



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

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Chancellor's and Provost's Distinguished Lecture Series on
the Advancement of Women in Academic Careers

University of Illinois, Urbana Champaign
April 16, 2015

Outline

1. Project Overview

- UC Davis context
- UC Davis ADVANCE mission, project goals, and initiatives
- Unique aspects
- Major accomplishments and progress toward our goals

2. Social Science Research Summary

3. Challenges

4. SWOT Analysis



UC Davis Context

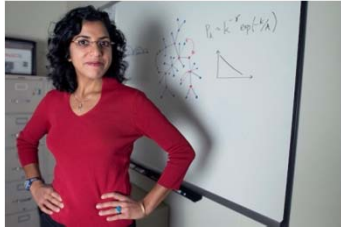
Who are we, what is our culture, what are our aspirations, what are our constraints?



- Land grant university with strong record in research and service to serve the community and society
- Strong culture of interdisciplinary research and graduate training
- Major research university with large STEM emphasis
 - 52 STEM Departments in 7 Academic Colleges/Divisions
- Strong culture of shared governance by faculty and administration
- Entering a period of campus growth through 2020
 - 300 new tenure track faculty positions
 - 5,000 additional undergraduates
- Aspire to be a Hispanic Serving Institution by 2018-19
- Diversity in UC Davis leadership team (Deans, VCs, VPs, Chancellor)
- Vice Provost of Academic Affairs Office is a key partner



UC Davis ADVANCE – Unique Strengths



- Special emphasis on Latina STEM faculty
- Engagement of Academic Senate, Academic Federation, Deans and Department Chairs
- Faculty-driven: 40+ UC Davis faculty developing programming and implementing initiative activities
- Personal involvement and support of campus leadership
- Kotter's 8 Steps For Organizational Change Conceptual Framework as a guideline for tracking overall progress toward institutional transformation
- Ranked number one college for *Advancing Women in STEM* for having 54% Women in 169 STEM programs by onlinecollegesdatabase.org
- Received 2015 Community Engagement Classification from the Carnegie Foundation for the Advancement of Teaching



Project Overview

Mission

Institutional transformation to increase recruitment, retention and advancement of female STEM ladder rank faculty, with an emphasis on Latinas, to develop a more innovative STEM workforce that reflects the populations it serves.

Project Goals

1. Build a vibrant, welcoming and diverse STEM research community through establishment of the “Center for Advancing Multicultural Perspectives on Science”
CAMPOS, Mentorship and Networking Initiative
2. Establish an institution-wide, inclusive climate in STEM departments/colleges in which diversity is valued
Inclusive Campus Climate Initiative, Policies and Practices Review Initiative
3. Promote equitable career advancement, achievement, and recognition among all STEM faculty
Policies and Practices Review Initiative, Mentorship and Networking Initiative
4. Understand barriers and catalysts for Latinas in STEM
Social Sciences Research Initiative
5. Develop a regional employment network and services to enhance recruitment and retention of dual-career faculty
Capital Resource Network

UC Davis ADVANCE Program Activities



Policy & Practices Review Initiative

Working across the UC Davis ADVANCE Initiatives
Reviewing and suggesting changes to existing UC Davis policies and practices
to improve recruitment, retention and promotion of a diverse STEM faculty

Inclusive Campus Climate Initiative/ Strength Through Equity & Diversity (STEAD)

Faculty-led training of search committee members to enhance the recognition of unconscious bias and its negative effects on recruitment of an excellent, diverse STEM faculty

Developing culturally-nuanced, evidence-based programs and disseminate resources to promote best practices for STEM faculty recruitment

Social Sciences Research Initiative

Data collection and analysis informing the work of UC Davis ADVANCE Initiatives

Administering and analyzing the Collaborative on Academic Careers in Higher Education (COACHE) Survey

Interviewing Latinas awarded UC President's Postdoctoral Fellowships to identify career trajectory challenges and outcomes

Capital Resource Network

Establishment of regional employment network to support effective faculty recruitment and dual career hiring

Center for Advancement of Multicultural Perspectives on Science (CAMPOS)

Building a community of multicultural STEM scholars, with emphasis on Hispanic Women and Latinas

Developing of strategies for targeted recruitment, retention and promotion of diverse STEM faculty

