

# ACRA

(Academic Career Readiness Assessment):  
Setting training expectations  
for trainees on the academic career track

Laurence Clement, PhD

Program Director, Academic Career Development  
Director, Research in Career Education  
Office of Career and Professional Development

Associate Adjunct Professor,  
Department of Social and Behavioral Sciences

What are you and your colleagues most interested in learning during this workshop?

Career qualifications required for jobs at various types of academic institutions

Help trainees assess what they need to do to achieve their career goals

Metrics for achievement

Having a rubric for trainee advising and mentoring

Mentoring, training and managing practices, and expectations of the academic communities.

How to set training expectations, talk about progress with trainees, and follow through

Tips about how to mentor a diverse group of trainees

Timeline for successful trajectory to a competitive faculty application, preparing early-stage trainees to become competitive for a faculty position later

# Agenda

**ACRA**  
Academic Career Readiness Assessment

*Winner of the First Prize 2019 AAMC Innovations in Research and Research Education Award*

**Clarifying Training Expectations for Future Faculty in the Life Sciences**

Laurence Clement, PhD  
Jennie Dorman, PhD  
Rick McGee, PhD

Developed with the support of Burroughs Wellcome Fund

**UCSF** Office of Career and Professional Development  
Student Academic Affairs

What is ACRA

Qualification	Teaching Experience	Pedagogical Practices	Ability to Serve a Diverse Student Population
Level of training required (majority institutions)	Trainee has been fully responsible for organizing and teaching a course.	Trainee is familiar with the evidence supporting the use of active learning strategies in the classroom.	Trainee demonstrates the sensitivity, respect for individuals of all backgrounds, and the interpersonal skills to interact with them.
Additional level of training required (more demanding positions)	Trainee has been fully responsible for organizing and teaching a variety of courses with undergraduate students.	Trainee demonstrates that they can use active learning strategies effectively in the classroom, reflects on own teaching effectiveness and uses an iterative process to teaching to improve curriculum.	Trainee has immersed self in a diverse community, or has mentored, advised or taught diverse populations of students.
<b>STEP-UP Introduction to Pedagogy Course</b> <a href="http://career.ucsf.edu/step-up-course">career.ucsf.edu/step-up-course</a> (GRAD 302)			
OCPD Programs	<b>STEP-UP USF-UCSF Teaching Residency</b> <a href="http://career.ucsf.edu/step-up-teaching-residencies-usf">career.ucsf.edu/step-up-teaching-residencies-usf</a>	<b>STEP-UP CCSF-UCSF Teaching Residency</b> <a href="http://career.ucsf.edu/step-up-teaching-residencies-usf">career.ucsf.edu/step-up-teaching-residencies-usf</a>	<b>TRAIN-UP CCSF-UCSF Mentoring Partnership</b> <a href="http://career.ucsf.edu/NSFATED">career.ucsf.edu/NSFATED</a> 18
	Publications, Scholarship	Research Vision & Strategy	Funding Plan
	Level of training required (majority institutions)	Trainee has produced first author papers during postdoc and PhD (regardless of impact).	Research program is exciting with a clear direction and includes explicit, feasible steps to attain this direction over the first couple of years.
Additional level of training required (more demanding positions)	Trainee has produced first author papers during postdoc and PhD, with at least one paper contributing significantly to the field.	There is an interesting, broad, research question that fills gaps in the field and provides direction for the next 5 to 10 years. The question is broken down into smaller, feasible projects that use appropriate methods.	
OCPD Programs	<b>PAC-UP Applying for faculty positions</b> <a href="https://career.ucsf.edu/pac-up-events">https://career.ucsf.edu/pac-up-events</a>	<b>PAC-UP Preparing for an Academic Career</b> <i>Developing an independent research program</i>	
		<b>PAC-UP Getting feedback on your research statement</b> <i>Giving a chalk talk for a faculty position</i>	

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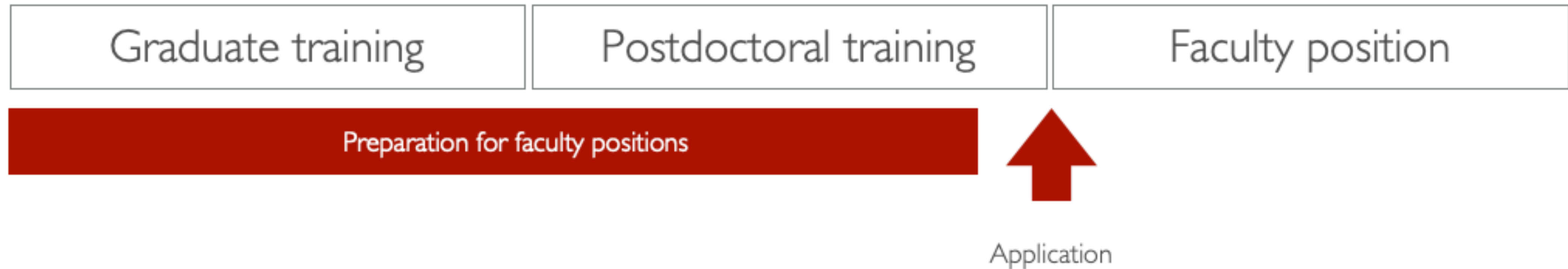
How we use ACRA



How you could use ACRA

# Academic Career Development at UCSF

what I am expected to do



Help aspiring faculty get faculty positions

### Goal:

Give every graduate student and postdoc at UCSF the knowledge and skills to make them more competitive for faculty positions, regardless of their background

### Strategy:

Develop evidence-based and inclusive programs, interventions and tools for aspiring faculty (through assessment and research)

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Give every graduate student and postdoc at UCSF the knowledge and skills to make them more competitive for faculty positions, regardless of their background

## Strategy:

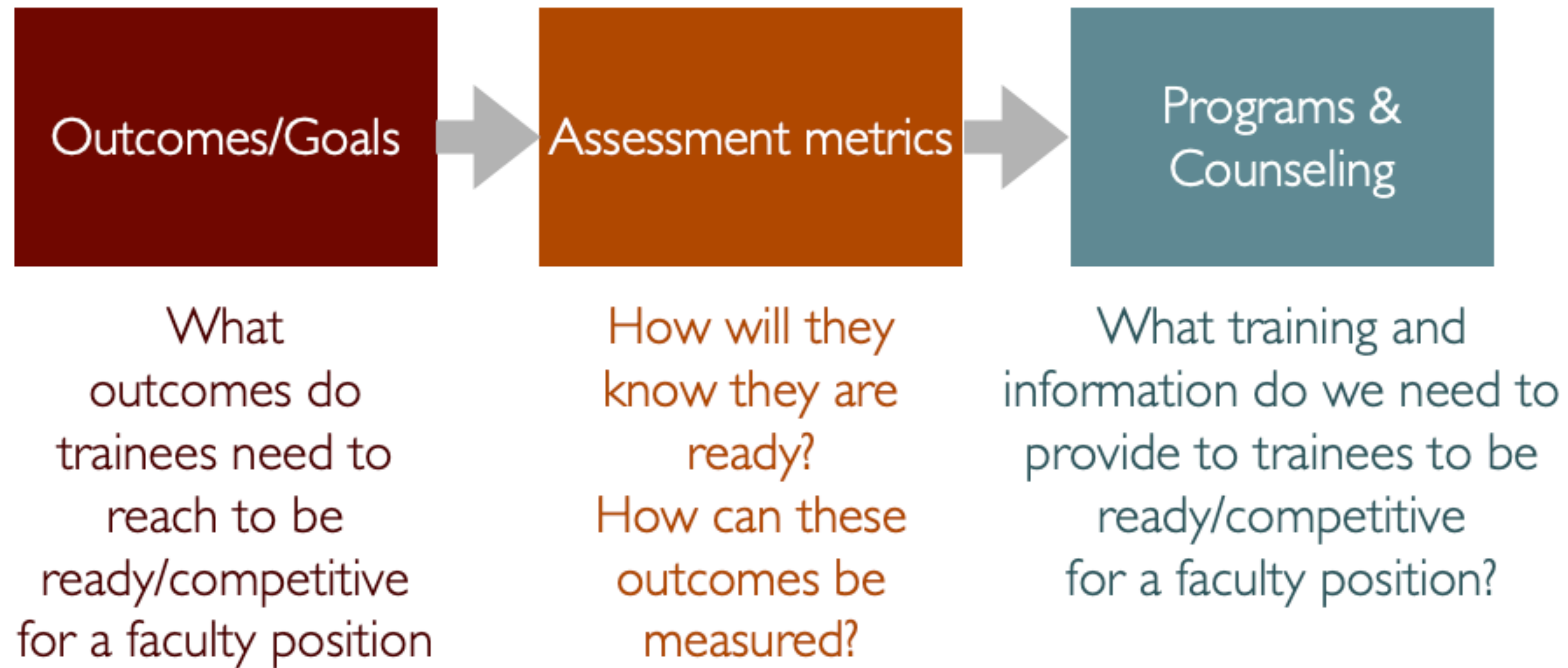
Develop evidence-based and innovative programs, interventions and resources for aspiring faculty (through assessment and research)

Undergraduate institutions around the country had been transforming their approach to education and training, towards evidence-based approaches NSF, HHMI, AAAS and scientific organizations.

