chicano/Latino/Hispanic-Domestic	4.7%	4.7%	4.5%	7.4%	5.9%	3.9%	5.4%
American Indian-Domestic	0.9%	0.7%	1.1%	0.0%	0.3%	0.5%	0.6%
Black/African-International	0.7%	1.3%	0.3%	0.0%	0.3%	0.4%	0.5%
Black/African American-Domestic	2.3%	3.2%	2.4%	4.8%	5.7%	2.2%	3.6%

Source: UC Academic File and Payroll data.

Note: American Indian-International faculty represent less than 0.1 percent of faculty and are not displayed.

New Ladder- and Equivalent-Rank Domestic Faculty Hires by Race and Ethnicity, Universitywide, 2007-2012

	New Hires 2007-08	New Hires 2008-09	New Hires 2009-10	New Hires 2010-11	New Hires 2011-12	Ladder- & Equiv Rank Faculty Fall 2011
White/Other-Domestic	77.7%	74.4%	76.5%	69.3%	69.8%	80.8%
Asian-Domestic	10.9%	13.2%	12.1%	13.9%	12.3%	10.7%
Chicano/Latino/Hispanic-Domestic	6.8%	6.8%	6.4%	10.2%	8.9%	5.1%
American Indian-Domestic	1.3%	1.0%	1.5%	0.0%	0.4%	0.6%
Black/African American-Domestic	3.3%	4.6%	3.4%	6.6%	8.5%	2.9%

Source: UC Academic File and Payroll data

University of California
Comparison 8 Gender and URM Report
Headcount and Percent of Faculty, Women, URM and Women URM
Fall 2011

Institution	Total Faculty	Total Women Faculty	Total URM Faculty	Total Women URM Faculty	% Women of Total	% URM of Total	% Women URM of Total
Harvard University	1,517	391	95	34	25.8%	6.3%	2.2%
Massachusetts Institute of Technology	968	206	56	11	21.3%	5.8%	1.1%
Stanford University	1,270	302	80	23	23.8%	6.3%	1.8%
SUNY at Buffalo	1,103	333	71	33	30.2%	6.4%	3.0%
University of California	**9,042**	**2,757**	**781**	**300**	**30.5%**	**8.6%**	**3.3%**
University of Illinois at Urbana-Champaign	1,671	503	170	73	30.1%	10.2%	4.4%
University of Michigan-Ann Arbor	2,634	797	227	88	30.3%	8.6%	3.3%
University of Virginia-Main Campus	1,395	355	76	29	25.4%	5.4%	2.1%
Yale University	1,464	490	97	41	33.5%	6.6%	2.8%

Source: IPEDS fall 2011

UC Recruit: Web-Based Hiring Tool

Ethnicity Distribution of UC Faculty Search Committee Members v. UC Faculty Systemwide
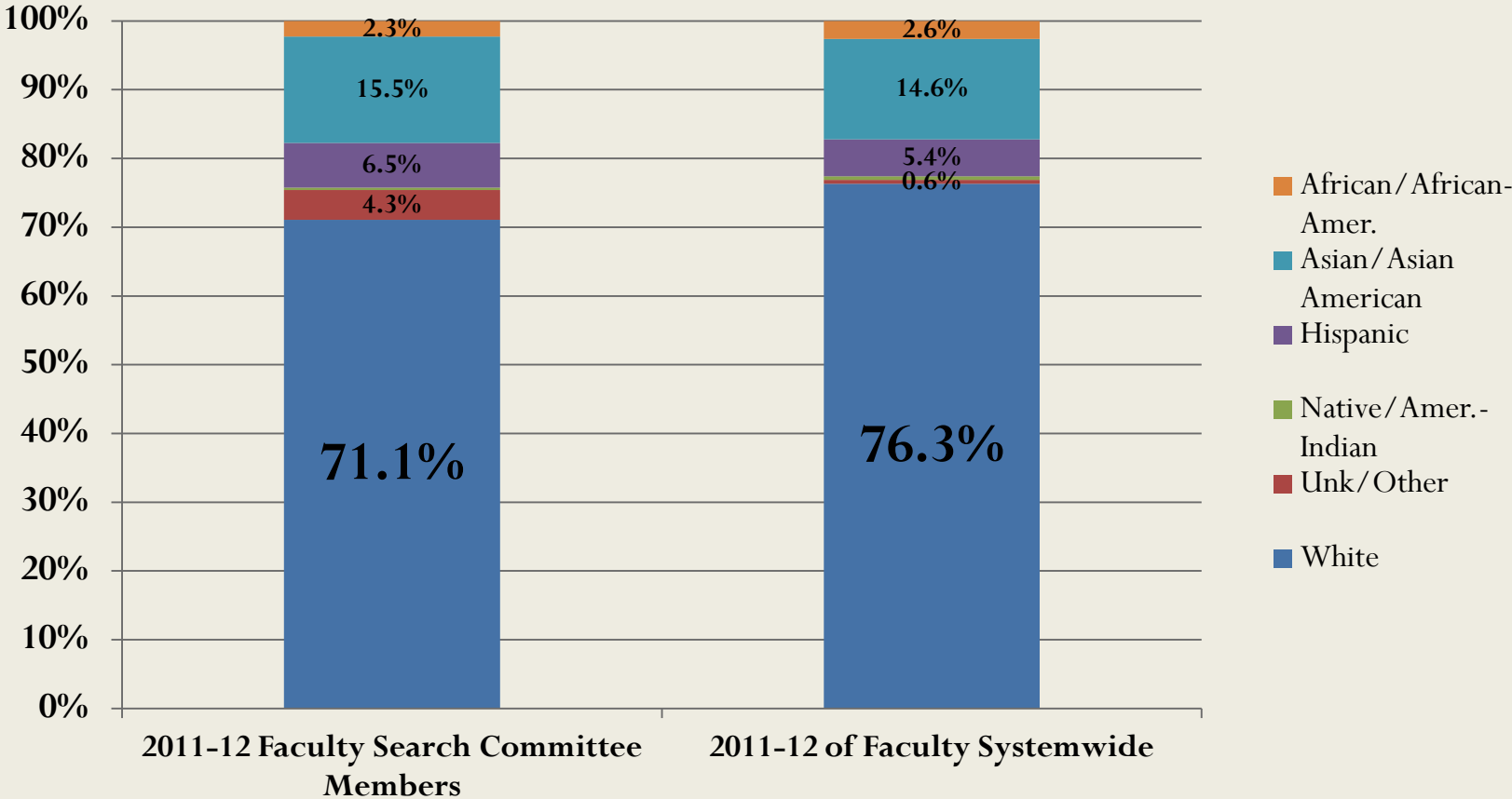
Source: 2011-12 UC Faculty Search Data

Challenges in Recruiting a Diverse Faculty to UC

- Reliability of availabilities data

- Correlating search practices to hiring results

- Costs in developing a flexible data collection tool

UC President's Post-Doctoral Fellowship Program

Sheila O' Rourke

Director, University of California-Office of the President's Postdoctoral Fellowship Program

Does your institution have effective programs in place to promote faculty diversity?

A. Targeted hiring

B. Postdoctoral or teaching fellowships

C. Research or curricular initiatives

D. Search committee training
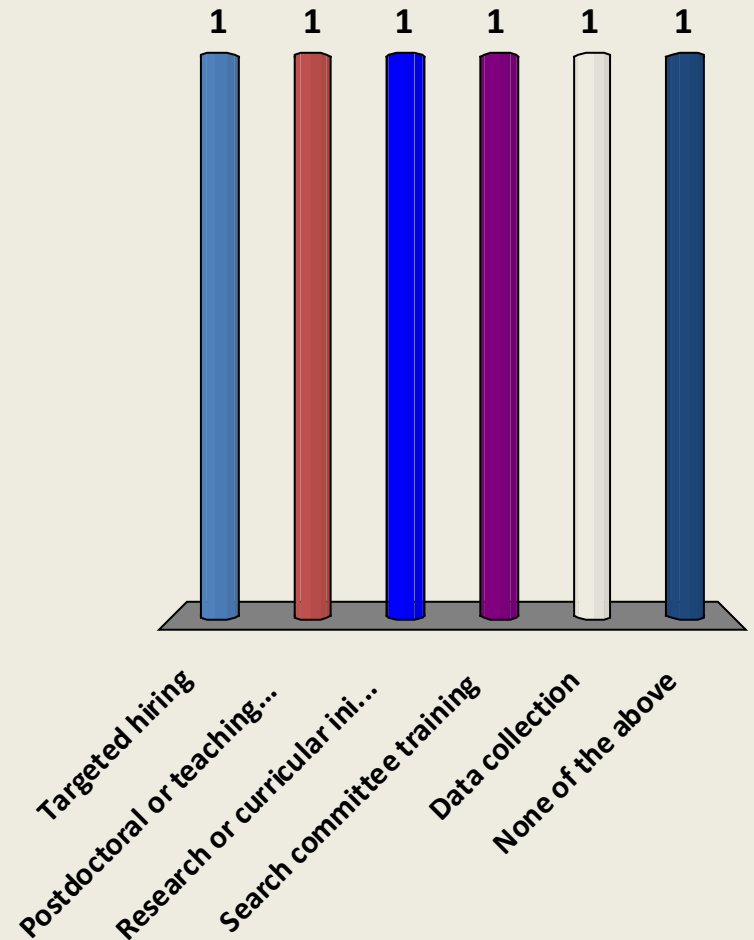
E. Data collection

F. None of the above

A Success Story
UC President's Postdoctoral Fellowship Program

The Data

- Showed that UC had not increased hiring of URM faculty in decades

The Challenge

- California passed Prop 209 in 1996 prohibiting consideration of race/gender

The Program Promotes Diversity Among Faculty by:

Providing research support, mentoring and career development for scholars whose work will contribute to diversity and equal opportunity at UC:

- Public service addressing the needs of our increasingly diverse society,

- Efforts to advance equitable access to higher education for women and minorities, or

- Research focusing on underserved populations or addressing issues of race, gender, or other inequalities.

A Success Story
UC President's Postdoctoral Fellowship Program

Fellows Demographic Profile 66% women/64% URM

2000-2012 (N=259)
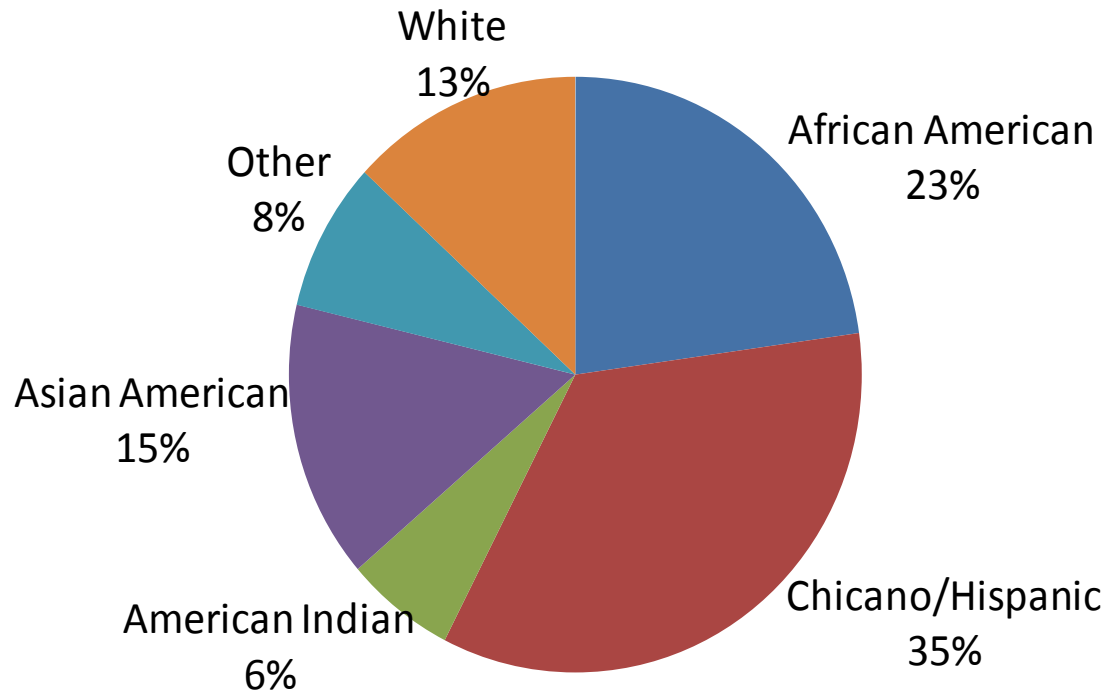
A SUCCESS STORY
UC President's Postdoctoral Fellowship Program

Benefits of the Program

- Two years of funded support under the mentorship of a UC faculty member
- Participation in an academic retreat to practice job talks and receive career coaching
- Benefits of a broad, multidisciplinary, multi-generational, scholarly network

Distribution by Field

- 33% Social Sciences
- 31% Humanities
- 36% Science, Technology, Engineering and Math (STEM)

A Success Story
UC President's Postdoctoral Fellowship Program

Challenge – UC system not hiring faculty from the program

- From 1986-2002 only 1-2 faculty hired each year to UC

Intervention

- President's Postdoctoral Fellowship Hiring Incentive:
  - Partial "FTE" salary support for five years
  - Funding taken "off the top" of regular faculty funds
  - Zero net cost to the system

Data

- Result of the Incentive:
  - Hiring UC faculty from this program jumped to >10/year
  - Since 2003, over 100 new UC faculty hires

A Success Story
UC President's Postdoctoral Fellowship Program

Data

Of first 52 eligible for tenure, 51 achieved tenure!