CAMPOS Faculty Scholars

CAMPOS Faculty Affiliates

Mentorship & Networking Initiative

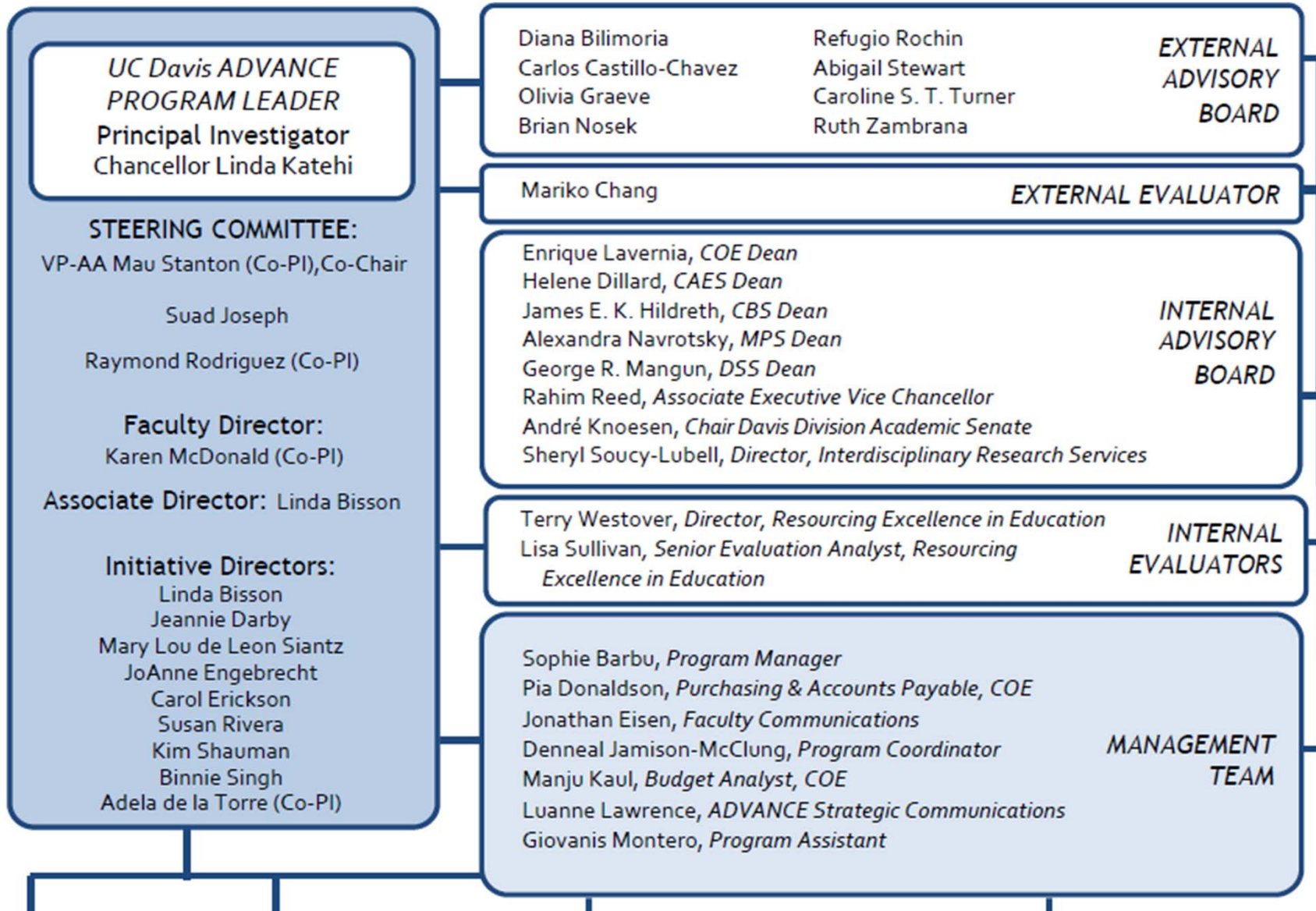
Institutional membership in the National Center for Faculty Development & Diversity

Piloting LAUNCH Committees for new faculty for 2014 (modeled on University of Michigan and Case Western Reserve LAUNCH Programs)

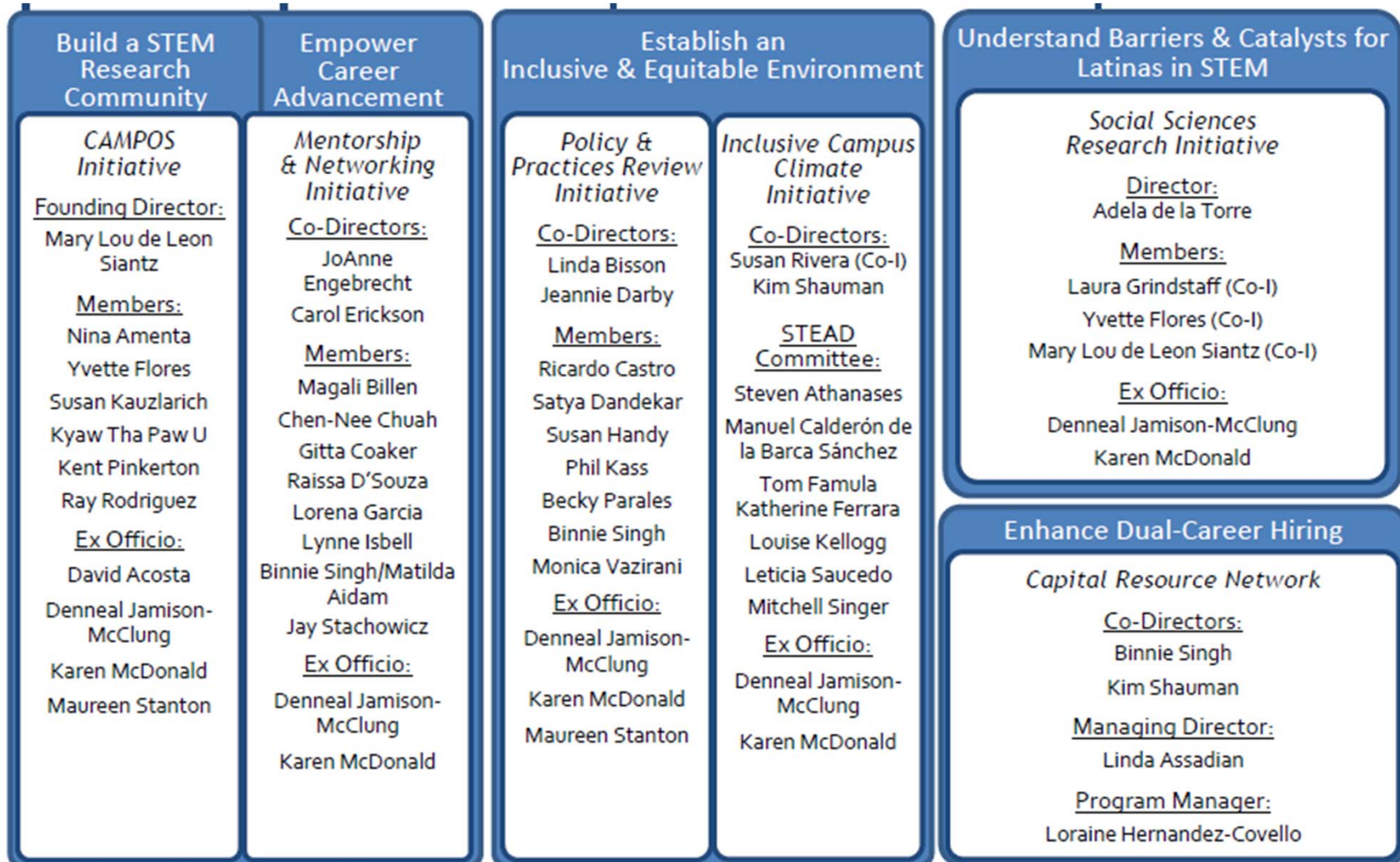
Supporting New Faculty Network gatherings to facilitate acclimation to campus