We are leading efforts in evidence-based graduate career education,  
nationally



## Evidence-based practice: Backward Designing Interventions



G. Wiggins (2005)



# Academic Career Development at UCSF

what was being done when I started

Seminar: Overview of the faculty job application process (Bill Lindstaedt)

1:1 Counseling appointments

1. Application material review with individual feedback (CV, cover letter, research, teaching, diversity statements)
2. Individual issues associated with special circumstances
3. Strategies for strengthening the candidacy

## ISSUE OF EQUITY

Confusion with expectations  
Questions about priorities  
Non-RI institutions  
(Cultural capital)

## ISSUE OF SCALE and ACCESS

2000 trainees (1200 postdocs)  
4-month application season  
1 hour review + prep for each  
appointment

# Academic Career Development at UCSF

what was being done when I started

Needed a tool  
to

30-40  
workshops a  
year  
~100 hours of  
content  
just for future  
faculty

communicate  
the essential  
information  
about faculty  
hiring to a large  
population of  
trainees

- Some of the faculty job application process (B...
1. A...:1 Counseling appointments  
review with individual feedback (CV, co...  
ments)
  2. Inc... with special circumstances
  3. Strat... ening the candidacy

## ISSUE OF EQUITY

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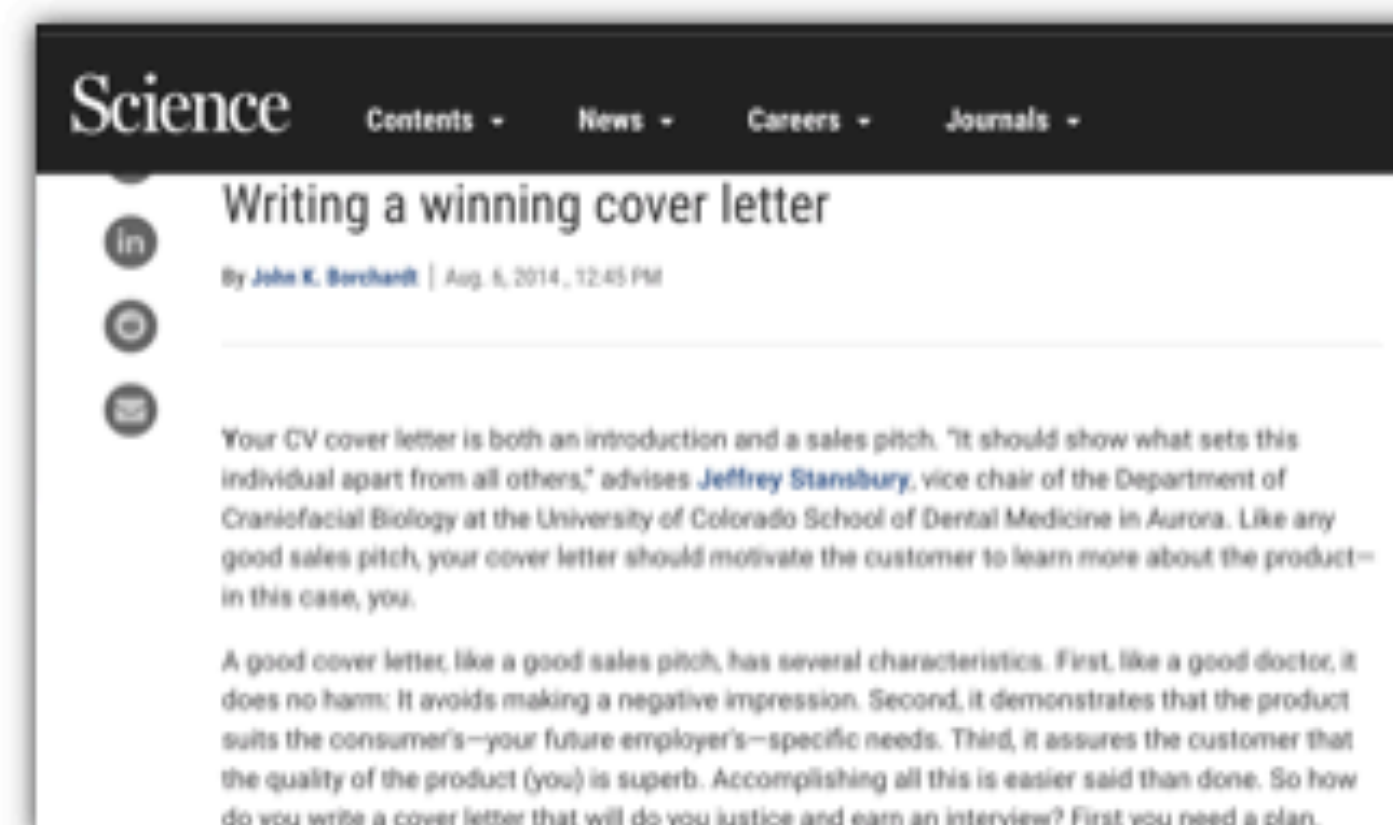
2000 trainees (1200 postdocs)  
4-month application season  
1 hour review + prep for each  
appointment

# Developing a tool to communicate hiring expectations to aspiring faculty



## What does the search committee do with these materials?

- Applications reviewed by individuals, consensus in committee
- Many documents are skimmed to make the first cut
  - ◆ Pedigree: see CV
  - ◆ Fit – clinical/teaching/research: see CV and Cover Ltr
  - ◆ Reputation, Ability, Collegiality: see References
  - ◆ Productivity: see CV (pubs, degree rate, teaching)
  - ◆ Already vetted as having potential: see CV (funding)
- Next, research/teaching statements **may** be read carefully



Parker, Roy. 2012. "Skill Development in Graduate Education." *Molecular Cell* 46 (4): 377–81.

## Bill Lindsteadt, Overview of the faculty job application process

The Diabetes Center of the University of California at San Francisco is seeking to appoint new faculty members whose research program will focus on biomedical aspects of Diabetes. The Diabetes Center is chartered to investigate both type I and type II diabetes, as well as the development, differentiation and homeostasis of the cell types and tissues manifesting these diseases. Relevant research areas with this recruitment include immunology/inflammation, B-cell biology, insulin resistance, genetics, bioinformatics, and stem cell research. The appointee will occupy space in the Diabetes Center on the Parnassus Heights campus of UCSF, and will be a member of the Biomedical Sciences Graduate Program.