- 12% of all URM hires at UC from 2003-2010
- 26% of all American Indian hires at UC from 2003-2010

New faculty are part of interdisciplinary system-wide cohort

Continue to be engaged in the program network

- Mentoring new fellows
- Continuing to receive mentoring from senior faculty

Challenge = Recruiting in the STEM fields

- More limited pipeline
- Higher start up costs

A Success Story
UC President's Postdoctoral Fellowship Program

New Partnerships

- STEM faculty with NSF, NIH and other funding – matching funds
  10 additional fellowships in STEM

- Other research universities – University of Michigan

University Partnerships for Faculty Diversity
http://www.ucop.edu/acadpersonnel/ppfp/welcome.html

- Shared application

- Shared recruiting network

- Easy access online review procedures

- Access to selection policies, teaching policies, professional development framework

UC Irvine ADVANCE Program for Equity and Diversity

Douglas M. Haynes

Associate Vice Provost for Equity and Diversity

Associate Professor, History
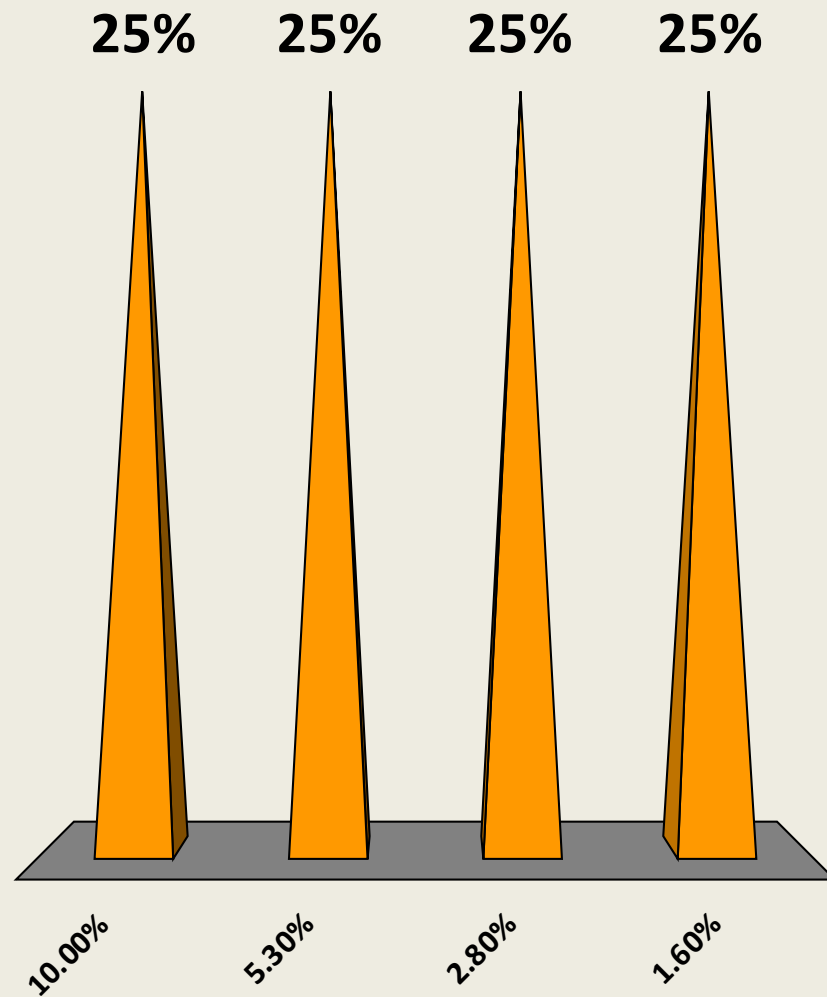
UC Irvine ADVANCE Program: Advancing Excellence through Equity and Diversity

- Robust leadership and intentional message
- Align incentives and resources to priorities
- Consistent dissemination and articulation of University policies and campus procedures
- Train and equip faculty leaders to be change agents
- Build on strengths and broaden mission

Faculty Equity Advisor Model and Leadership

- Equity Advisor selected from each School
- Furnish best practices for and advise regular rank faculty searches
- Coordinate mentoring programming for junior as well as senior faculty
- Provide salary equity counseling for faculty
- Oversight of faculty and graduate student diversity

- Tenured and Familiar with UC Irvine
- Current/former chairs, directors
- Established research profiles
- Supported by NSA, NEH, NEA, NIH, NSF
- Recipients of Senate Research, teaching and service awards
- Incumbents of UC Irvine Endowed Chairs

Gender Characteristics of Equity Advisors

Equity Advisors by Gender

■ Female   ■ Male

Year	Female	Male
2002	10	0
2003	14	2
2004	14	4
2005	12	4
2006	12	6
2007	10	6
2008	8	7
2009	7	9
2010	5	9
2011	9	6
2012	8	4
2013	9	4
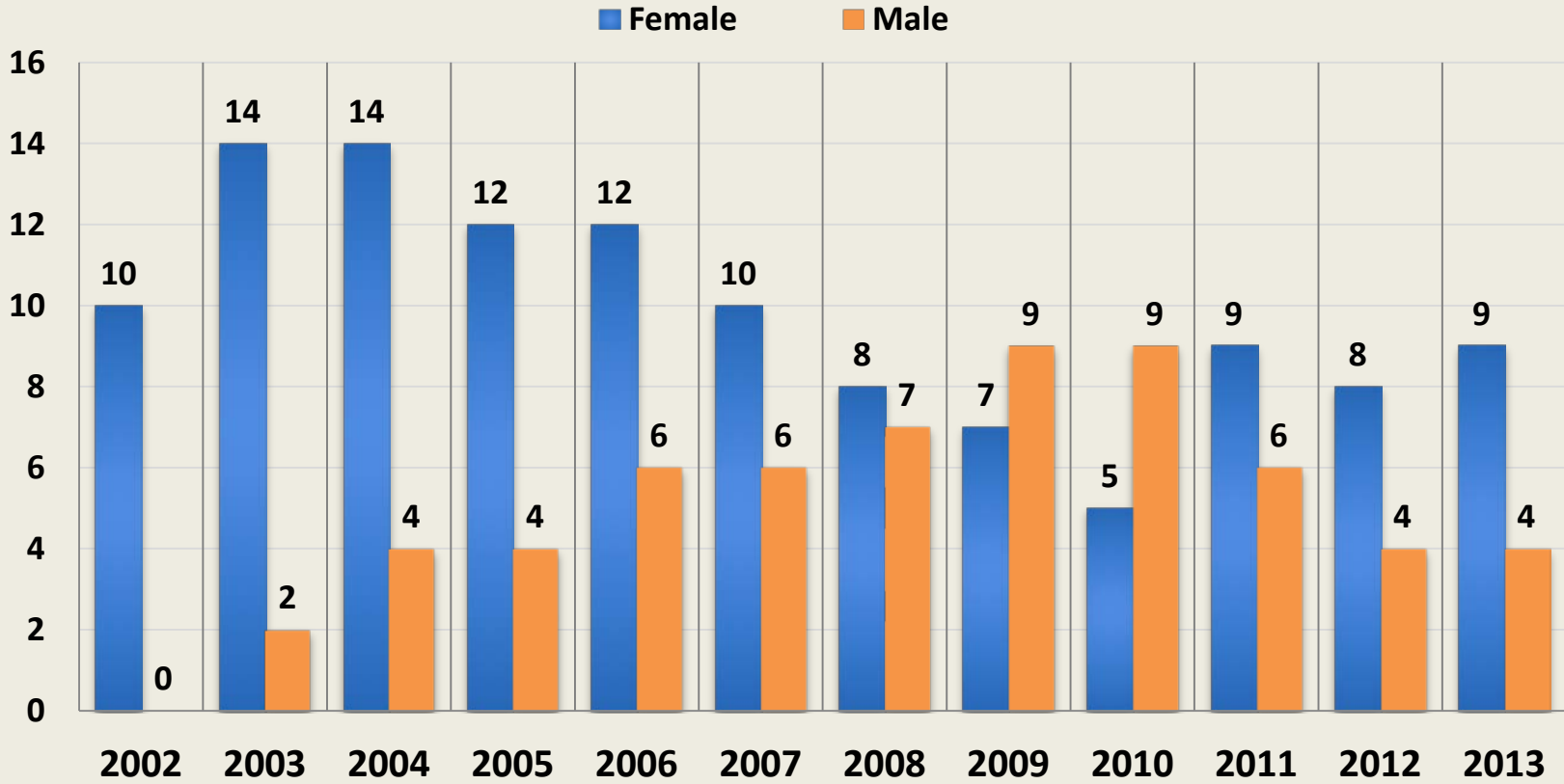
Ethnicity Characteristics of Equity Advisor

2002-2013

Equity Advisors by Ethnicity

■ URM ■ White ■ Asian ■ Declined
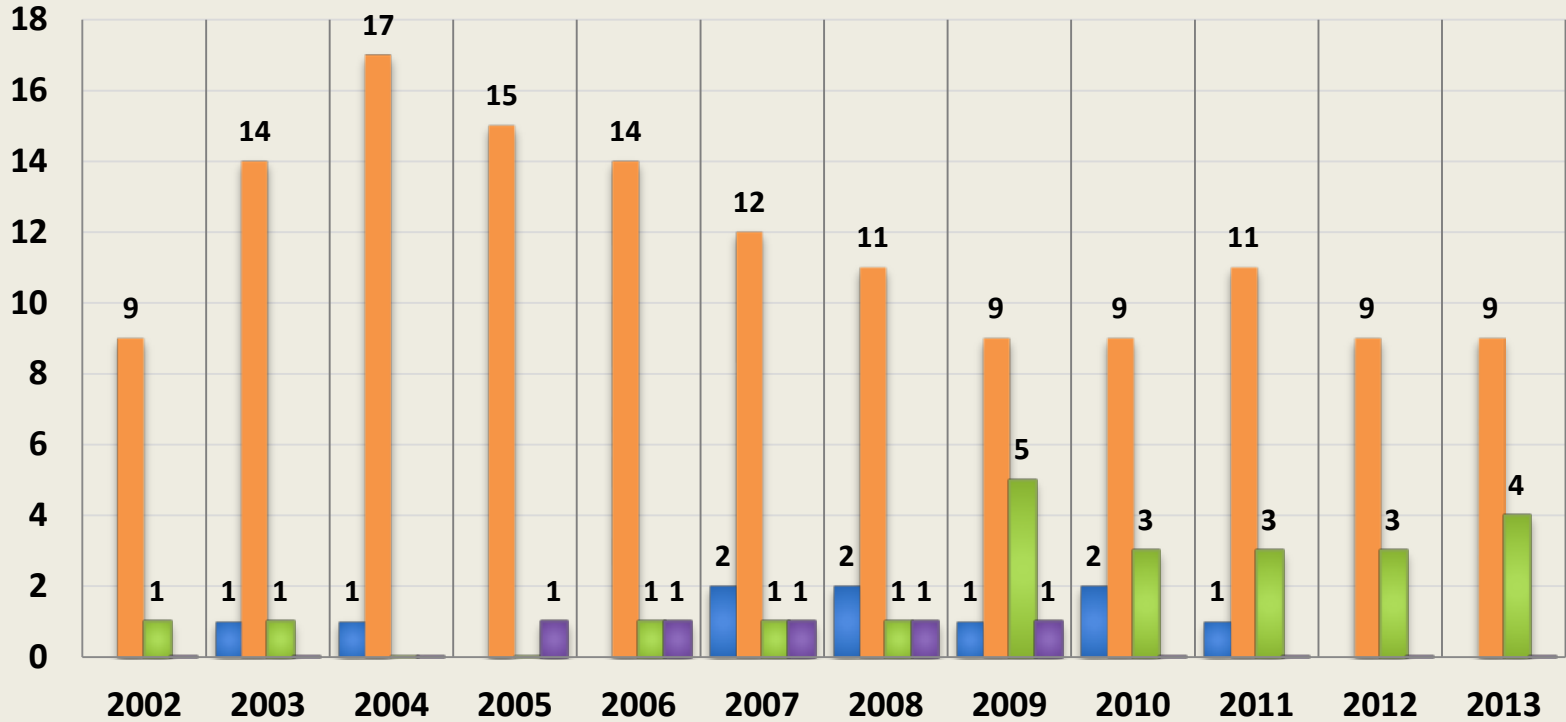
Diversity: A Principal Campus Objective

- Multiple recruitment strategies advance UC Irvine strategic plan *Focus on Excellence.*

- The programs below augment and complement other campus/school/department strategic hiring programs:
  - UC Irvine Chancellor's ADVANCE Postdoctoral Fellowship, 2013-2014
  - UC PPFP Faculty Incentive Hires since 2003 (17 FTE)
  - Scholarship on Diversity since 2007-2008 (7 FTE)
  - Career Partner Hires since 2000 (84 FTE)