Awarding STEM women faculty & enhancing their networking & professional recognition

UC Davis ADVANCE Structure



UC Davis ADVANCE Structure - Initiatives



Build a Vibrant, Diverse STEM Community

Developed a nomination, review and selection process for CAMPOS Faculty Scholars resulting in recruitment of **seven** CAMPOS Faculty Scholars in our first year of implementation (AY 2013-2014 recruitments). **CAMPOS Faculty Scholars are selected for demonstrated professional interest/expertise in research, teaching or outreach that serves underrepresented populations, especially Hispanic Women/Latinas.**

- **Jacqueline Barlow**, *Assistant Professor Microbiology and Molecular Genetics*, studies the etiology of DNA damage and mechanisms for its repair.
- **Magdalena Cerda**, *Assistant Professor of Emergency Medicine and Violence Prevention Research Program*, addresses the social and structural determinants of health, including such important problems as violence, substance abuse, and mental illness.
- **Lillian Cruz-Orengo**, *Assistant Professor of Anatomy, Physiology and Cell Biology*, studies rodent models of neurological disorders, including trauma, chronic pain and inflammatory-induced neurodegeneration.
- **Anna La Torre Vila**, *Assistant Professor of Cell Biology and Human Anatomy*, combines molecular and cellular biology, stem cells, and mouse studies to study neuronal development.
- **Cindy Rubio Gonzalez**, *Assistant Professor of Computer Science*, focuses on developing and applying program-analysis techniques to make software more reliable.
- **Mariel Vazquez**, *Professor of Mathematics and Microbiology and Molecular Genetics*, specializes in the applications of topology to the study of DNA.
- **Fernanda Ferreira**, *Professor of Psychology, Psycholinguistics, language comprehension, disfluencies and stuttering, individual differences, working memory and language processing.*

CAMPOS Faculty Scholars Program

Eligibility

- Open to tenure-track, STEM faculty during recruitment to UC Davis
- Based on contributions (teaching, research, outreach/mentoring) to underserved groups and underrepresented minorities
- Search committee nomination process
 - Nomination form
 - Letter of departmental nomination
 - Current CV/faculty job application materials
- Nominees reviewed by CAMPOS Committee & VPAA

CAMPOS Faculty Scholars receive

- \$6K Summer GSR support (one-time award)
- Travel awards available
- Priority registration for professional development activities and training in:
 - Grant-writing
 - Leadership
 - research field
 - administrative
 - Mentorship
 - Teaching
 - Lab management
- Access to network of like-minded faculty collaborators



* Dept/College receive 5 years of salary offset at \$85K/yr

CAMPOS Faculty Affiliates Program

Eligibility

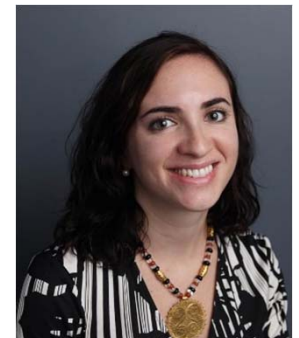
- Open to all faculty
 - STEM and non-STEM
 - tenure track and non-tenure track
- Self-nomination process
 - Paragraph describing interest in serving CAMPOS mission
 - Current CV
- Applicants reviewed by CAMPOS Committee

CAMPOS Faculty Affiliates receive:

- Travel awards available
- Priority registration for professional development activities and training in:
 - Grant-writing
 - Leadership
 - research field
 - administrative
 - Mentorship
 - Teaching
 - Lab management
- Access to network of like-minded faculty collaborators

Evidence of Impact of CAMPOS

- We have had CAMPOS inquiries or nominations from all STEM colleges and schools.
- Five CAMPOS Faculty Scholars have arrived on campus and seven will be on campus by next Fall
- Four have attended one or more of the 7 Cafecitos and participated in discussion topics.
- Requests from existing UC Davis faculty have resulted in the development of a CAMPOS Faculty Affiliates program.
- The number of Latina STEM faculty increased from 10 to 16 with the addition of six Latina CAMPOS Faculty Scholars, an increase of >50% in one year.
- National acknowledgement by Congressional Hispanic Caucus for outreach to Latinas in STEM



CAMPOS Faculty Scholar Nominations (Oct 2014 - present)

	Number
Inquiries Received by UC Davis ADVANCE	20+
Formal Nomination Packets Received (1 now in review – Apr '15)	15
Formal Nomination Packets Approved by Committee	12
Formal Nomination Packets Approved by VPAA Maureen Stanton	12
UC Davis Job Offers Extended to VPAA-Approved CAMPOS Nominees	10
UC Davis Job Offers Accepted by VPAA-Approved CAMPOS Nominees	8
UC Davis Job Offers Still in Negotiations by CAMPOS Nominees	1
UC Davis Job Offers Accepted by VPAA-Approved CAMPOS Nominees, and Decision Reversed at a later date	1
CAMPOS Faculty Scholars Currently at UC Davis	5
CAMPOS Faculty Scholars Arriving in 2015	2