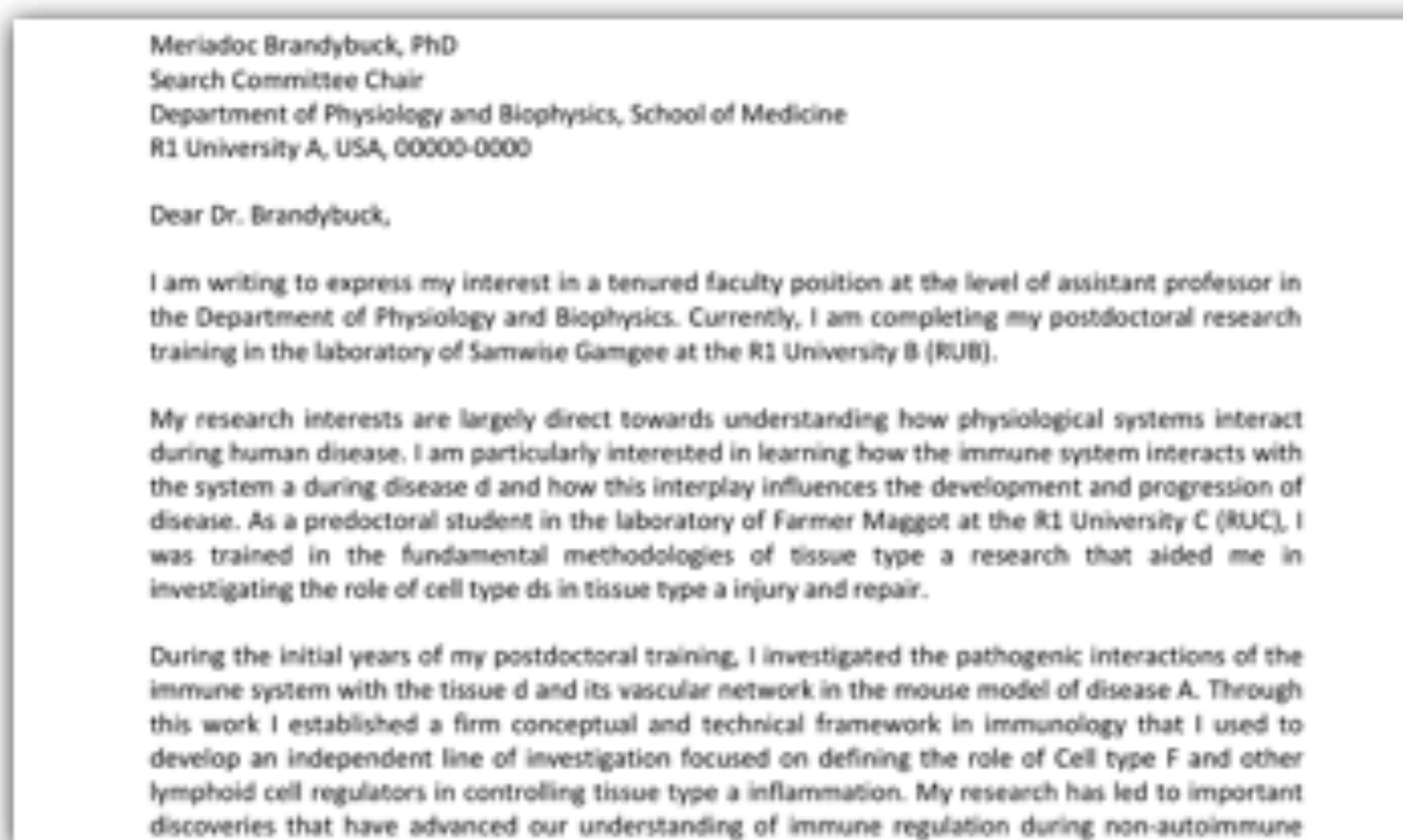
### Basic qualifications:

MD and/or PhD degree(s) or equivalent  
A research program in type 1 or type 2 diabetes

UCSF seeks candidates whose experience, teaching, research, or community service has prepared them to contribute to our commitment to diversity and excellence. UCSF is an Equal Opportunity/Affirmative Action Employer.

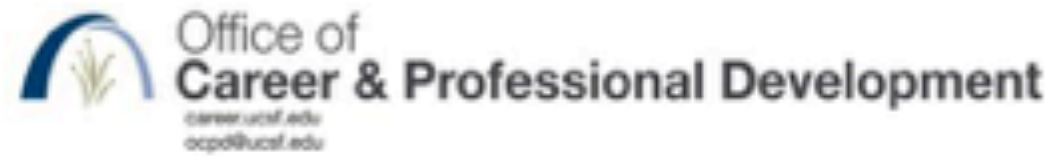
Job descriptions

## Books and articles on faculty hiring



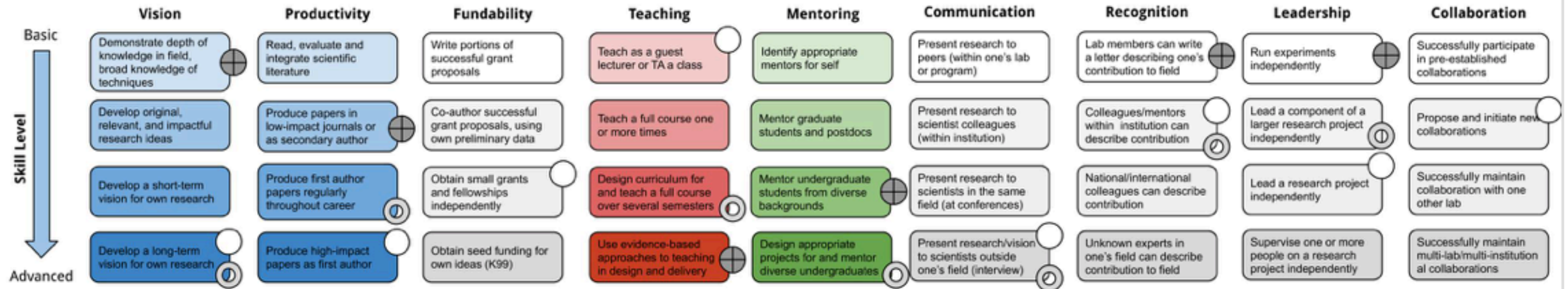
Feedback on application materials

# Prototype Academic Career Readiness Assessment



## Academic Career Readiness Assessment (ACRA) For Upcoming Professors

To be considered for a Faculty position, applicants should be able to:



- Target skill level in order to be considered for an interview at institutions with very high research focus (R1 or research/doctoral universities)
- ⊙ Target skill level in order to be considered for an interview at a research-intensive Liberal Arts College (Baccalaureate, Majority Undergraduates)
- ⊕ Target skill level in order to be considered for an interview at a competitive Community College (Associate, Undergraduates Only)

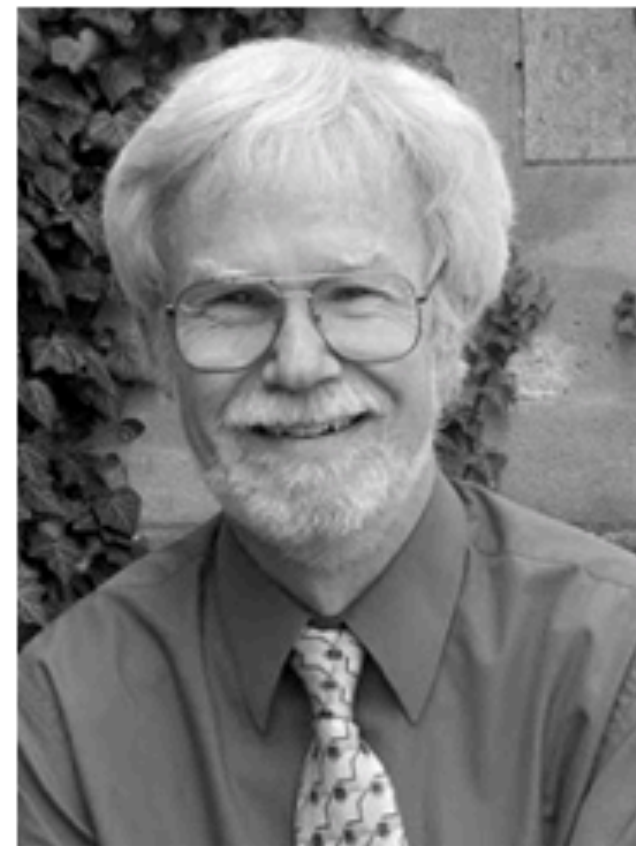
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BURROUGHS  
WELLCOME  
FUND 



Jennie Dorman, PhD  
*MIND program co-PI,  
UCSF*



Rick McGee, PhD  
*Feinberg School of Medicine,  
Northwestern*

# Scientific Careers Research and Development Group

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## Our team: A wealth of experience

in laboratory and social science research and training

## Developing Scientific Talents

The mission of the Scientific Careers Research and Development Group (Careers R&D Group) is to develop new approaches to the training of young scientists that more effectively bring their talents to the scientific enterprise. In so doing, our goal is to contribute to the National mission of maximally stimulating creative problem solving through inclusion of the widest possible range of individuals and the perspectives they bring in research and teaching. To achieve this goal requires much greater participation in the research enterprise by individuals from underrepresented groups.