Regular Rank STEM
New Faculty Hires by Gender

Legend: ■ Female ■ Male

Year	Female	Male
2005-06	FTE 15, 37.5%	FTE 25, 62.5%
2006-07	FTE 11, 28.9%	FTE 27, 71.1%
2007-08	FTE 18, 39.1%	FTE 28, 60.9%
2008-09	FTE 16, 32.7%	FTE 33, 67.3%
2009-10	FTE 5, 38.5%	FTE 8, 61.5%
2010-11	FTE 7, 58.3%	FTE 5, 41.7%
2011-12	FTE 2, 11.1%	FTE 16, 88.9%
2012-13	FTE 8, 50.0%	FTE 8, 50.0%
Total	FTE 82, 35.3%	FTE 150, 64.7%
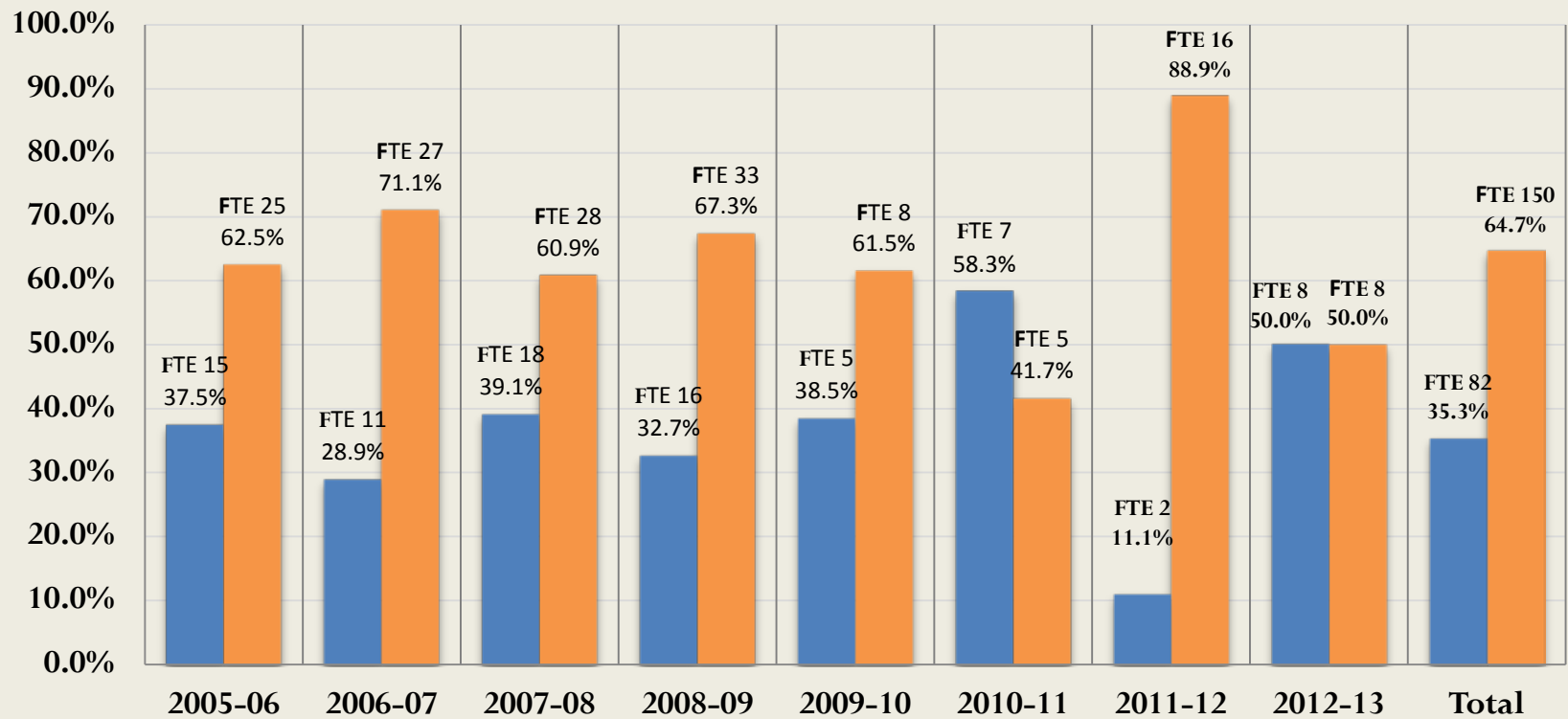
Regular Rank STEM
New Faculty Hires by Ethnicity

Legend: ■ Underrepresented* ■ Asian ■ White ■ Declined to State

Year	Underrepresented*	Asian	White	Declined to State
2005 – 2006	FTE 6 10.0%	FTE 11 18.3%	FTE 42 70.0%	FTE 1 1.7%
2006 – 2007	FTE 3 4.7%	FTE 11 17.2%	FTE 48 75.0%	FTE 2 3.1%
2007 – 2008	FTE 6 7.8%	FTE 14 18.2%	FTE 55 71.4%	FTE 2 2.6%
2008 – 2009	FTE 8 11.4%	FTE 13 18.6%	FTE 46 65.7%	FTE 3 4.3%
2009 – 2010	FTE 6 22.2%	FTE 5 18.5%	FTE 15 55.6%	FTE 1 3.7%
2010 – 2011	FTE 6 21.4%	FTE 6 21.4%	FTE 15 53.6%	FTE 1 3.6%
2011 – 2012	FTE 2 11.1%	FTE 5 27.8%	FTE 11 61.1%	0.0%
2012 – 2013	0.0%	FTE 4 25.0%	FTE 12 75.0%	0.0%
Total	FTE 16 7.1%	FTE 46 20.4%	FTE 159 70.7%	FTE 4 1.8%

Challenge: Narrow Clusters of Faculty Recruiting Institutions

- UC Recruit shows approximately 65% of UC's new appointments in the professorial series and equivalent rank faculty are from 25 institutions
- Those 25 institutions are a combination of 15 private and 10 public higher education institutions

New Appointments - Institution of Highest Degree--2002-03 through 2011-12 combined		
Degree Institution	**New UC Hires**	**% of new hires**
Top 20 Public and Private Institutions	1,888	40%
Other Institutions	1,747	37%
University of California	1,108	23%
Total New Hires	4,743	100%

Challenge: Declining State Support

- Reduced hiring activity and increased uncertainty in academic planning

- Differential perceptions of "core" and "non-core" fields/disciplines—STEM versus Non-STEM

- Potential for reducing participation in the professoriate due to narrow definition of excellence—i.e. PhD institution, field of research, and "best fit"

Building and Sustaining an Inclusive Culture

Academic Senate Statements and Commitments Affirming:

- Work-life Balance (2008)

- Inclusive Culture & Climate (2011)

- Diversity in the Academic Review Process (2012)

- Diversity in Graduate Education (2013)

ADVANCE Dependent Care Travel Awards Program

Complements University "*family friendly accommodation*" resources:

- Supports Assistant/Associate professors w/young children
- Subsidizes daycare costs for conference attendance and research meeting participation
- 104 awards funded to eligible faculty across campus units since 2007

# Moving Forward with Women in STEM UC Riverside and Beyond

Yolanda Moses

Associate Vice Chancellor, Diversity, Excellence and Equity
Professor, Anthropology, University of California Riverside

What is the most common reason that senior faculty cite for why they do not volunteer to mentor junior faculty?

A. Lack of formal training as a mentor

B. Lack of confidence in interpersonal skills

✔ C. Lack of time
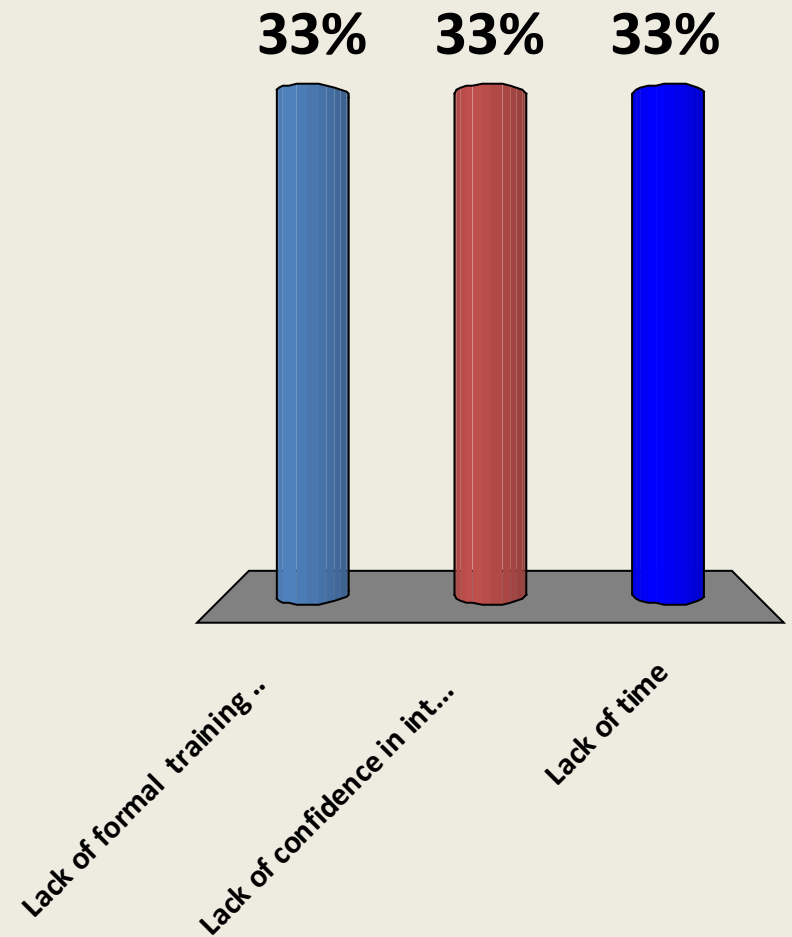
# Research shows that the most effective mentoring outcomes are

A. Increased research productivity of mentee

B. Increased professional engagement of mentee

C. Increased professional satisfaction of mentor

✔ D. All of the above
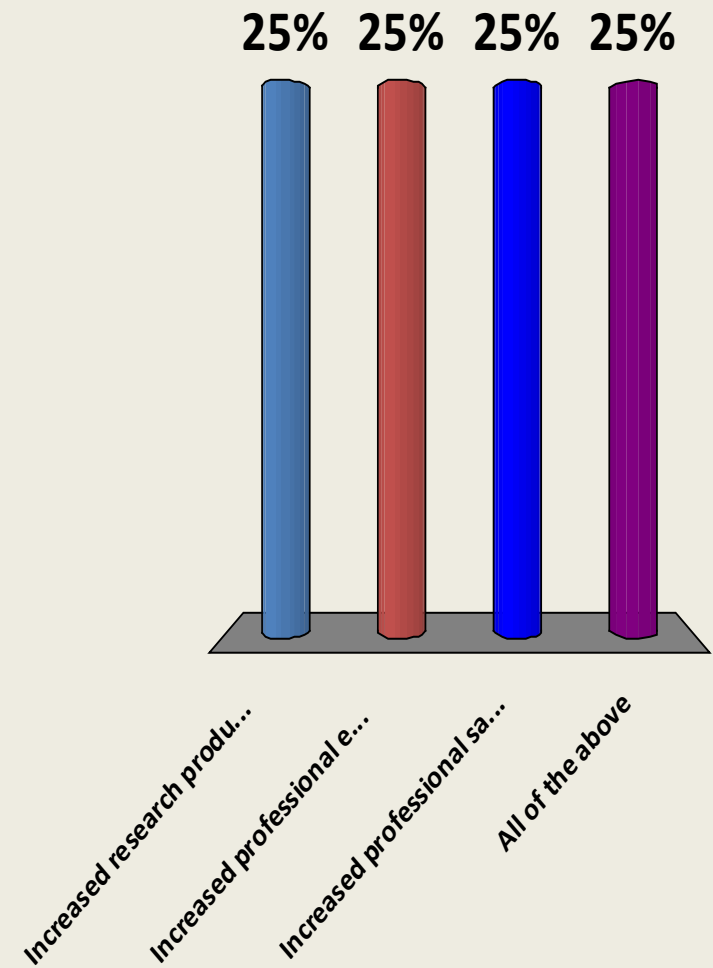
Peer Mentoring and Group Mentoring Strategies

A. Are more effective with students than with faculty

B. Should only be reserved for junior faculty

✓ C. Are part of a variety of options that faculty at all levels of their career should use as options

33% **33%** **33%**

Are more effective with …

Should only be reserved …

Are part of a variety of …
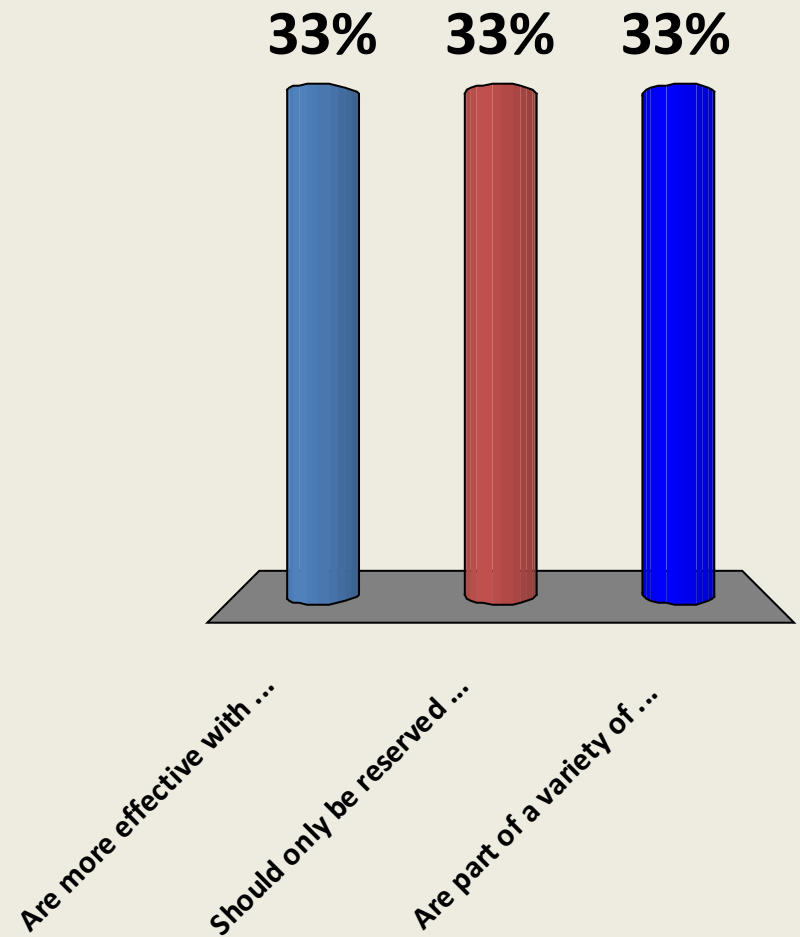
Diversity at UC Riverside by Gender:
Undergraduate Students v. Ladder-Rank Faculty