Establish an Inclusive Climate

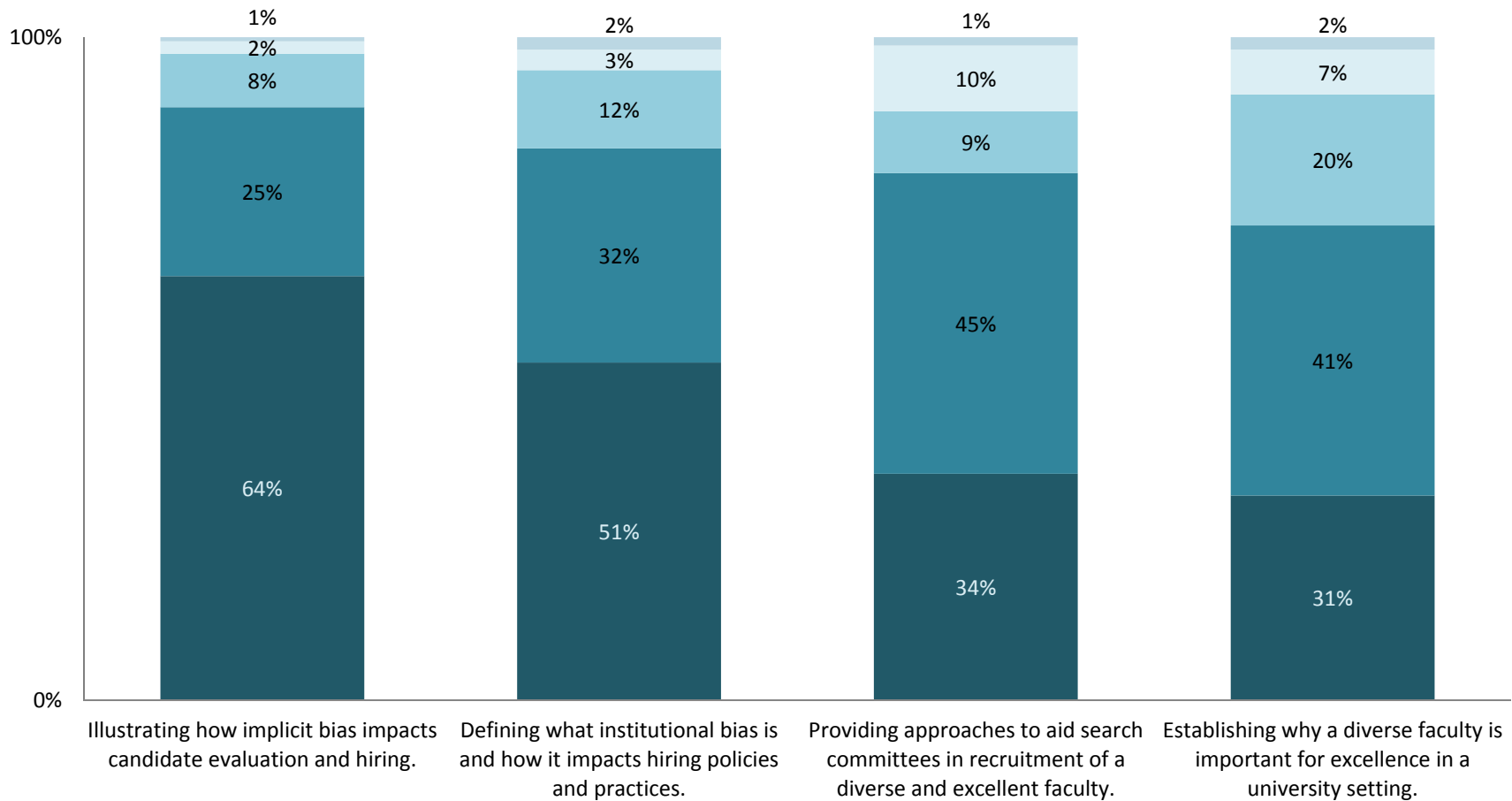
Developed and implemented search committee training through the STEAD initiative

- The ten member STEAD committee met bi-weekly during 2013-14 to learn about, review and discuss relevant literature as well as institutional data.
- During the 2013-14 academic year and through the summer of 2014, the STEAD committee designed the workshop, slide presentation, website, resources to facilitate greater equity in faculty searches, interactive activities, the registration process, and communication templates.
- STEAD Workshops began in Fall 2014 and so far they have trained >300 faculty.
 - 6 workshops in Fall 2014
 - 3 in Winter 2015, 2 in Spring 2015



Effectiveness of STEAD Workshops

Please rate the effectiveness of the following presentation sections: (N=162)