## Integration of Theory, Research and Practice

The Careers R&D Group brings together a truly unique combination of individuals, resources and opportunities that allow us to bridge and integrate the full cycle of theoretical

## Using the Benson (1998) framework for instrument validation

### Step 1: Substantive stage

**Goal: Establishing the theoretical and empirical domains.**

- Theoretical domain: represents our best understanding of the construct
- Empirical domain: operationalizes the construct.

### Step 2: Structural stage

**Goal: Determine the extent to which the observed variables covary** among themselves, and how they covary with the intended structure of the theoretical domain.

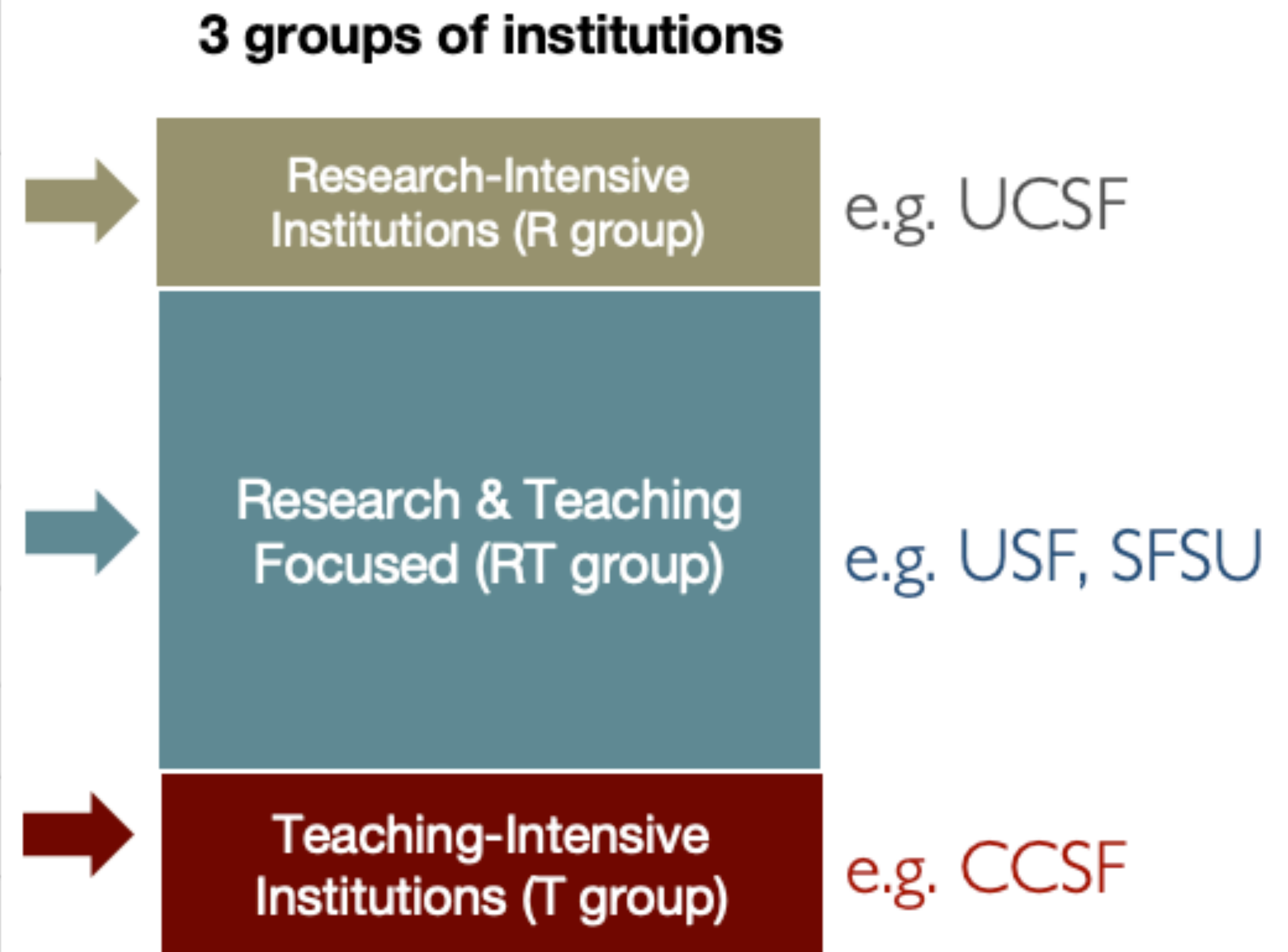
### Step 3: External stage

**Goal: Description of how the construct is related to other variables (for e.g., group differences).**

Use Exploratory Factor Analysis and use ordinal regression in a multilevel model to determine if the sub-constructs can predict group hiring preferences.

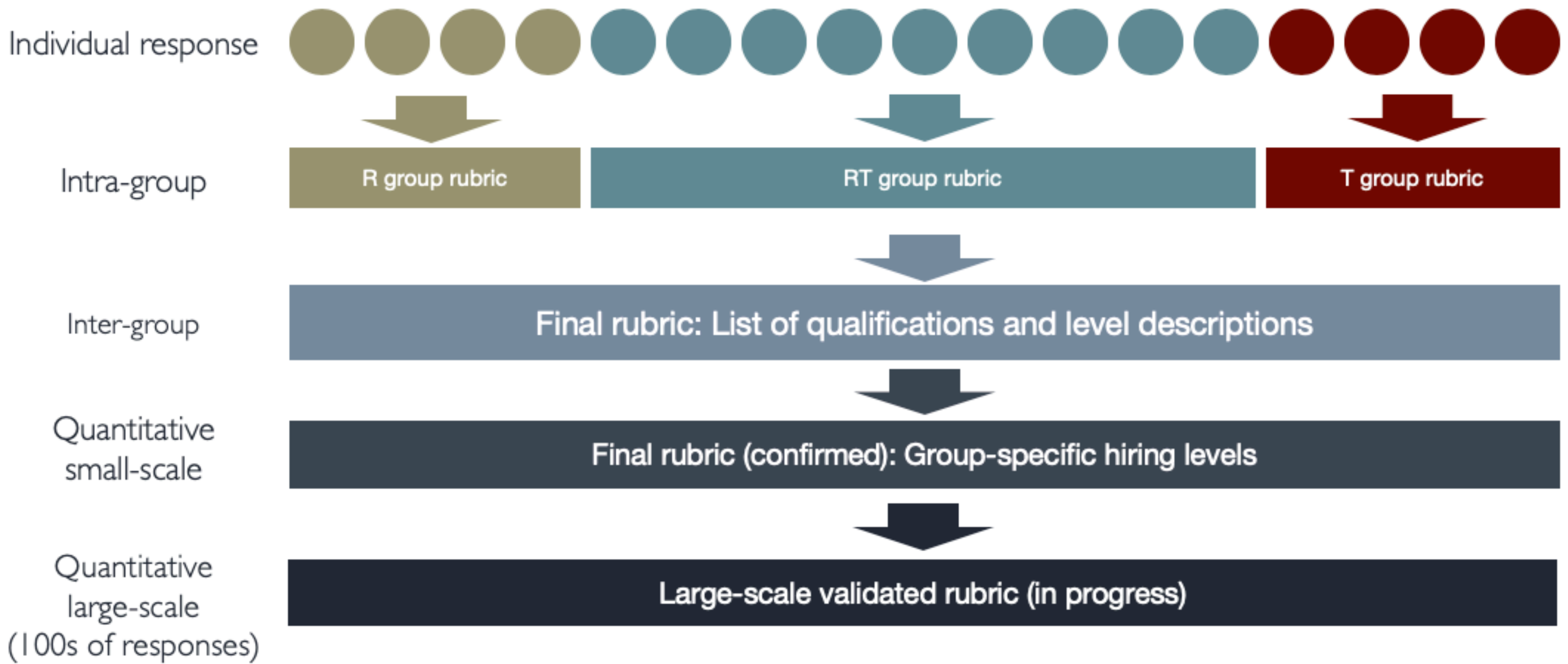
Sampling: study subjects were selected based on the research intensity of institution  
(according to the 2015 Carnegie Classification of Higher Education)