Undergraduate Students

Ladder-rank Faculty

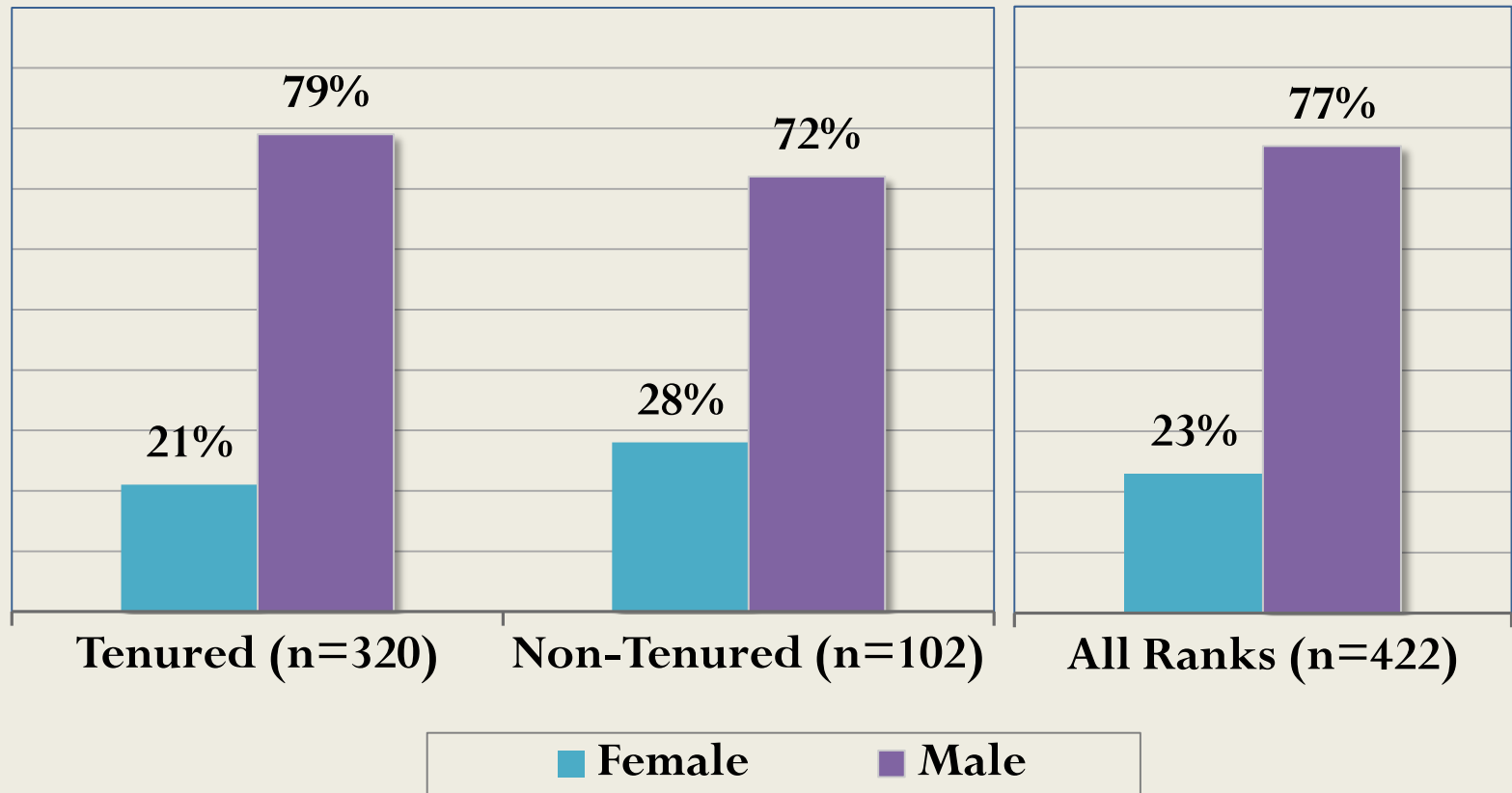Male 48%

Female 52%

Female 31%

Male 69%

N=633

N=18,516
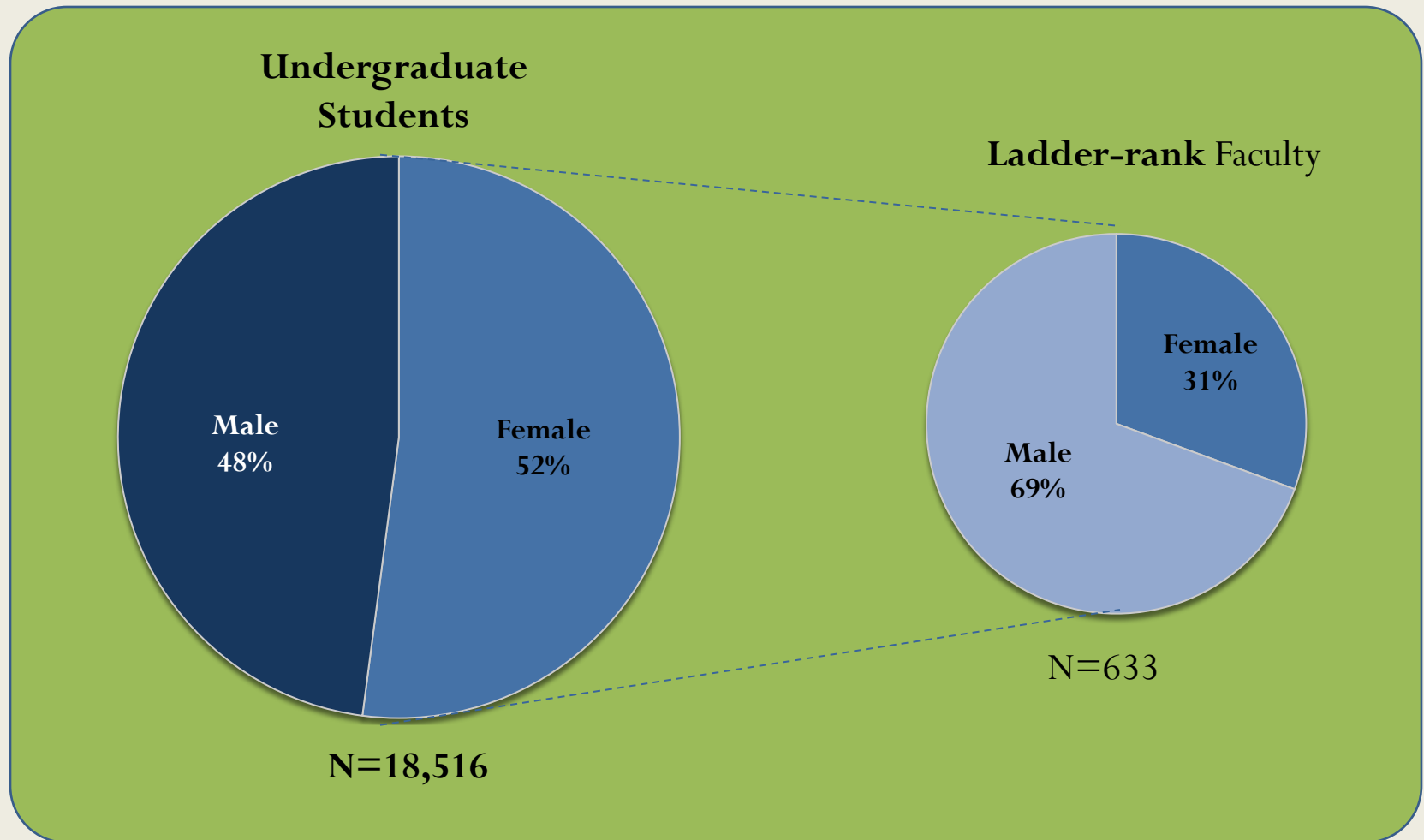
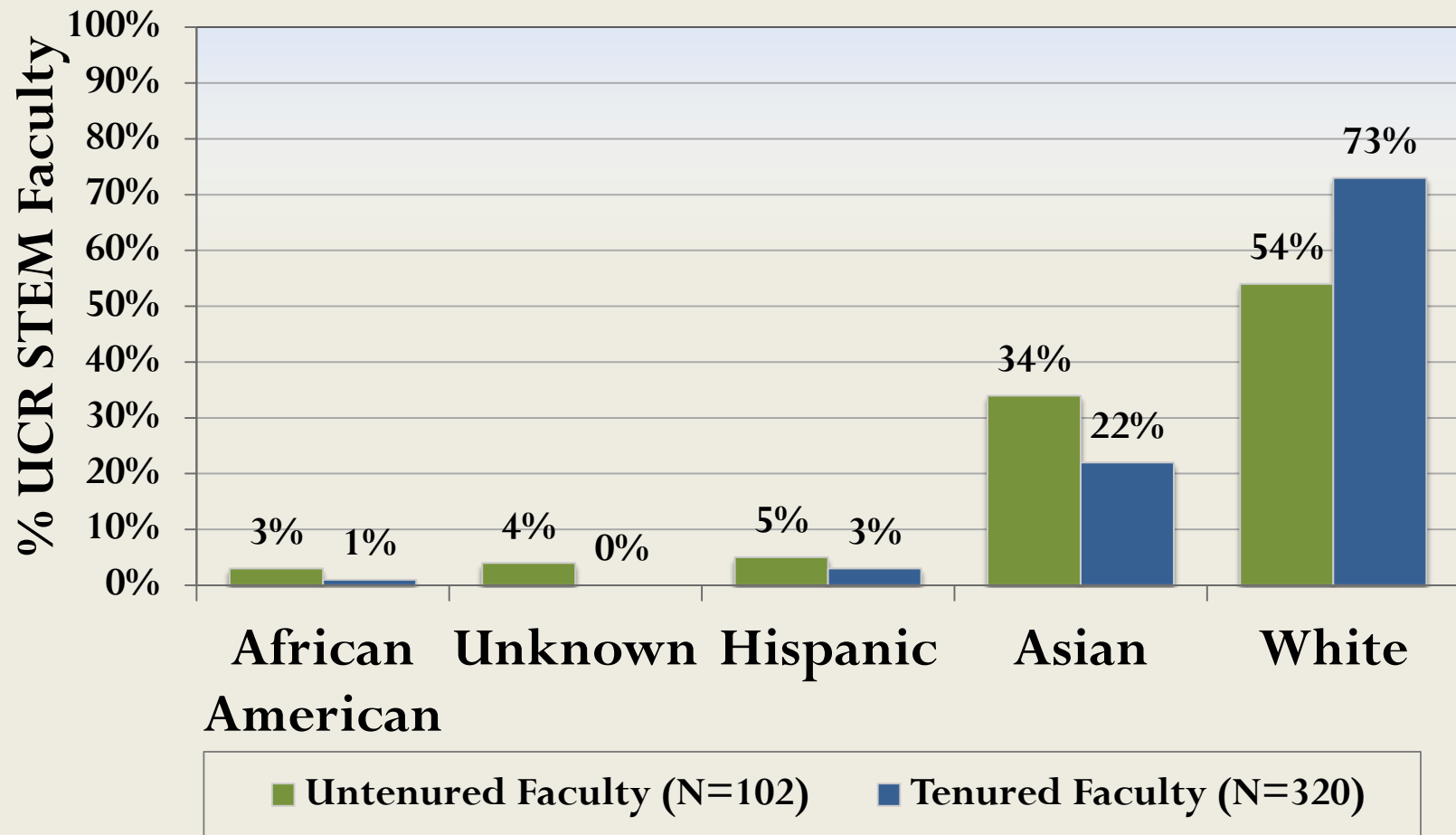Source: UC Office of the President, and OFSAA Campus Academic Workforce File, October 2012