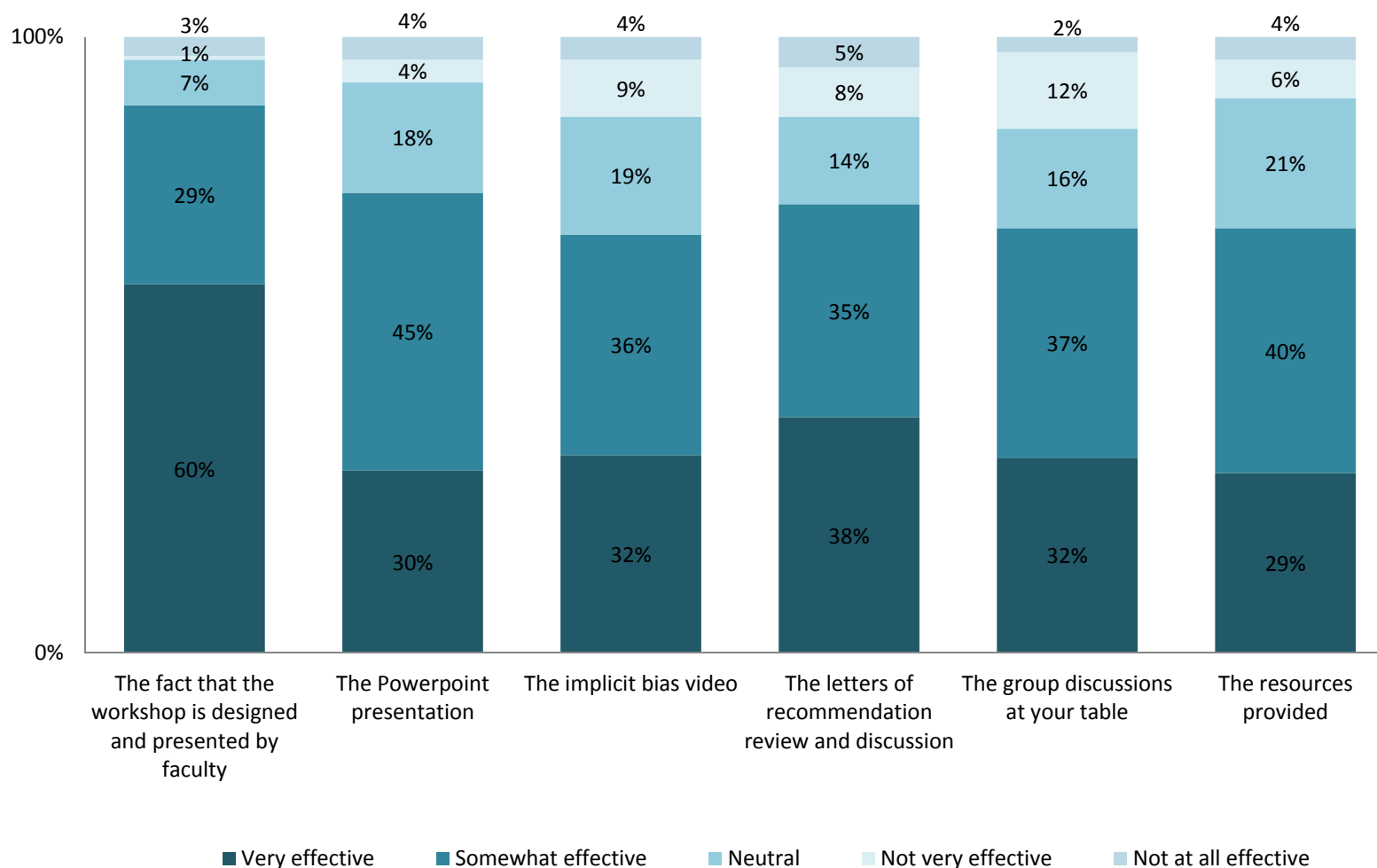


■ Very Effective
 ■ Somewhat effective
 ■ Neutral
 ■ Not very effective
 ■ Not at all effective



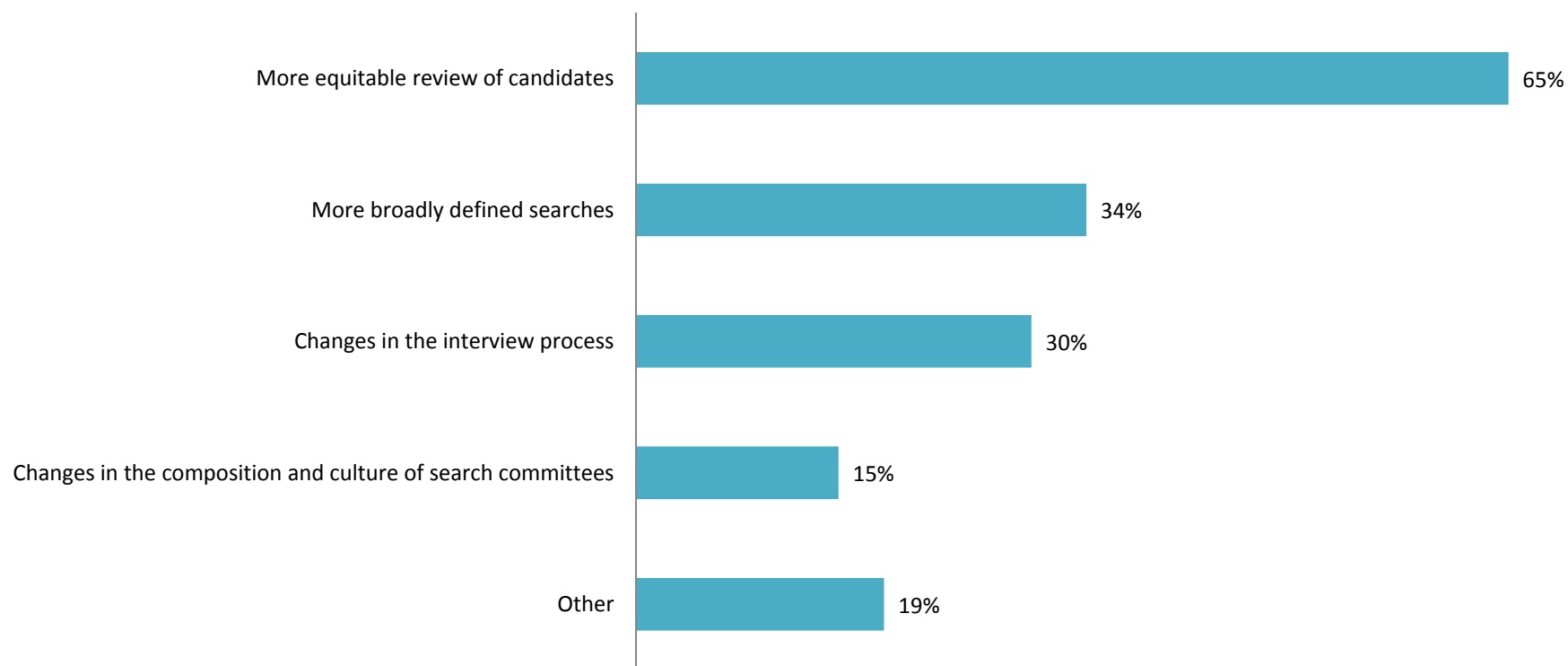
Effectiveness of STEAD Workshops

Please rate the effectiveness of the following aspects of the workshop: (N=162)