<b>Carnegie Basic Classification</b> <sup>1</sup>	<b>Abrev.</b>	<b>Faculty</b>
Doctoral Universities <sup>2</sup> - Highest Research Activity	R1	4
Doctoral Universities <sup>2</sup> - Higher Research Activity	R2	2
Doctoral Universities <sup>2</sup> - Moderate Research Activity	R3	2
Master's Colleges & Universities <sup>3</sup> - Larger Programs	M1	2
Master's Colleges & Universities <sup>3</sup> - Medium Programs	M2	1
Baccalaureate Colleges <sup>4</sup>	BAC	2
Associate's Colleges <sup>5</sup> (Community Colleges)	CC	5
	<b>Total</b>	<b>18</b>





# Data Analysis



## Institutions using ACRA in workshops and counseling with graduate students and postdocs



Intramural Research Program  
*Our Research Changes Lives*



JOHNS HOPKINS  
SCHOOL of MEDICINE



MASSACHUSETTS  
GENERAL HOSPITAL



TEXAS A&M  
UNIVERSITY.



THE OHIO STATE  
UNIVERSITY

Georgia  
Tech  
CREATING THE NEXT



EMORY  
UNIVERSITY  
SCHOOL OF  
MEDICINE



VANDERBILT  
School of Medicine



PRINCETON  
UNIVERSITY



THE UNIVERSITY  
of NORTH CAROLINA  
at CHAPEL HILL



INDIANA UNIVERSITY  
SCHOOL OF MEDICINE



THE UNIVERSITY OF  
ALABAMA AT BIRMINGHAM



The Children's Hospital  
of Philadelphia®



Northern Illinois  
University  
*Your Future. Our Focus.*

BOSTON  
UNIVERSITY

Ucla



WISCONSIN  
UNIVERSITY OF WISCONSIN-MADISON



OIST



東京大学  
THE UNIVERSITY OF TOKYO



VAN ANDEL  
RESEARCH INSTITUTE®

RESEARCH

## 2019 AAMC Innovations in Research and Research Education Award

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The Association of American Medical Colleges (AAMC) announces four recipients of the **2019 AAMC Innovations in Research and Research Education Award**. This is the eighth annual award developed in collaboration with the GREAT Group and GRAND leadership. The GREAT (Graduate Research, Education, and Training) Group is the AAMC's professional development group for the faculty and administrative leaders of biomedical PhD, MD-PhD, and postdoctoral programs. The GRAND (Group on Research Advancement and Development) leadership is the AAMC's professional development group for research deans, deans of clinical research, and other research leaders at academic medical centers.

The primary goal of this year's awards program is to highlight Innovations to Support the Next Generation of Researchers to Launch and Maintain Scientific Careers. This includes programs that provide support for trainees and for early- and mid-career researchers. The four awarded projects were selected by a panel of leaders in biomedical research, education, and training from AAMC-member institutions as well as AAMC staff. Entries were judged on creativity, impact, and feasibility of replication of the innovation.

### First Prize Winner

#### Academic Career Readiness Assessment

University of California, San Francisco – Laurence Clement, PhD



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### The Academic Career Readiness Assessment: Clarifying training expectations for future life sciences faculty

Posted November 06, 2019.

Laurence Clement, Jennie B. Dorman, Richard McGee

doi: <https://doi.org/10.1101/829200>

This article is a preprint and has not been certified by peer review [what does this mean?].

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#### ARTICLE USAGE

Article lifetime

Last 6 months

This month

#### Article usage: November 2019 to December 2019

Show by month	Abstract	Full-text HTML	PDF
Total	1,719	291	453



Blogged by 1  
Tweeted by 62

#### Subject Area

Scientific Communication and Education

#### Subject Areas

All Articles

Animal Behavior and Cognition

Biochemistry

Bioengineering

Bioinformatics

# The Academic Career Readiness Assessment (ACRA)

Qualification

Level 1

Level 2

Level 3

Level 4

Teaching Practices

		Candidate shows awareness of their limited teaching abilities and is interested in developing teaching skills.	Level 1 & Candidate is familiar with the evidence supporting the use of active learning strategies in the classroom.	Level 2 & Candidate demonstrates that they can use active learning strategies effectively in the classroom.	Level 3 & Candidate reflects on own teaching effectiveness and uses an iterative process to teaching to improve curriculum (1).
T	91% Required	18%	27%	27%	18%
RT	91% Required	14%	36%	32%	9%
R	42%	32%	11%		

Teaching Experience

		Candidate has had significant responsibilities (2) as a teaching assistant.	Candidate has been fully responsible for organizing (3) and teaching a course.	Candidate has been fully responsible for organizing (3) and teaching a course with a comparable student population (4).	Candidate has been fully responsible for organizing (3) and teaching a variety of courses (5) with a comparable student population (4).
T	100% Required	18%	18%	55%	9%
RT	86% Required	27%	36%	14%	9%
R	21%	21%			

Commitment and Ability to Serve a Diverse Student Population

		Candidate demonstrates the sensitivity, respect for individuals of all backgrounds, and the interpersonal skills to interact with them.	Level 1 & Candidate has immersed self in a diverse community, or has mentored, advised or taught diverse populations of students.	Level 2 & Candidate has used strategies to support learning of diverse populations of students.	Level 3 & Candidate can articulate a personal experience with equity or social justice that inspires them to improve learning experiences of diverse populations of students. (6)
T	82% Required	27%		45%	9%
RT	82% Required	59%	9%	3%	9%
R	34%	32%			3%



T institutions  
(n=11)

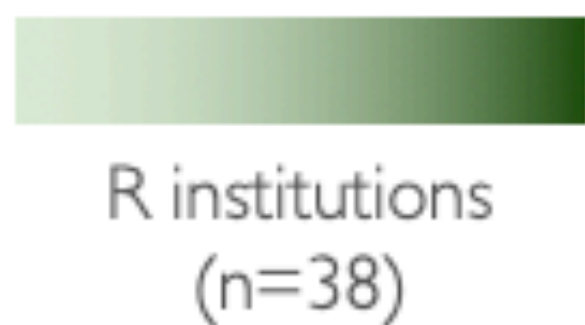
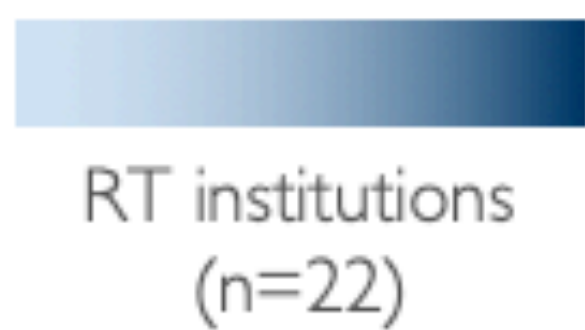
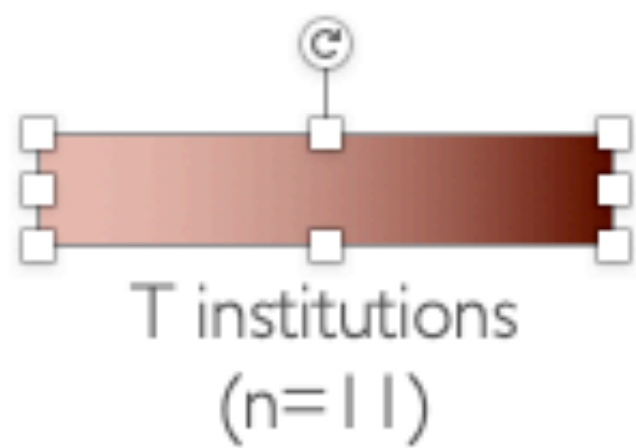