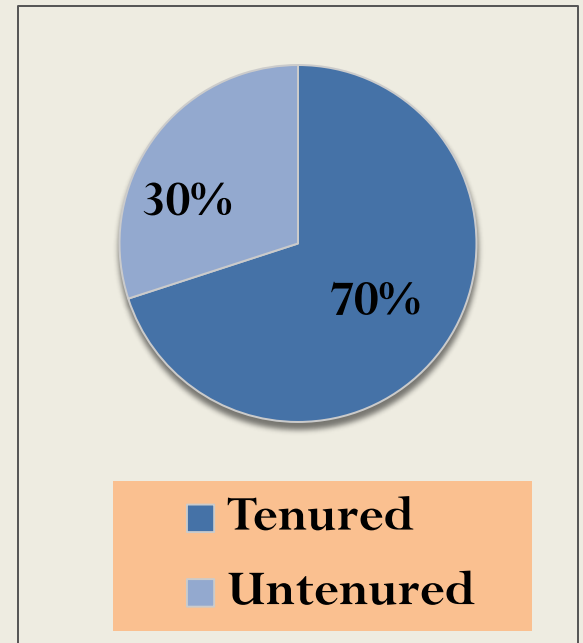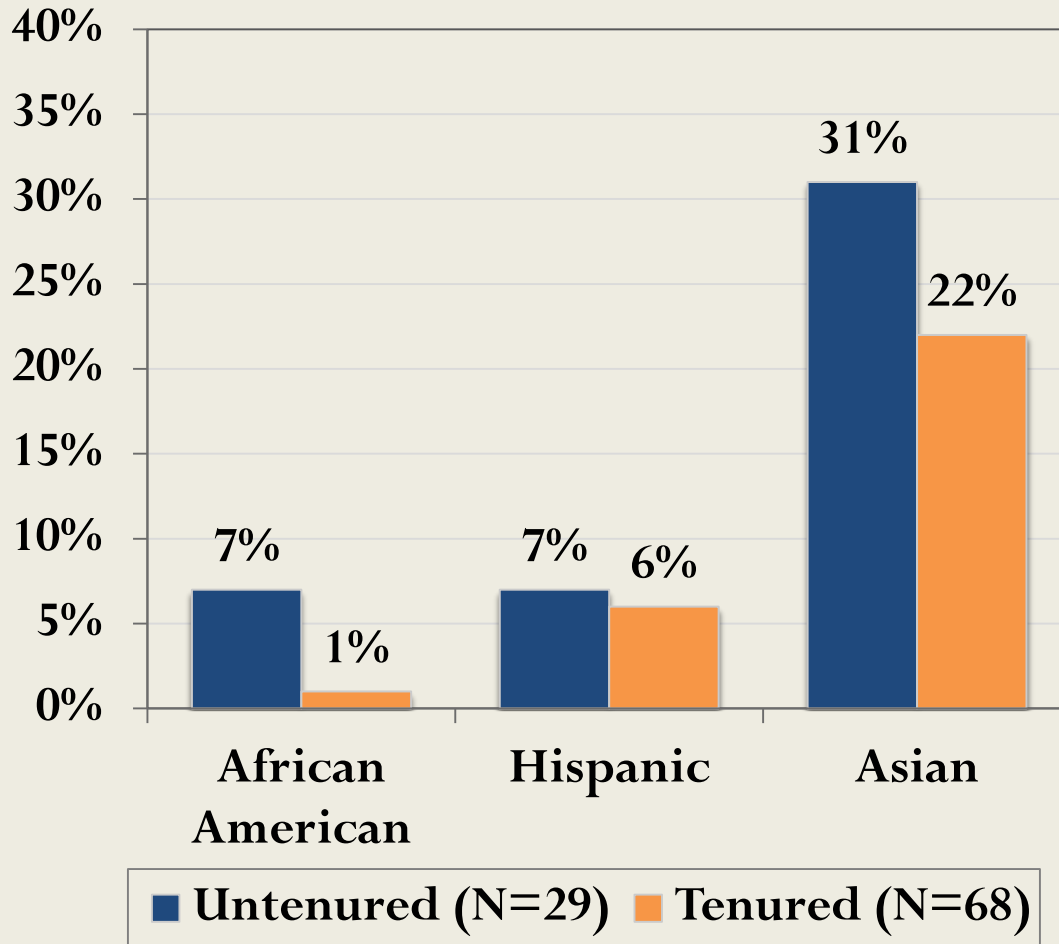Diversity at UC Riverside by Race/Ethnicity: Undergraduate Students v. Ladder Rank Faculty
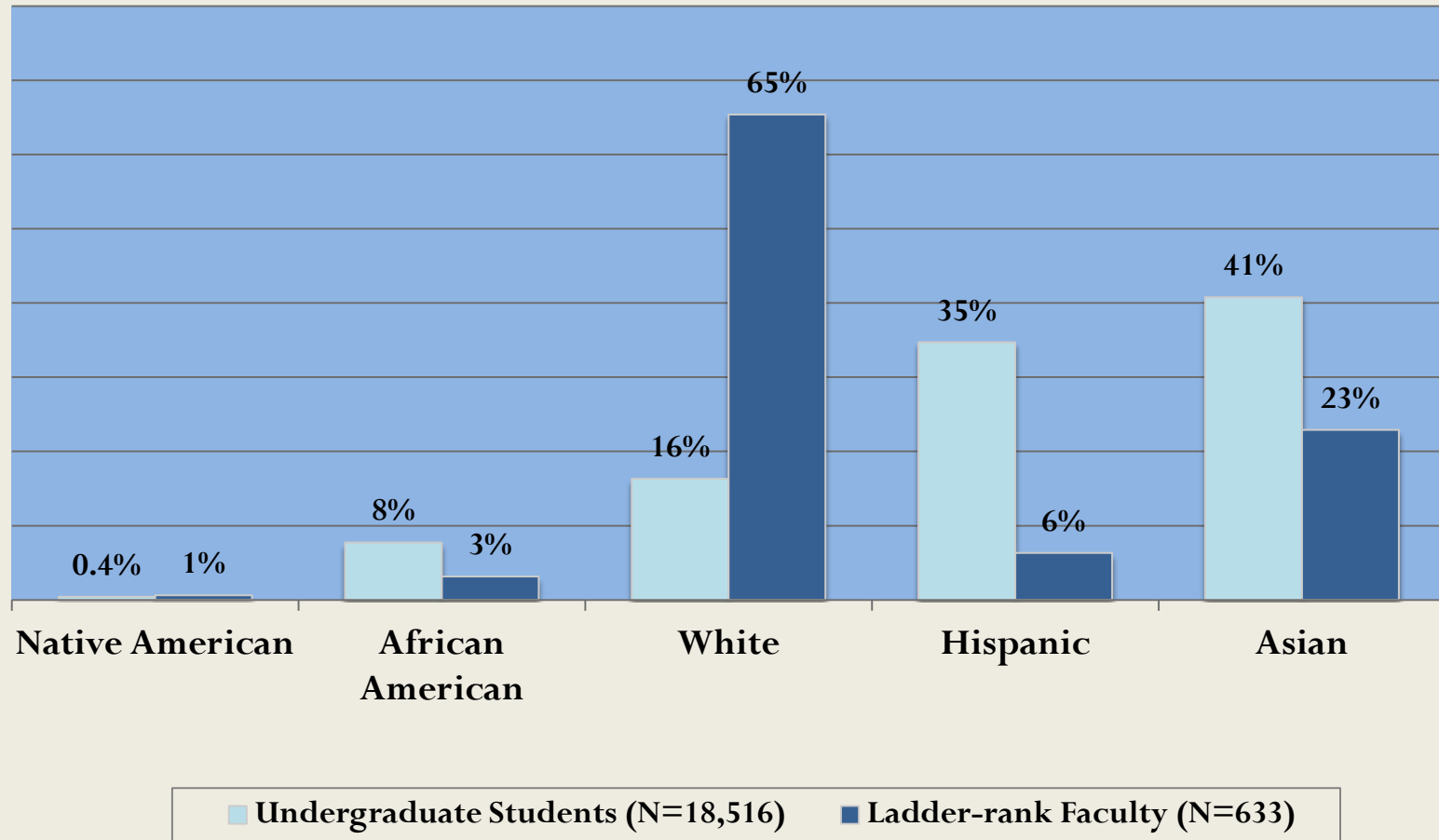
UC R STEM Faculty by Gender and Tenure Status

UC Riverside STEM Faculty
by Race/Ethnicity and Tenure Status

UC Riverside Women of Color STEM Faculty by Tenure Status

UC: Riverside
Moving Forward with Women in STEM: UCR and Beyond

This is a project with two major goals:

- First- Information gathering and analysis in expanded and creative ways; building new and effective programs for professional development and success of STEM women faculty at UC Riverside.

- Second- Build a statewide professional development network for Women of Color in STEM in California.

UC Riverside-The Impact of Mentoring at all Career Stages

What the data shows:

- Between 2004 and 2007 UC Riverside hired 100 new faculty
  - 43% were women
  - 32% were minorities
- To date, there is a persistence rate of that cohort of 86%
- Grant allows us to look at the effectiveness of current mentoring programs, and to make them more effective

UC Riverside-The Impact of Mentoring at all Career Stages

- Campus-wide faculty survey showed that both men and women feel that mentoring is useful (65% men and 78% women)

- This year we will see how the women who participated in our new and enhanced mentoring program feel

- We are also working with the Office of Research to measure research output as an indicator of success

UC Riverside: The Impact of Mentoring at all Career Stages

Successes:

- **Senior to Junior Faculty**

    Establishing a more formal program that will become part of the "service" component in the tenure review process

- **Associate Professors**

    Need a special, multidimensional program

- **Full Professors**

    Have a different set of mentoring and professional development needs e.g., group sessions and leadership development

UC Riverside: The Impact of Mentoring at all Career Stages

Successes:

- By disaggregating data on faculty, we can personalize the needs of faculty at individual levels-- one size does *no*t fit all

- Developing new electronic data base to track the progress of departments and individuals within departments and they move through their careers

UC Riverside: The Impact of Mentoring at all Career Stages

Challenges-Institutional Change

- Integrating the value for mentoring into the tenure and promotion system (UC Academic Personnel Manual (APM) 210, 240 and 245)

- Filling new leadership roles (on and off campus) with faculty who have a profound understanding and value of the role of effective mentoring as a success strategy for women and URM STEM faculty

UC Riverside: The Impact of Mentoring at all Career Stages

Challenges-Institutional Change

- Promoting institutional cultural shifts around the use of policies that encourage flexibility for faculty (especially taking advantage of family leave policies and stopping the clock policies as flex-time policies)

Increasing Diversity in the Sciences: Observations and Lessons From a New School
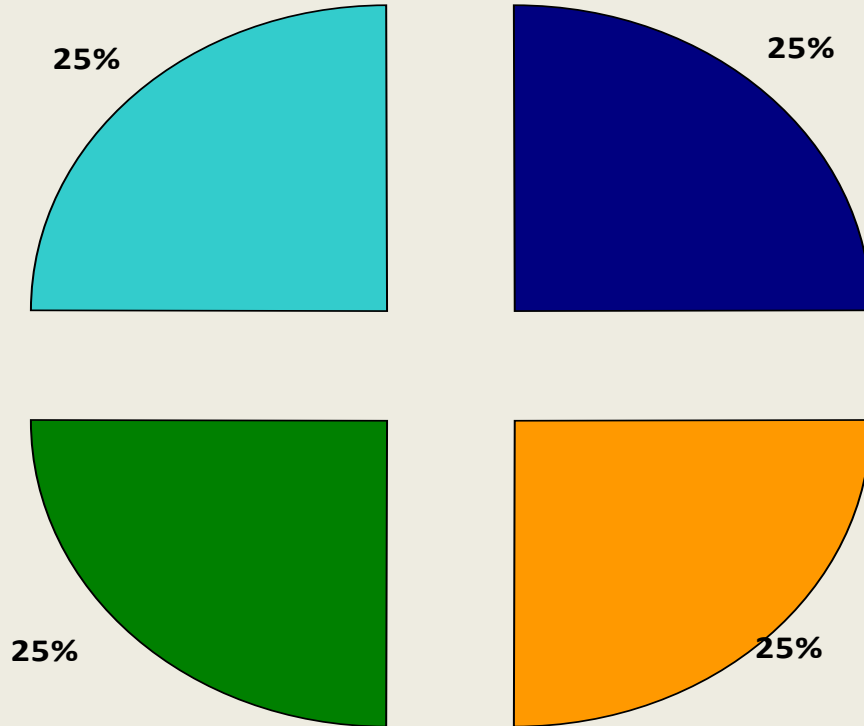
Juan Meza

Dean, School of Natural Sciences
Professor, Applied Mathematics, University of California Merced

(presented by Associate Vice Chancellor Yolanda Moses, University of California Riverside)
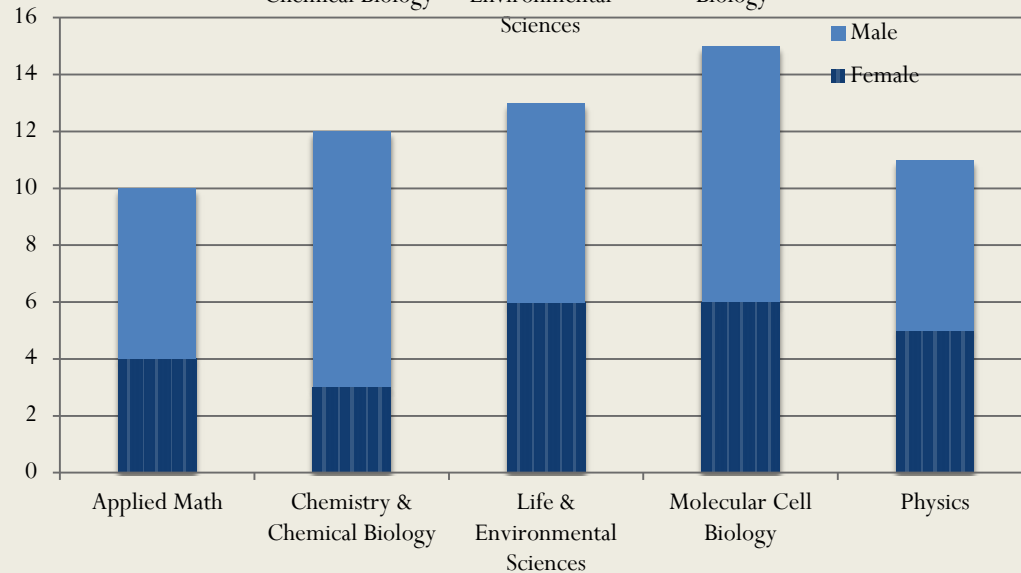
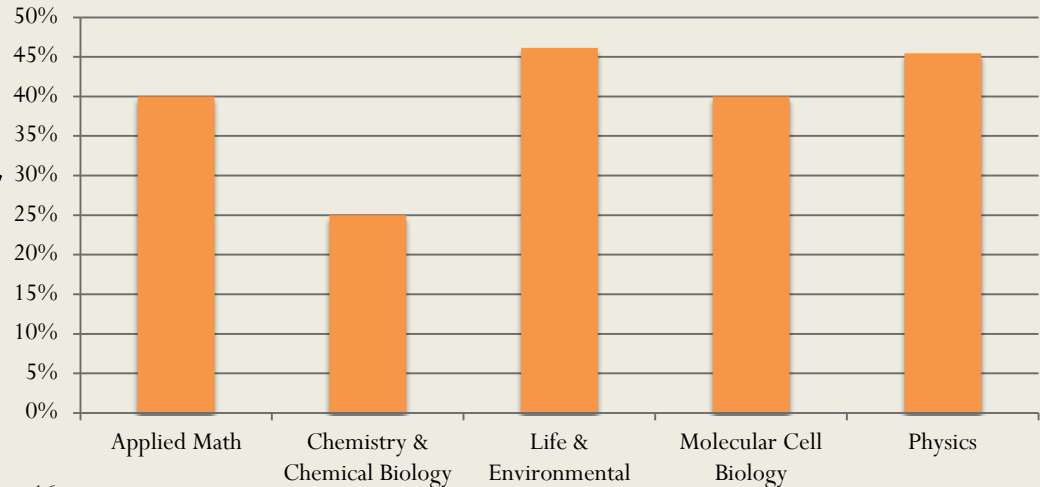# What is the percentage of untenured faculty at UC Merced?