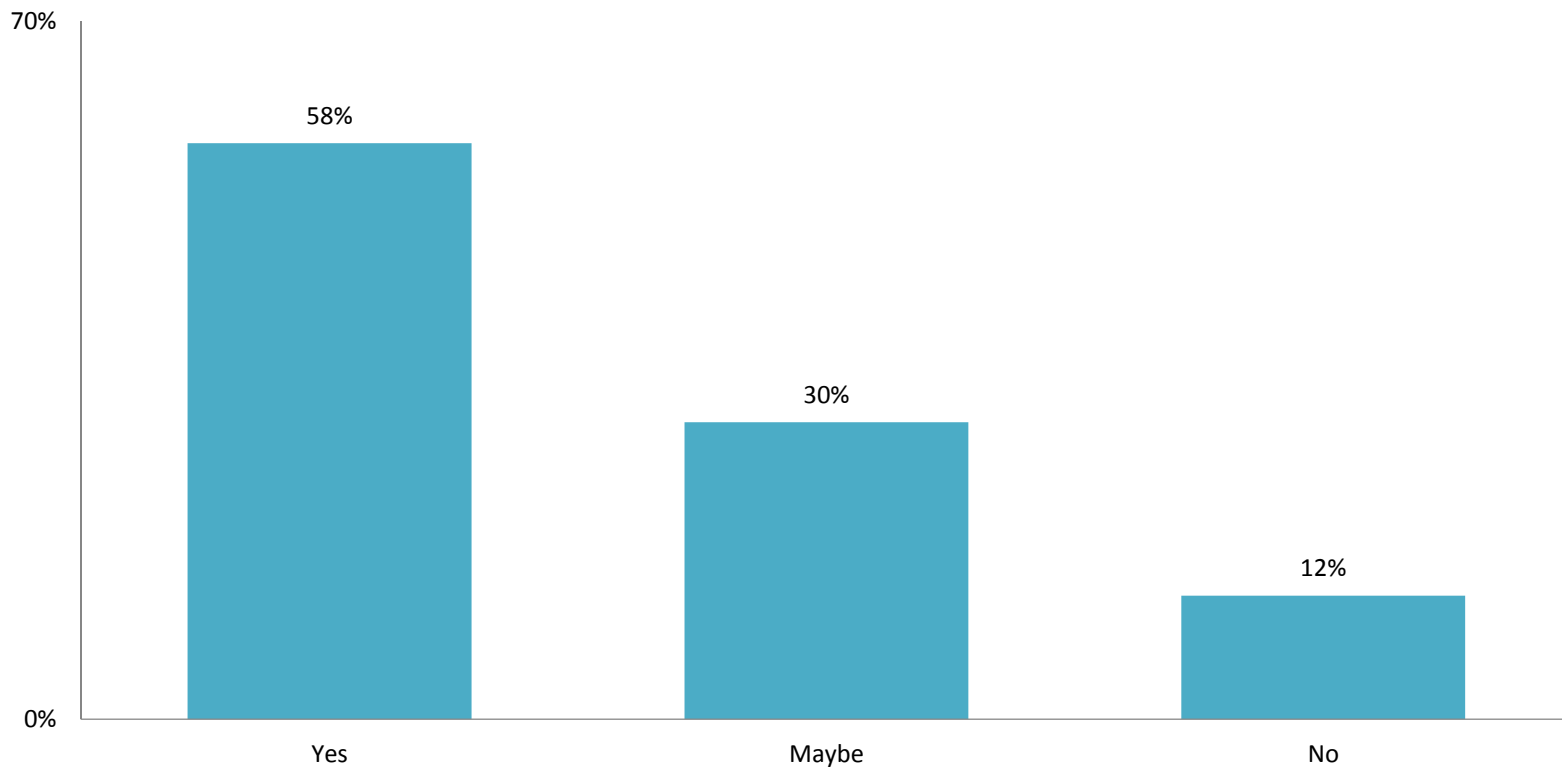
Effectiveness of STEAD Workshops

How do you think the workshop will affect the search process in your department? (Check all that apply) (N=146)



Effectiveness of STEAD Workshops

Do you think participating in the workshop will affect your behavior when you serve on a search committee? (N=161)



Promote Equitable Career Advancement

Established twelve LAUNCH committees for new faculty, to date, including Three CAMPOS Faculty Scholars

- *College of Agriculture & Environmental Sciences*
 - Clare Casteel, *Plant Pathology Department*
- *College of Biological Sciences*
 - Diasynou Fioravante, *Center for Neuroscience*
 - Karen Ryan, *Neurobiology, Physiology & Behavior*,
 - Mark Huising, *Neurobiology, Physiology & Behavior*
 - Alex Nord, *Center for Neuroscience; Neurobiology, Physiology & Behavior; School of Medicine – Psychiatry; Genome Center*
- *College of Engineering*
 - Sharon Aviran, *Biomedical Engineering*
 - *Cindy Rubio Gonzalez, *Computer Science*
- *School of Medicine*
 - *Anna La Torre, *Cell Biology and Human Anatomy*
 - Li-En Jao, *Cell Biology and Human Anatomy*
 - Sergi Simo, *Cell Biology and Human Anatomy*
- *School of Veterinary Medicine*
 - *Lillian Cruz-Orengo, *Anatomy, Physiology and Cell Biology*
 - Colin Reardon, *Anatomy, Physiology and Cell Biology*



* CAMPOS Faculty Scholars



Evidence of Impact of LAUNCH Committees

Positive comments by LAUNCHees:

*I like having resources to go to with questions that come up. I had an idea to start a virtual lab and the committee members from outside the department were asking their contacts across campus about this and giving me ideas. Having **this outside point of view is helpful**. They also talk to the chair about some of the issues that have come up and they provide extra support. It has provided me with more contacts and support.*

*I got a lot of good advice. I may have eventually learned and figured out things on my own but it was nice to have the help. I got to know people with knowledge of UC Davis. **It was nice to see that there are people who care**. In my department I am part of a very small group and I came in to almost a vacuum. Many of the faculty is ready to retire and most people are indifferent. This is specific to my area so it may be different for other people.*

***It is great to have someone in the beginning to talk to**. They have really tried to help me with some of the problems I have had. I am very sensitive to taking people's time and even though everyone in the department is really nice and welcoming, the people on my committee are there so I can ask questions and talk to them. So, it has been very helpful. Having people to talk to has been a tremendous help.*

UC Davis ADVANCE leaders now meet regularly with the new campus CFO, VC David Lawlor to discuss challenges w/lab space renovation process, cost over-runs, etc.



Major Achievements to Date – Goals #1-#3

Developed a process for campus review, consultation and implementation of recommendations developed by the PPRI with the following steps:

1. Draft recommendations report developed and discussed by the PPRI and ADVANCE leadership
2. Consultation with key Academic Senate committees (Faculty Welfare and Affirmative Action and Diversity) resulting in modification of draft
3. Draft submitted to all committees of the Senate and Federation as well as all nine Academic and Professional School Deans with request for feedback and comments on the proposed recommendations
4. Revised draft sent to Academic Senate for formal review, comment and adoption.

The Revised Recruitment Recommendations dated October 2014 (a total of 18 recommendations including defining responsibilities for implementation) are now undergoing formal Academic Senate consultation.