RT institutions  
(n=22)



R institutions  
(n=38)

T



RT

### Inclusion of Undergraduate Research Experiences in Research Plan

T 9%  
**RT 91% Required**  
 R 5%

Candidate demonstrates a clear understanding that they will be working with undergraduate and/or Master's students.	Level 1 & Candidate understands the implications of doing research with non-PhD students on scope of project.	Level 2 & Research plan is specifically tailored to the institution's undergraduate and/or Master's population.	Level 3 & Candidate is able to propose projects of different calibers for different student populations. (7)
9%	9%	9%	55%
18%	9%	55%	9%
5%	5%		

### Experience Conducting Research with Students

T 27%  
**RT 82% Required**  
 R 16%

Candidate can articulate a scientific mentoring philosophy that meets the needs of the non-PhD student population served by this institution.	Level 1 & Candidate has experience conducting research with non-PhD students	Level 2 & Research conducted with non-PhD students produced preliminary data.	Level 3 & Data produced by non-PhD students was included in a scientific poster or paper.
18%	9%		
45%	36%		
13%	3%		



T institutions  
(n=11)



RT institutions  
(n=22)



R institutions  
(n=38)

RT

### Qualification

### Level 1

### Level 2

### Level 3

### Level 4

### Research Feasibility with Available Resources

Candidate demonstrates ability to develop a research program within the limitations of the start-up funds. (8)	Level 1 & Candidate demonstrates the ability to independently manage and run the equipment required for their research program. (9)	Level 2 & Research program is feasible in the institution's research and geographic environment, which includes some minor constraints. (10)	Level 3 & Research plan is tailored to the non-R1 institution's highly limited resources. (11)
--	---	--	--

T	9%	9%			
RT	82% Required	14%	9%	36%	23%
R	66% Required	16%	26%	24%	

### Verbal Communication of Research

Can present research clearly and effectively to labmates.	Can present science clearly to scientists in the same sub-discipline (for example, to other microbiologists).	Can present science clearly and effectively to scientists outside of subfield.	Can present science clearly and effectively and can spark the interest of scientists outside of subfield and non-PhD students.
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T	27%	9%		9%	9%
RT	73% Required			14%	59%
R	87% Required		3%	61%	24%

### Publications

Candidate has produced a few papers, regardless of authorship or impact.	Candidate has produced first author papers during postdoc and (12) PhD (regardless of impact) (13).	Candidate has produced first author papers during postdoc and (12) PhD, with at least one paper contributing significantly to the field (14).	Candidate has produced first author papers during postdoc and (12) PhD, at least one of which was published in Cell, Nature, or Science (15).
--	---	---	---

New T	18%	18%			
RT	77% Required	9%	64%	5%	
R	100% Required		3%	95%	3%



T institutions  
(n=11)



RT institutions  
(n=22)



R institutions  
(n=38)

R

### Research Vision & Strategy

Research program is exciting (16) with a clear direction and includes explicit, feasible steps to attain this direction over the first couple of years.	Level 1 & There is an interesting, broad, research question that fills important gaps in the field and provides direction for the next 5 to 10 years.	Level 2 & The research question is broken down into smaller, feasible projects that use appropriate methods to answer the question.	Level 3 & The candidate has demonstrated experience successfully implementing this or a similar vision independently. (17)
---	---	---	--

T	9%	9%			
RT	<b>77% Required</b>	41%	18%	18%	
R	<b>87% Required</b>	13%	29%	34%	11%

### Funding Plan

Candidate can suggest specific funding agencies and program names to fund proposed research program. (18)	Level 1 & Proposed research program is ambitious and impactful enough to be funded by an R01 grant. (19)	Level 2 & Candidate has developed specific aims that can be realistically achieved with a first R01 grant. (20)	Level 3 & Candidate has developed a funding plan beyond the first R01 grant. (21)
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T	9%	9%			
RT	45%	45%			
R	<b>68% Required</b>	8%	24%	34%	3%

### Research Independence

Candidate has the technical expertise to run their proposed research program independently. (22)	Level 1 & Candidate shows ability to lead a research program, by developing own ideas and new collaborations independently. (23)	Level 2 & Candidate's proposed research program does not appear to be in competition with their current advisor's. (24)	Level 3 & Candidate can provide evidence of independence through advisor's recommendation letter.
--	--	---	---

T	0%				
RT	<b>59% Required</b>	27%	23%	5%	5%
R	<b>82% Required</b>	11%	32%	24%	16%



T institutions  
(n=11)

T



RT institutions  
(n=22)



R institutions  
(n=38)

RT

R

### Qualification

### Level 1

### Level 2

### Level 3

### Level 4

### Recommendations

Enthusiastic and personalized recommendations from both PD and PhD advisors. (25)	Level 1 & letters from other respected scientists who are well known by the search committee AND who know the candidate well. (26)	Level 2 & letters emphasize candidate's ability to be successful as a principal investigator.	Level 3 & letters emphasize that the candidate shows the potential to become a leader in the field.
---	--	---	---

T	36%	27%	9%		
RT	73% Required	59%	9%	5%	
R	92% Required	24%	5%	32%	32%

### Collegiality

Candidate demonstrates the ability to interact with colleagues in a professional manner.	Levels 1 & Candidate demonstrates the interpersonal skills well-suited for the department's culture. (27)	Level 2 & Candidate demonstrates willingness to share ideas and resources with colleagues. (28)	Level 3 & Candidate demonstrates the ability to develop collaborative projects with colleagues. (29)
--	---	---	--

T	91% Required	27%	27%	27%	9%
RT	77% Required	5%	41%	27%	5%
R	76% Required	16%	13%	42%	5%

### Fit

Candidate has sought experiences that align with the institution's teaching/ research mission. (30)	Level 1 & Research or teaching disciplines meet the needs of the department. (31)	Level 2 & Candidate has the ability and determination to handle the high workload. (32)	Level 3 & Candidate highlights potential synergies with others in department or institution.
---	---	---	--

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RT	95% Required		55%	23%	18%
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<b>R</b>	34%	32%			3%

T institutions  
(n=11)

RT institutions  
(n=22)

R institutions  
(n=38)

T

## ACRA as an assessment tool for trainees

Discriminatory  
power

Indication of  
barriers

	<b>Sig.</b> (AICc)	<b>Status</b> PD vs GS	<b>Ethnicity</b> WR vs URM	<b>Readiness</b> Now vs New Year
TP	<b>18.36</b>			Now>NY
FEA	<b>19.09</b>			Now>NY
PUB	<b>14.28</b>	PD > GS	WR>URM	
VIS	<b>13.12</b>	PD > GS		Now>NY
FUN	<b>12.03</b>			Now>NY
URE	<b>9.99</b>			Now>NY
IND	<b>6.10</b>			Now>NY
TEX	<b>6.35</b>			
EXP	<b>5.84</b>			Now>NY
DIV	<b>2.06</b>		URM>WR	
VCOM	NS	n=83 trainees		Now>NY

## UCSF faculty:

How do you evaluate the potential of a trainee to succeed on the academic track before they apply to faculty positions?

What are the milestones that academic-bound trainees have met or should meet?

What challenges have you or your trainees faced in meeting these milestones?



# The Academic Career Readiness Assessment (ACRA)

Qualification

Level 1

Level 2

Level 3

Teaching Practices

Candidate shows awareness of their limited teaching abilities and is interested in developing teaching skills.

Level 1 & Candidate is familiar with the evidence supporting the use of active learning strategies in the classroom.

Level 2 & Candidate demonstrates the ability to use evidence-based strategies in the classroom.

T 91% Required  
RT 91% Required  
R 42%

18%  
14%  
32%

27%  
36%  
11%

Teaching Experience

Candidate has had significant responsibilities (2) as a teaching assistant.

Candidate has been fully responsible for organizing (3) and teaching a course.

Candidate has been responsible for organizing (3) and teaching a course with a comparable student population (4).