A. 74%

✓ B. 48%

C. 45%

D. 32%

UC Merced Natural Sciences Faculty by Gender

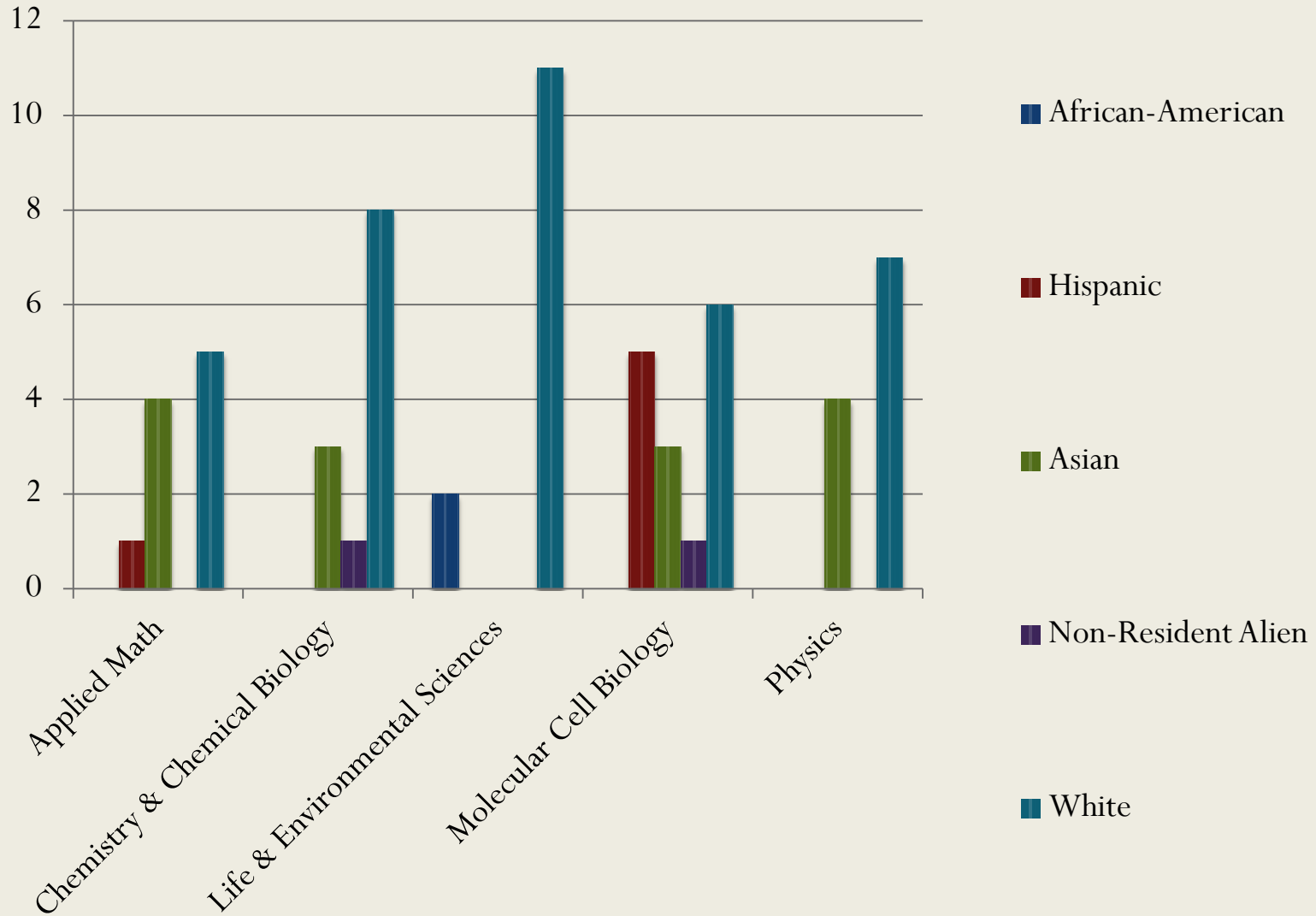- Overall 39% of faculty are female across the School of Natural Sciences

- Highest percentages in the Life Sciences and Physics!

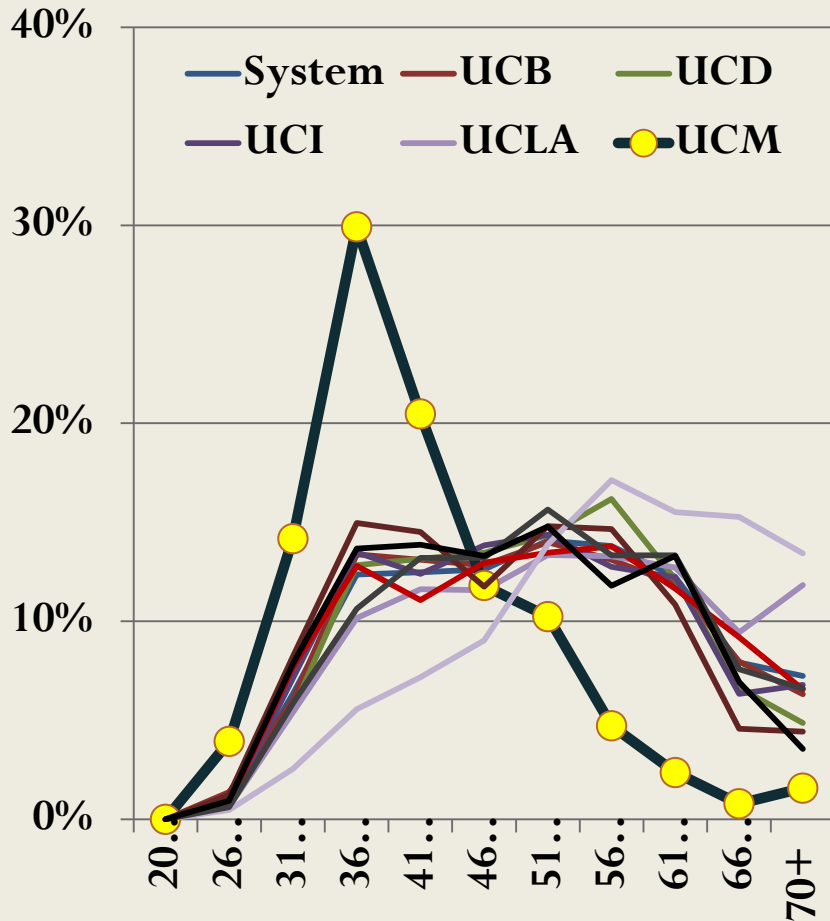- Lowest percentage in Chemistry

Percent Female Faculty

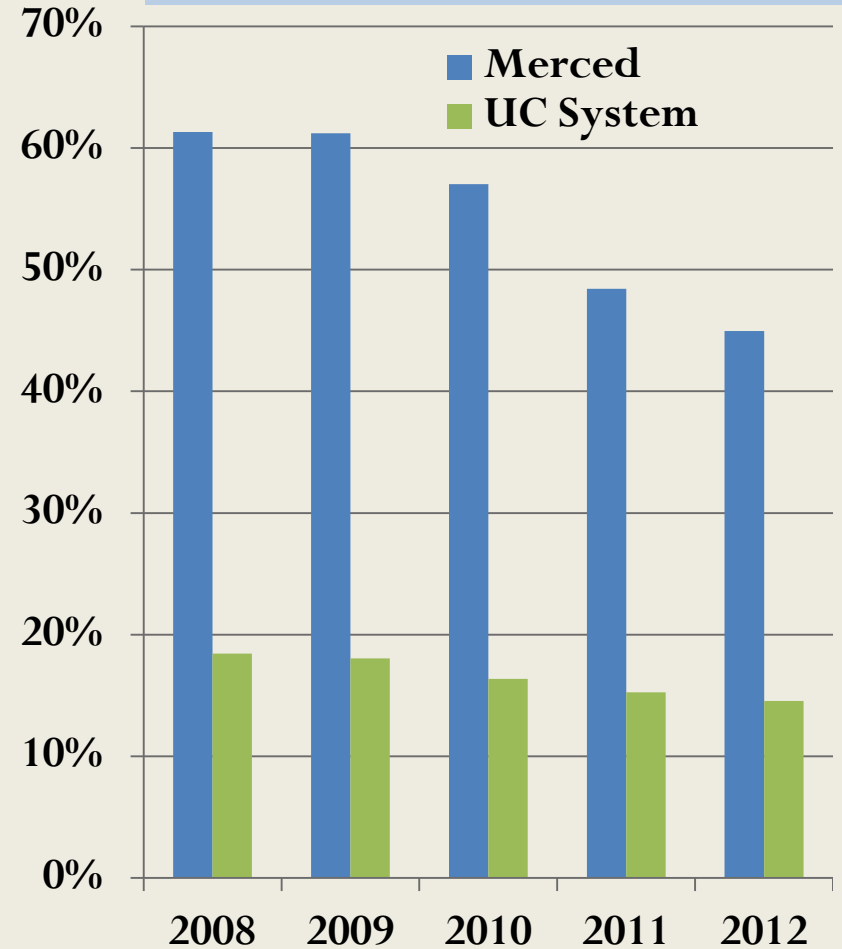UC Merced Natural Sciences Faculty by Ethnicity

UC Merced Faculty Are Younger and More Junior Than Their UC Peers

UC System Faculty Age Distribution Ladder-Rank Faculty

Source: Office of the President.

Percent of Untenured Ladder-Rank Faculty

Source: Office of the President.

Observations and Lessons Learned

New university presents great opportunities:
- Ability to develop and adopt new processes quickly
- Fewer institutional barriers to overcome
- Strong commitment at all levels of administration is crucial

Many challenges remain:
- Difficult to incorporate a broad set of criteria for both pool and final selections
- Large service load on junior faculty takes a toll on their research activities
- Tackling URM issues is harder than gender issues

Institutional Transformation to Build and Sustain a Diverse Community of Innovative STEM Scholars

Maureen Stanton

Vice Provost, Academic Affairs
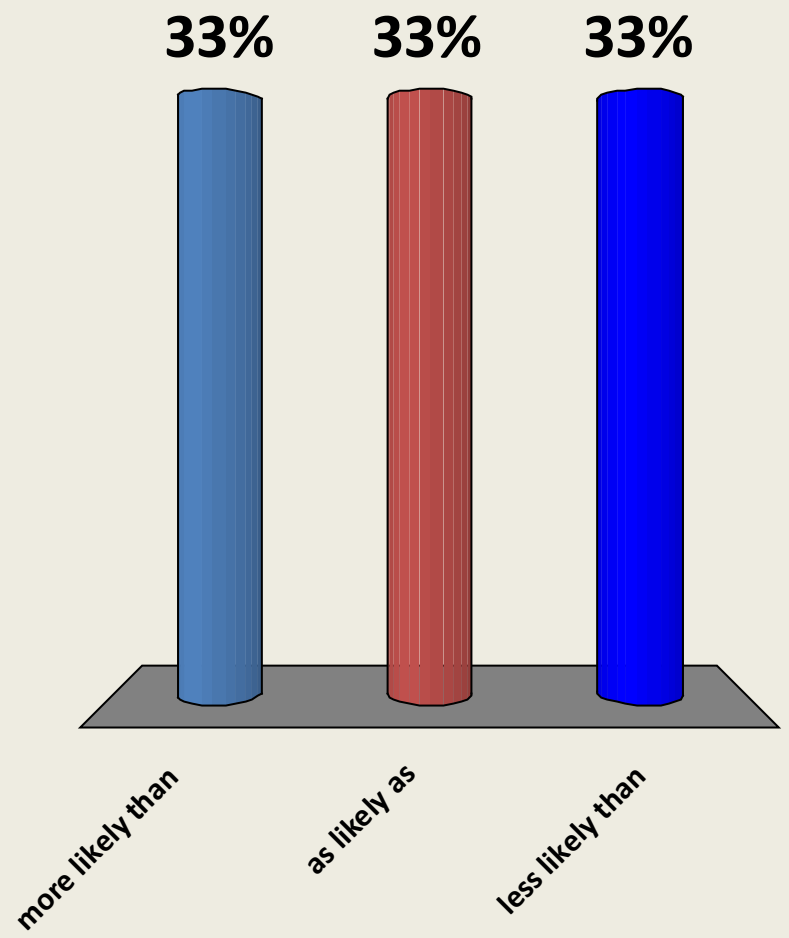**Professor of Evolution and Ecology, University of California Davis**

In the faculty merit and promotion process at UC Davis, women are ___ ___ ___ men to seek promotions on an accelerated schedule.