Earlier this month we convened a Roundtable on **Building and Sustaining a Diverse Faculty: Implications for Faculty Advancement and Reward Systems**



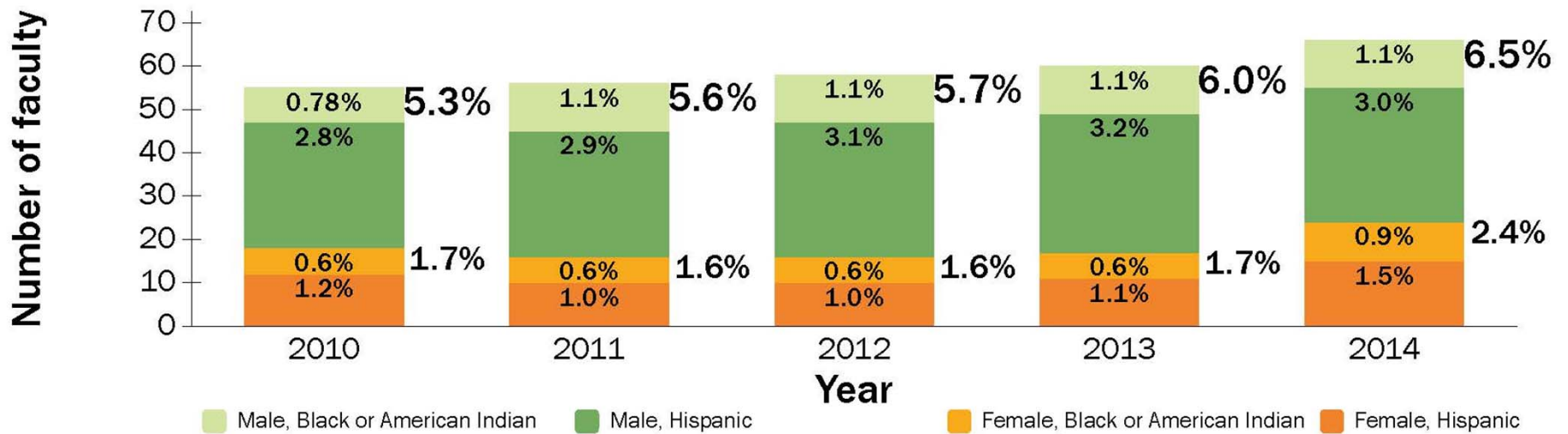
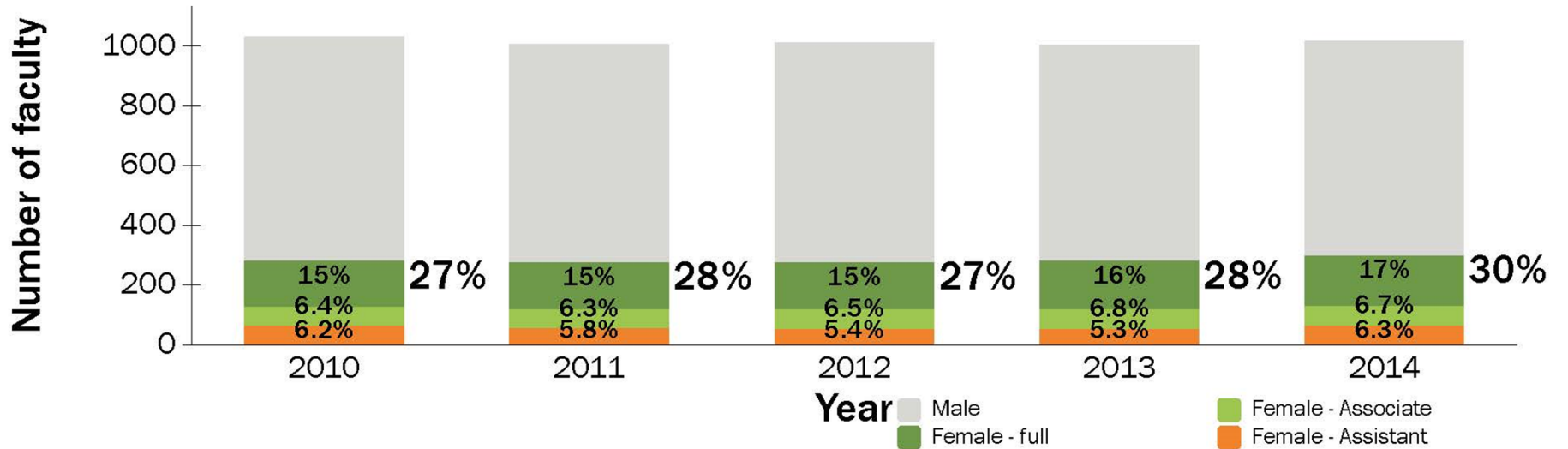
Enhance recruitment of dual-career faculty

The Capital Resource Network to support dual-career hiring has been established on campus with:

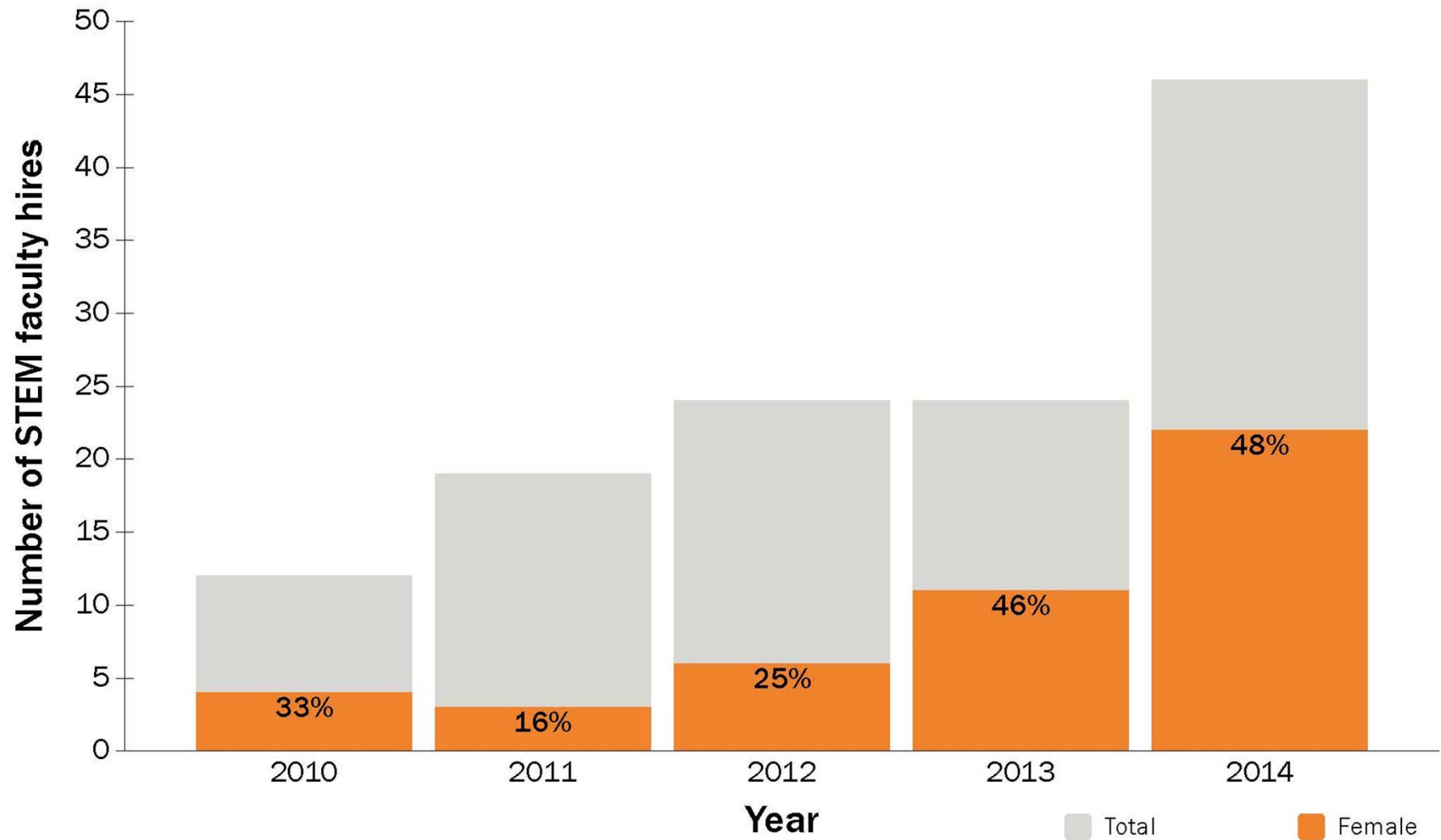
- Permanent director
- Establishment of an Advisory Council with representatives from ten of the region's top employers
- Subcommittees met to advise and finalize the following aspects of the business Plan: Services & Rates, Membership & Benefits, and Marketing & Sponsorships
- Active networking with regional employers and other stakeholders
- Logo, and communication materials, website design & content
- Soft launch with some services in Winter 2015, planning for a formal program launch in Spring 2015
- Full service for academic year 2015-16



STEM Faculty Diversity at UC Davis



STEM Faculty Hiring at UC Davis





**Social Science
Research Initiative
a qualitative study**

Adela de la Torre, Co-PI

Professor of Chicana/o Studies
Director, Center for Transnational Health
Vice-Chancellor, Student Affairs

Yvette Flores Professor of Chicana/o Studies

Laura Grindstaff Professor of Sociology

Marylou Siantz Professor of Nursing. Director, CAMPOS

Lisceth Brazil-Cruz Post-doctoral scholar, ADVANCE

Initiative Mission Statement

To conduct empirical, qualitative research that:

1. Identifies the personal and institutional factors influencing the career paths of Latina STEM scholars in academia.
2. Informs the UC Davis ADVANCE program initiatives.
3. Contributes to the literature explaining the under-representation of Latinas in STEM.



Study Cohorts

1. The *President's Postdoctoral Fellowship Program* (PPFP), 1988-present:
 - Total sample size of 537
 - 58 of the 537 fellows are Latina
 - 23 of the 58 Latina fellows are in STEM (10 interviewed)
 - 35 of the 58 Latina fellows are non-STEM (9 SBS interviews)
2. CAMPOS Faculty Scholars 2014-2015
 - Sample size of 6 (all interviewed)
3. Latina STEM scholars nationwide, in and outside academia



Methodology

- In-depth, semi-structured interviews
- “Grounded theory” approach to qualitative analysis
- Narrative representation of themes and patterns
- Connections and additions to existing literatures



Interview Themes

- Early childhood experiences (home, school, neighborhood)
- Mentoring
- Structural and programmatic supports
- Role of family in pathway
- Work-life balance
- Conflicts/challenges
- Resilience
- Positionality





Advancing excellence through faculty diversity

The University of California President's Postdoctoral Fellowship Program was established in 1984 to encourage outstanding women and minority Ph.D. recipients to pursue academic careers at the University of California. The current program offers postdoctoral research fellowships, professional development and faculty mentoring to outstanding scholars in all fields whose research, teaching, and service will contribute to diversity and equal opportunity at UC.

Resources for:

[Applicants](#) [Fellows](#) [Faculty](#) [Universities](#)



FORD FOUNDATION FELLOWSHIP PROGRAM

Fellowships Office



Society of Hispanic Professional Engineers

Changing Lives... Empowering Communities... Impacting the World...



SACNAS

40 Years of Advancing Hispanics/Chicanos
& Native Americans in Science

**JOIN THE
CONVERSATION**



Get Connected with SACNAS!

Connect to SACNAS year-round with social media!



Key Findings Related to Program Initiatives

- **Mentoring**
 - Mentors are key to pursuing graduate and post-graduate opportunities
LAUNCH committees, NCFDD membership, Faculty Success Program
- **Networking and Career Development**
 - PFP enables collaborative research, publishing, networking, and professional development
LAUNCH committees, CAMPOS programming, ADVANCE Scholar Awards
- **Programmatic Support**
 - Helps level the playing field for the most vulnerable scholars
CAMPOS programming
- **Discrimination/Microaggression**
 - Takes many forms and occurs at multiple life stages
STEAD training, climate initiative, implementation of policy and practices, Senate engagement in policies and practices revision





Questions?

Comments?