Candidate has been responsible for organizing (4) and teaching a variety of courses (5) with a comparable student population (4).

T 100% Required  
RT 86% Required  
R 21%

18%  
27%  
21%

18%  
36%

55%  
14%

9%  
9%

Commitment and Ability to Serve a Diverse Student Population

Candidate demonstrates the sensitivity, respect for individuals of all backgrounds, and the interpersonal skills to interact with them.

Level 1 & Candidate has immersed self in a diverse student population.

Level 2 & Candidate has used strategies to engage a diverse student population.

Level 3 & Candidate can articulate a personal commitment to serving a diverse student population.

T 82% Required  
RT 82% Required  
R 34%

27%  
59%  
32%

Funding graduate programs: "How trainees in the program will be provided with adequate and appropriate information regarding the variety of careers in the biomedical research workforce for which their training would be useful." T32 NIGMS

Complementary tool for non-academic careers, particularly industry scientist positions

Non-Academic Career Assessment

T institutions (n=)

RT institutions (n=)

R institutions (n=38)



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GCC

— GRADUATE CAREER CONSORTIUM —

# GRADUATE CAREER CONSORTIUM

An International Voice for Graduate-Level Career & Professional Development Leaders

Non-Academic  
Career  
Assessment



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September 12, 2018



ImaginePhD - a career exploration and planning tool for the humanities and social sciences

June 29, 2018



VIEW ALL EVENTS

# Agenda

**ACRA**  
Academic Career Readiness Assessment

Winner of the First Prize 2019 AACR Innovations in Research and Research Education Award

**Clarifying Training Expectations for Future Faculty in the Life Sciences**

Laurence Clement, PhD  
Jennie Dorman, PhD  
Rick McGee, PhD

Developed with the support of Burroughs Wellcome Fund

**UCSF** Office of Career and Professional Development  
Student Academic Affairs

What is ACRA

Qualification	Teaching Experience	Pedagogical Practices	Ability to Serve a Diverse Student Population
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	<b>STEP-UP UCSF-UCSF Teaching Residency</b> career.ucsf.edu/step-up-teaching-residencies-usf	<b>STEP-UP CCSF-UCSF Teaching Residency</b> career.ucsf.edu/step-up-teaching-residencies-usf	<b>TRAIN-UP CCSF-UCSF Mentoring Partnership</b> career.ucsf.edu/NSFATED18
Qualification	Publications, Scholarship	Research Vision & Strategy	Funding Plan
Level of training required (majority institutions)	Trainee has produced first author papers during postdoc and PhD (regardless of impact)	Research program is exciting with a clear direction and includes explicit, feasible steps to attain this direction over the first couple of years	Trainee can suggest specific funding agencies and program names to fund proposed research program.
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		<b>PAC-UP Getting feedback on your research site</b> Giving a chalk talk for a faculty	

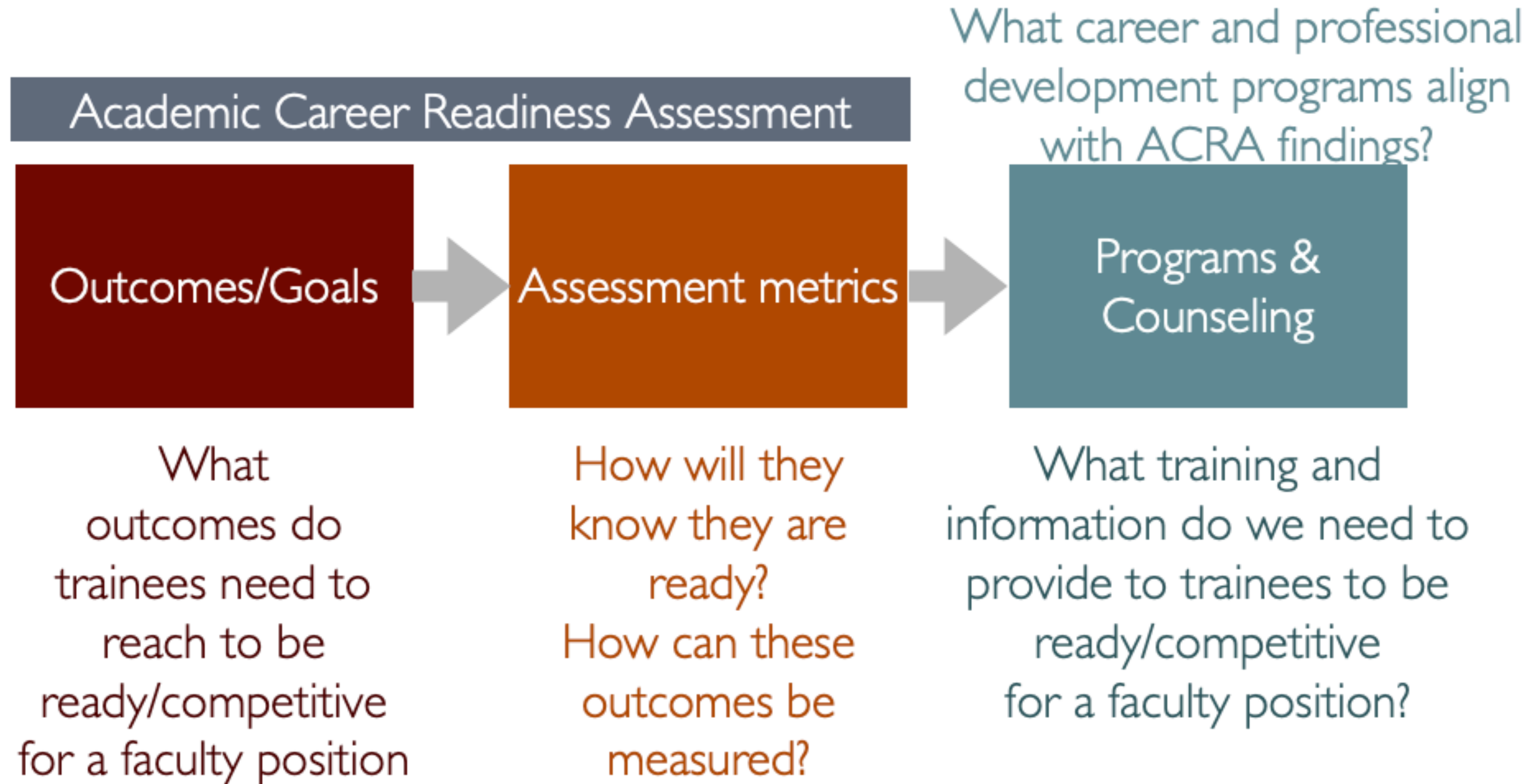
Copyright 2019 Laurence Clement, Office of Career and Professional Development