A. more likely than

B. as likely as

✓ C. less likely than

33% 33% 33%

more likely than   as likely as   less likely than

In the merit and promotion personnel process at UC Davis, what is the gender difference in the rate of positive personnel actions among Faculty of Color?

A. Women are 10% less likely to have a positive action

B. Women are 20% less likely to have a positive action

C. Women 12% more likely to have a positive action ✓

D. There are no gender differences among faculty of color

25% 25% 25% 25%

Women are 10% less likel… Women are 20% less likel… Women 12% more likely… There are no gender diff…
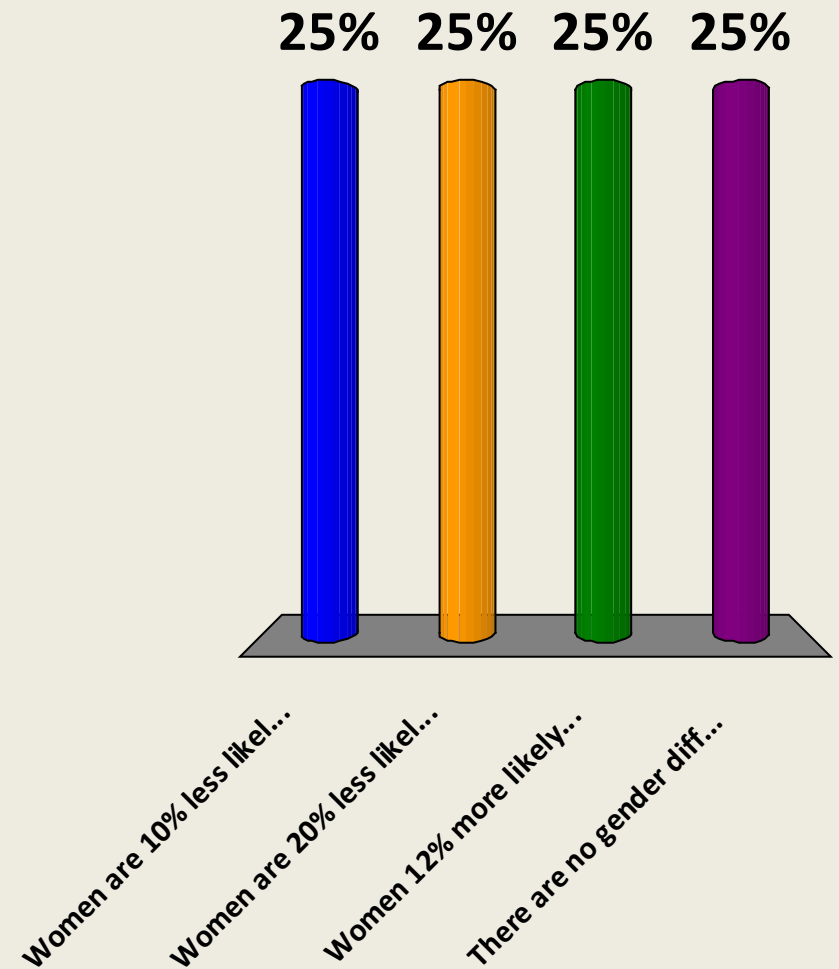
Percentage of positive outcomes by color and by type of personnel action: UC Davis, 2008-2012
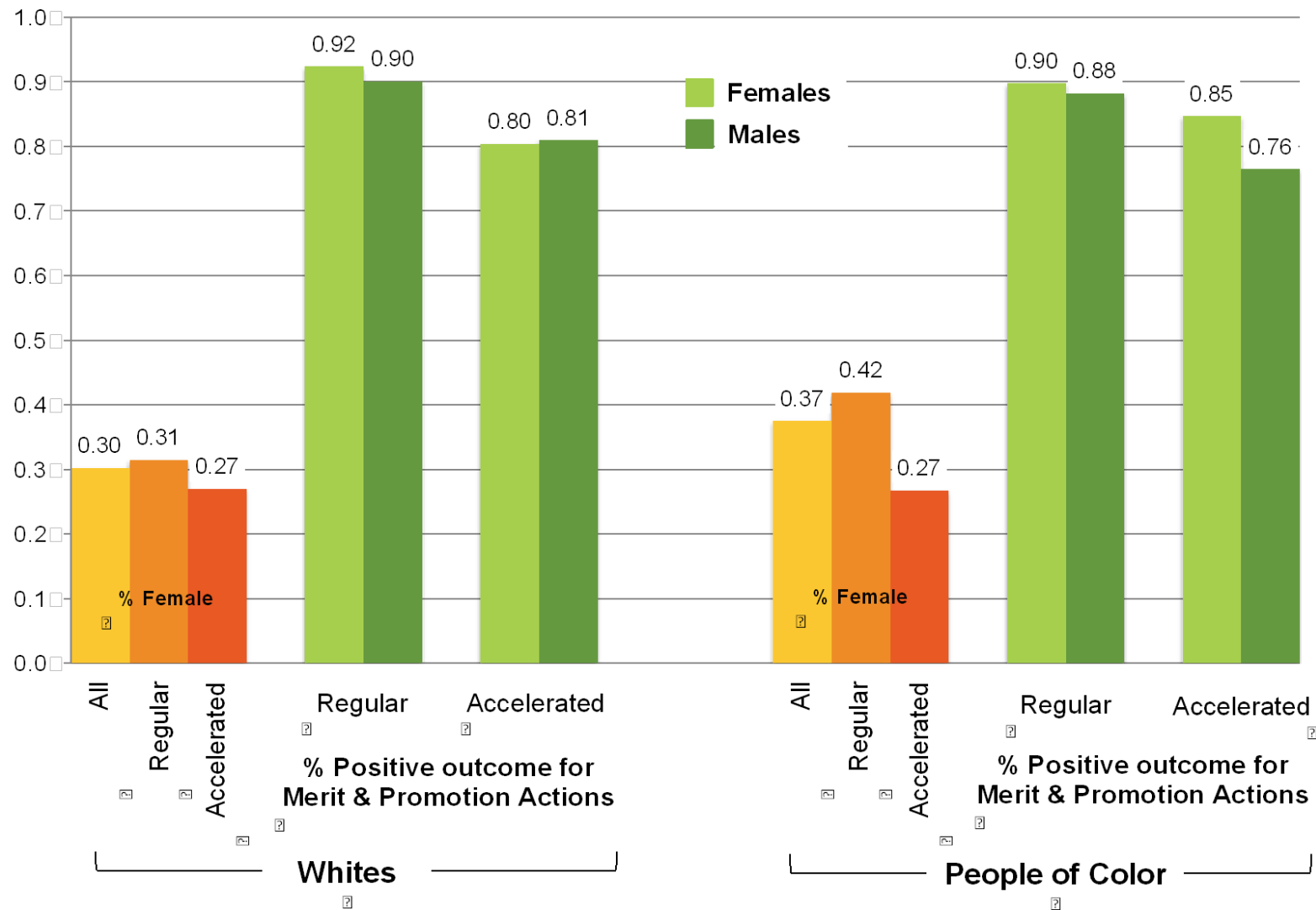
Promotion to tenure- -Percentage of positive outcomes by color and by timing: UC Davis, 2008-2012
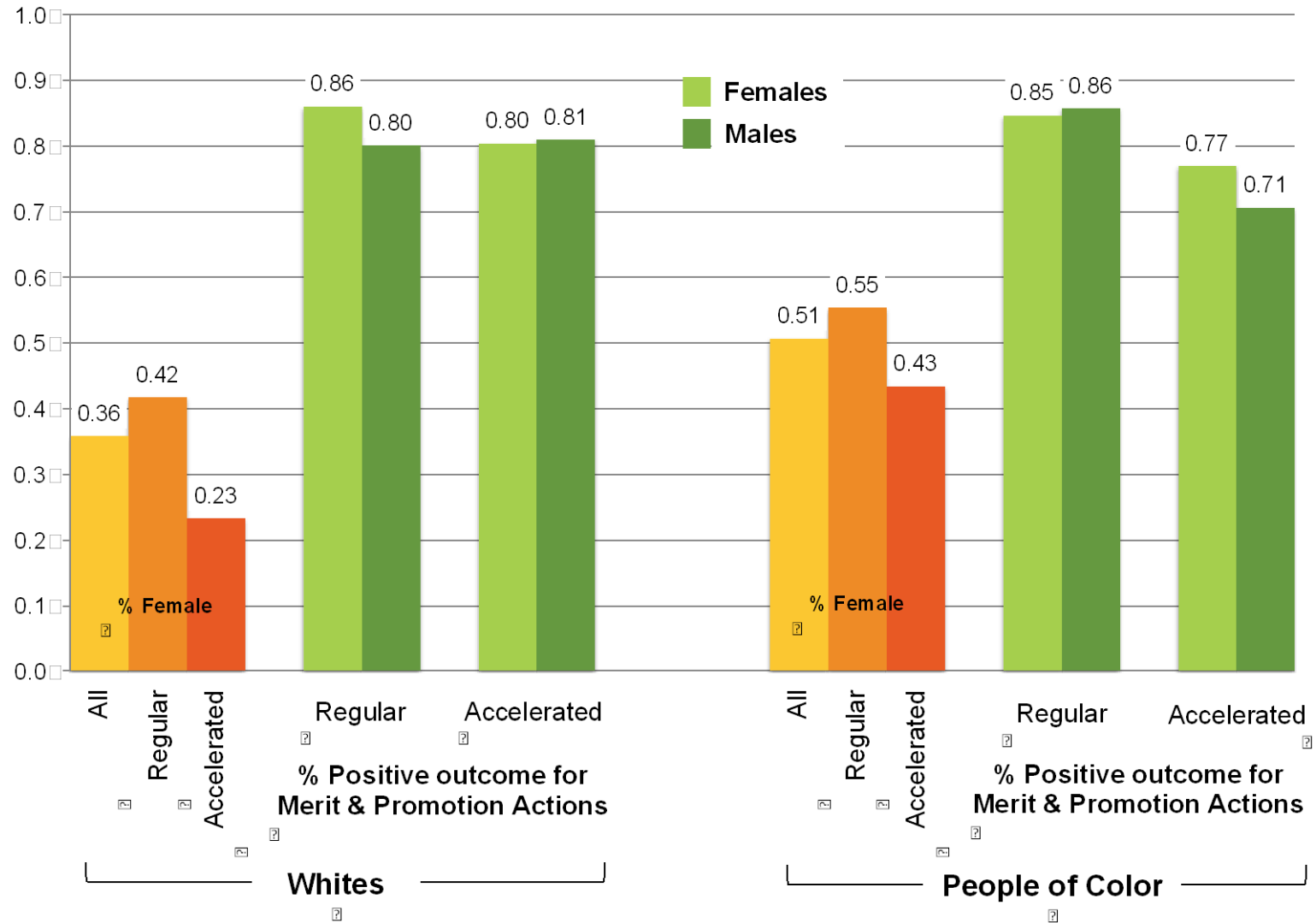
Institutional Transformation to Build and Sustain a Diverse Community of Innovative STEM Scholars

- $3.7 million over 5 years

- Special focus on Latina STEM scholars

- Significant campus support
  - Offices of Chancellor and Provost have pledged 16 FTE
  - Equivalent of indirect costs returned to the program
  - Each STEM Dean provides significant funds and in-kind resources

UC Davis ADVANCE Project Overview

UC Davis ADVANCE Program initiatives

- Build a diverse STEM research community: the CAMPOS initiative

- Establish a campus-wide, inclusive STEM climate that values diversity

- Provide tools that empower individuals for career advancement

- Understanding barriers and catalysts for Latinas in STEM

Project Overview
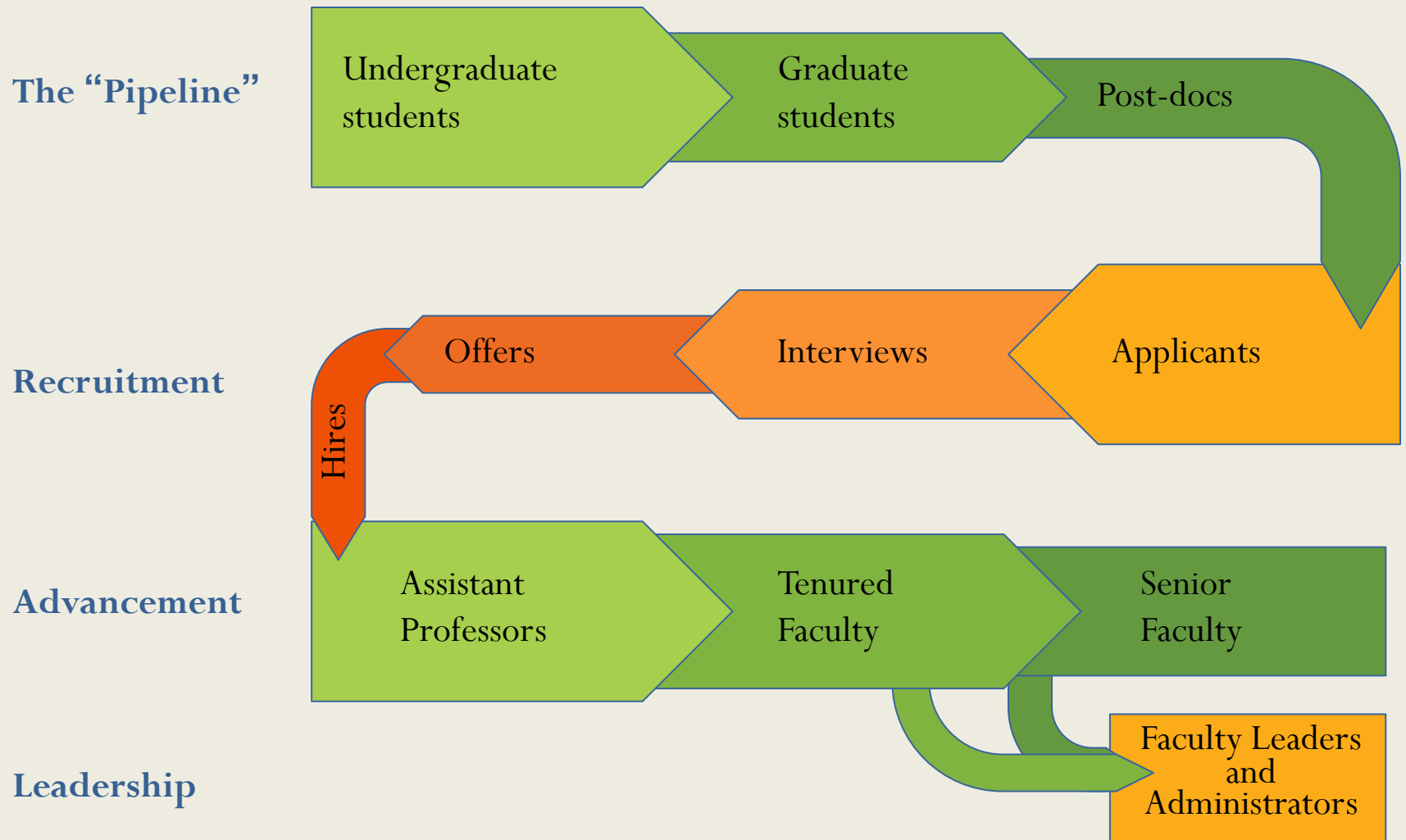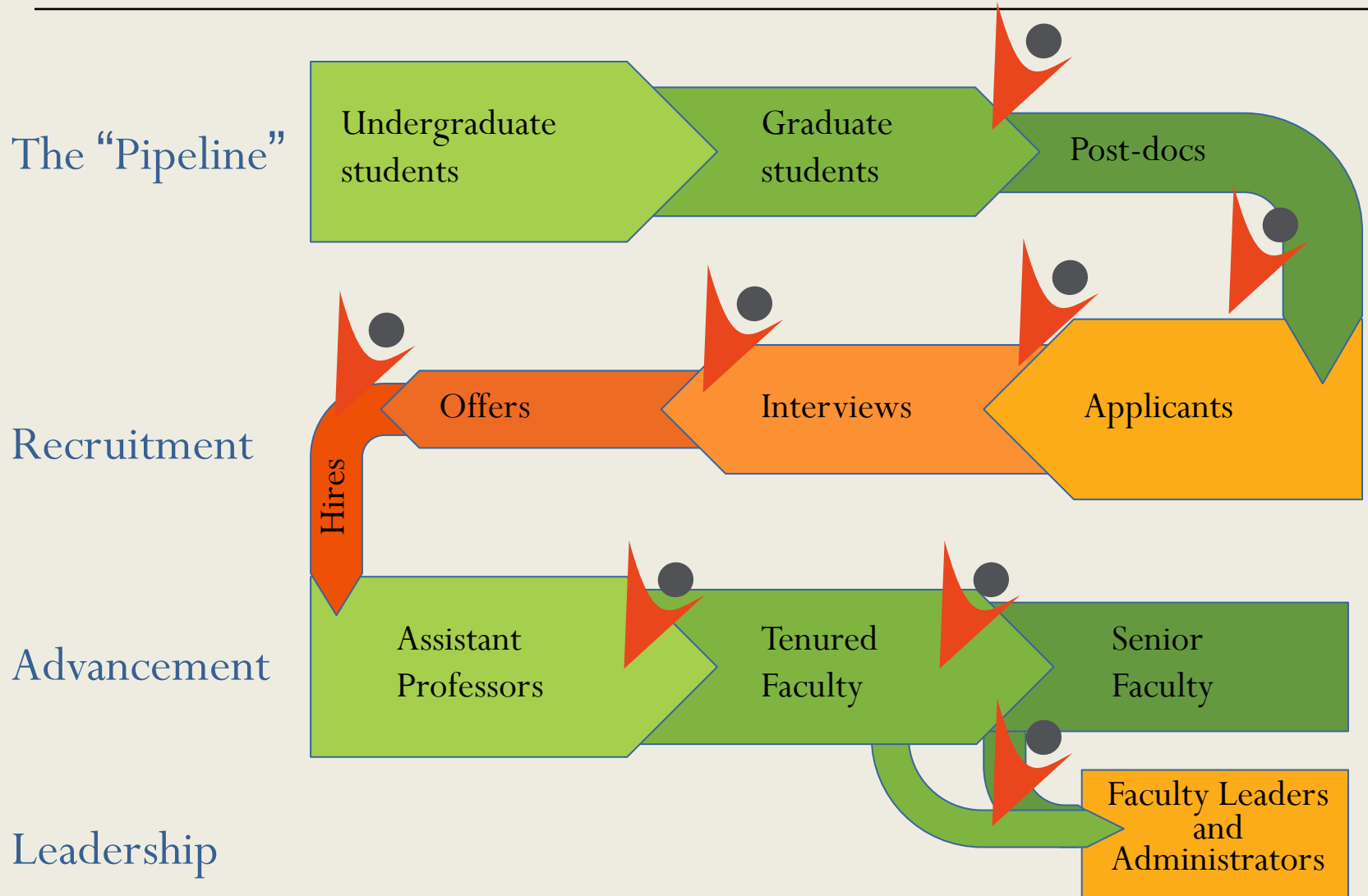
The "Pipeline"

Undergraduate students → Graduate students → Post-docs

Recruitment

Applicants → Interviews → Offers → Hires

Advancement

Assistant Professors → Tenured Faculty → Senior Faculty

Leadership

Faculty Leaders and Administrators

Project Overview

The "Pipeline"
- Undergraduate students → Graduate students → Post-docs

Recruitment
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Advancement
- Assistant Professors → Tenured Faculty → Senior Faculty

Leadership
- Faculty Leaders and Administrators

Prior Research

What are the barriers encountered by people of color, especially women of color, as faculty at research universities?

- Social and cultural isolation

- Bias and subtle and/or overt discrimination
  - Implicit bias and assumptions
  - Interpersonal micro-aggression from colleagues and students

- Less well-developed professional networks

- Greater service demands and high expectations from students of color

- Inclination to do translational/community-based research

For a comprehensive review of literature see:

> Ong, M., et al., "Inside the Double Bind: A Synthesis of Empirical Research on Undergraduate and Graduate Women of Color in Science, Technology, Engineering, and Mathematics." *Harvard Education Review*, 2011. 81(3):172-208.

CAMPOS Initiative

Center for the **A**dvancement of **M**ulticultural **P**erspectives **o**n **S**cience

- Hiring initiative
  - Recruit a senior STEM Scholar as Director of CAMPOS
  - Engage STEM deans, chairs & faculty to identify research initiatives & request new faculty positions to be recruited in research-themed clusters
  - Recruit 15 Latina and non-Latina women for CAMPOS into departments with best fit to research initiatives and best plan for inclusive recruitment, hiring, and advancement
  - Involve ADVANCE/CAMPOS leaders in hiring process for all new faculty hires
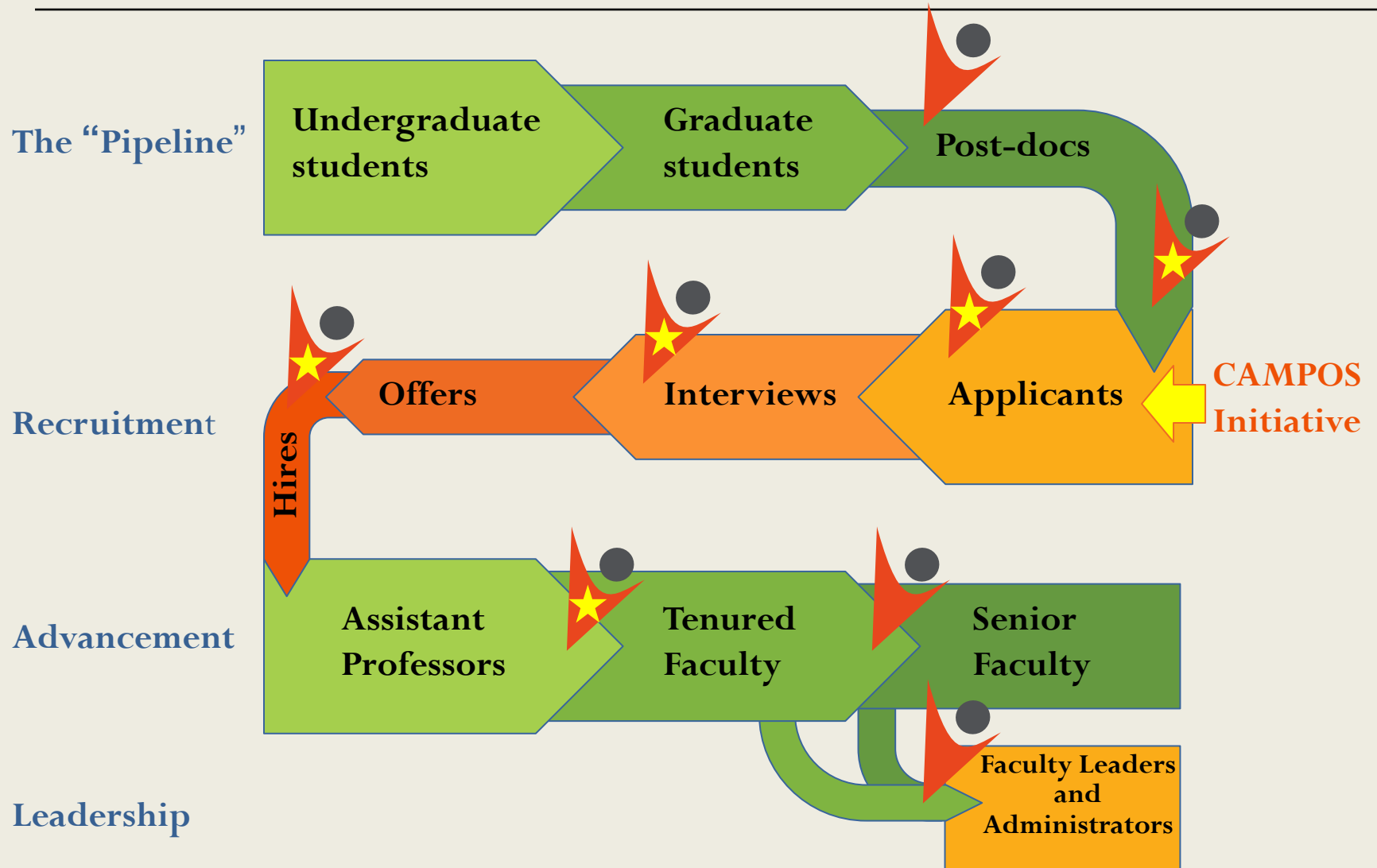
CAMPOS Initiative

Center for the Advancement of Multicultural Perspectives on Science

- Center for collaboration, mentorship and translational research
  - Collaborative research incubator in a welcoming space
  - Resources
    - Eminent invited speakers
    - Grant writing mentorship and assistance
    - Graduate student research assistants
  - Research Mentorship

CAMPOS Initiative

The "Pipeline"

Undergraduate students → Graduate students → Post-docs

Recruitment

Hires ← Offers ← Interviews ← Applicants

CAMPOS Initiative

Advancement

Assistant Professors → Tenured Faculty → Senior Faculty

Leadership

Faculty Leaders and Administrators

CAMPOS Initiative

Successes

- Excitement in senior and some junior faculty already present
- Administrative buy-in: 16 FTE committed to CAMPOS Director and strategic cluster hires

Accountability: social sciences longitudinal research on successes of CAMPOS hires

- Track success of CAMPOS and non-CAMPOS hires at UC Davis
- Longitudinal interviews

Challenges

- Getting buy-in from departments and deans for the programmatic hiring initiative
- Getting the word out to the community of potential applicants
- Transforming culture– ***bias is ubiquitous, and diversity adds value to STEM!***

UC Davis ADVANCE Program Space

National Science Foundation Grants

- *UC ADVANCE PAID.* Grant no. HRD1106712
  http://www.ucop.edu/ucadvance/index.html

- *Moving FORWARD for Women in STEM Fields at UC Riverside and Beyond.* Grant no. 1107245

  http://diversity.ucr.edu/paid

- *[UC Davis]ADVANCE: Institutional Transformation to Build and Sustain a Diverse Community of Innovative STEM Scholars.* Grant no. 1209235

- *ADVANCE/IT Catalyst GROW-STEM: Gaining Representation Of Women (GROW) - Systemically Transforming Excellence in [UC] Merced (STEM).* Grant no. 1008044

- *UC Irvine ADVANCE Program for Equity and Diversity.* Grant nos. [2001-2006] #SBE0123682 and [2007-2009] #SBE0620123

  http://advance.uci.edu/

Meeting the California Challenge:
The University of California's Partnership to Advance Faculty Diversity in STEM

Keeping Our Faculty of Color Symposium

April 15, 2013—University of Minnesota