How we use ACRA



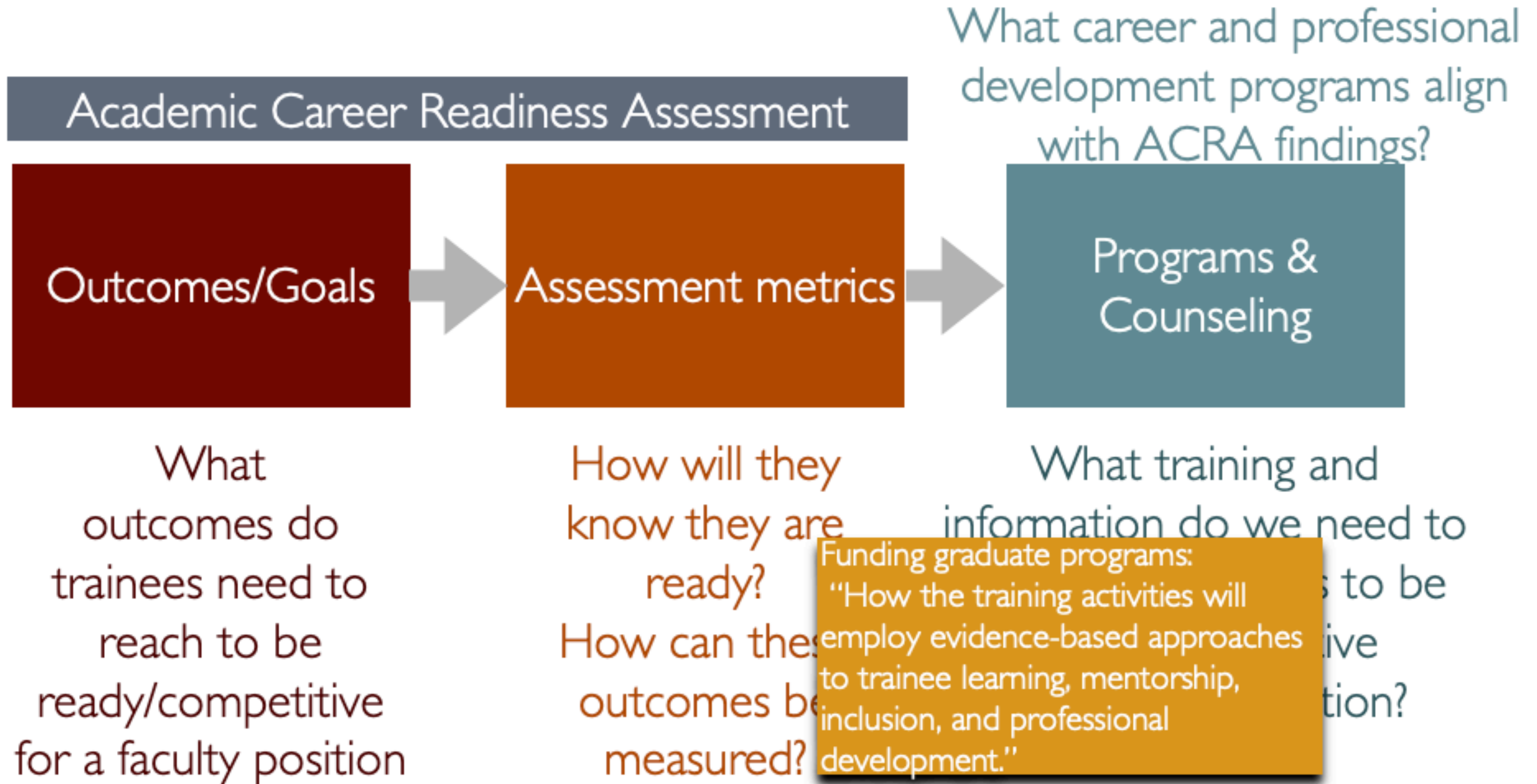
How you could use ACRA

# Evidence-based practice: Backward Designing Interventions



G. Wiggins (2005)

# Evidence-based practice: Backward Designing Interventions





# Mapping career education curriculum to ACRA qualifications

Qualification	Teaching Experience	Pedagogical Practices	Ability to Serve a Diverse Student Population	Recommendations	Inclusion of Undergraduate Research Experiences in Research Plan	Experience Conducting Research with Students
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Trainees can use these training goals to design a **training plan** & have **career conversations** with their mentors

# Mapping career education curriculum to ACRA qualifications

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Trainees can use these programs to build the skills they need towards their **training goals**

# A little bit more about the Academic Career programs at OCPD

Qualification	Teaching Experience	Pedagogical Practices	Ability to Serve a Diverse Student Population	Recommendations	Inclusion of Undergraduate Research Experiences in Research Plan	Experience Conducting Research with Students
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# A little bit more about the Academic Career programs at OCPD

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<p>OCPD programs for academic-bound trainees are called</p> <p><b>“UP”</b></p> <p>for</p> <p><b>Upcoming Professors</b></p>						
Qualification						
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# A little bit more about the Academic Career programs at OCPD

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STEP-UP Series

Science Teaching Effectiveness Program

Introduction to Pedagogy Course  
(GRAD 302, Spring quarter)

USF-UCSF Teaching Residency  
CCSF-UCSF Teaching Opportunity

Science Education Research Journal Club

We teach trainees how to support diversity in the classroom through evidence-based practices.

*"I cannot stress enough how going through STEP-UP has really made me so competitive in the academic job market. The types of conversations I am able to have with faculty and knowledge of so many active learning strategies has really served me well."*

# A little bit more about the Academic Career programs at OCPD

## TRAIN-UP Series

### TrainResearchers and Interns

Introduction to Mentoring Program  
(4 workshops, Summer and Winter quarters)

UCSF-CCSF Inclusive Mentoring Fellows  
(new, Spring and Fall 2020)  
NSF-funded

Mentoring Workshops  
(TRAIN-UP applied)

#### Ability to Serve a Diverse Student Population

Trainee demonstrates the sensitivity, respect for individuals of all backgrounds, and the interpersonal skills to interact with them.

Trainee has immersed self in a diverse community, or has mentored, advised or taught diverse populations of students.

#### Inclusion of Undergraduate Research Experiences in Research Plan

Research plan is specifically tailored to the institution's undergraduate and/or Master's population.

Trainee is able to propose projects of different calibers for different student populations.

#### Experience Conducting Research with Students

Trainee can articulate a scientific mentoring philosophy that meets the needs of the non-PhD student population served by this institution.

Trainee has experience conducting research with non-PhD students

TRAIN-UP  
CCSF-UCSF Mentoring Partnership  
career.ucsf.edu/NSFATE2018

TRAIN-UP  
Introduction to Mentoring Course  
career.ucsf.edu/  
TRAIN-UP-course

TRAIN-UP  
CCSF-UCSF Mentoring Partnership



We teach trainees how to be inclusive research mentors and manage for productivity and well-being of their research team.

# A little bit more about the Academic Career programs at OCPD

## PAC-UP Series

## Preparing for an Academic Career

Exploring Faculty Careers workshop  
(for early graduate students, introduces ACRA)

Preparing for an Academic Career course  
***Developing an independent research program***  
(new: GRAD 201, Winter quarter)

Applying, Interviewing and Negotiating positions  
(6+ workshops, Summer-Fall)

We ***supplement***  
career and  
professional  
development  
for faculty careers  
using ACRA-based  
materials.

Qualification	Publications, Scholarship	Research Vision & Strategy	Funding Plan	Research Independence	Research Feasibility with Available Resources	Verbal Communication of Research
Level of training required (majority institutions)	Trainee has produced first author papers during postdoc and PhD (regardless of impact)	Research program is exciting with a clear direction and includes explicit, feasible steps to attain this direction over the first couple of years	Trainee can suggest specific funding agencies and program names to fund proposed research program.	Trainee has the technical expertise to run their proposed research program independently.	Research program is feasible in the institution's research and geographic environment, which includes some minor constraints.	Trainee can present science clearly and effectively and can spark the interest of scientists outside of subfield and non-PhD students.
Additional level of training required (more demanding positions)	Trainee has produced first author papers during postdoc and PhD, with at least one paper contributing significantly to the field .	There is an interesting, broad, research question that fills gaps in the field and provides direction for the next 5 to 10 years. The question is broken down into smaller, feasible projects that use appropriate methods.		Trainee shows ability to lead a research program, by developing own ideas and new collaborations independently. (& evidence of independence through advisor's recommendation letter.)	Research plan is tailored to the non-R1 institution's highly limited resources.	
OCPD Programs	<b>PAC-UP</b> Applying for faculty positions <a href="https://career.ucsf.edu/pac-up-events">https://career.ucsf.edu/pac-up-events</a>	<b>PAC-UP</b> Preparing for an Academic Career Course <i>Developing an independent research program (GRAD 201)</i>		<b>PAC-UP</b> Applying for faculty positions <a href="https://career.ucsf.edu/pac-up-events">https://career.ucsf.edu/pac-up-events</a>		<b>PAC-UP</b> The job talk for a faculty position at a PUI



# Exploring and Preparing for Faculty Careers

What are the expectations for graduate and postdoctoral training?  
What skills do you need to get a faculty position?

Laurence Clement, PhD  
Director, Research in Career Education  
Program Director, Academic Career Development  
University of California, San Francisco  
Office of Career and Professional Development

UCSF Office of Career & Professional Development  
Student Academic Affairs

Developed by: Laurence Clement, Jennie Dorman,  
career.ucsf.edu  
Funded by: Burroughs Wellcome Fund

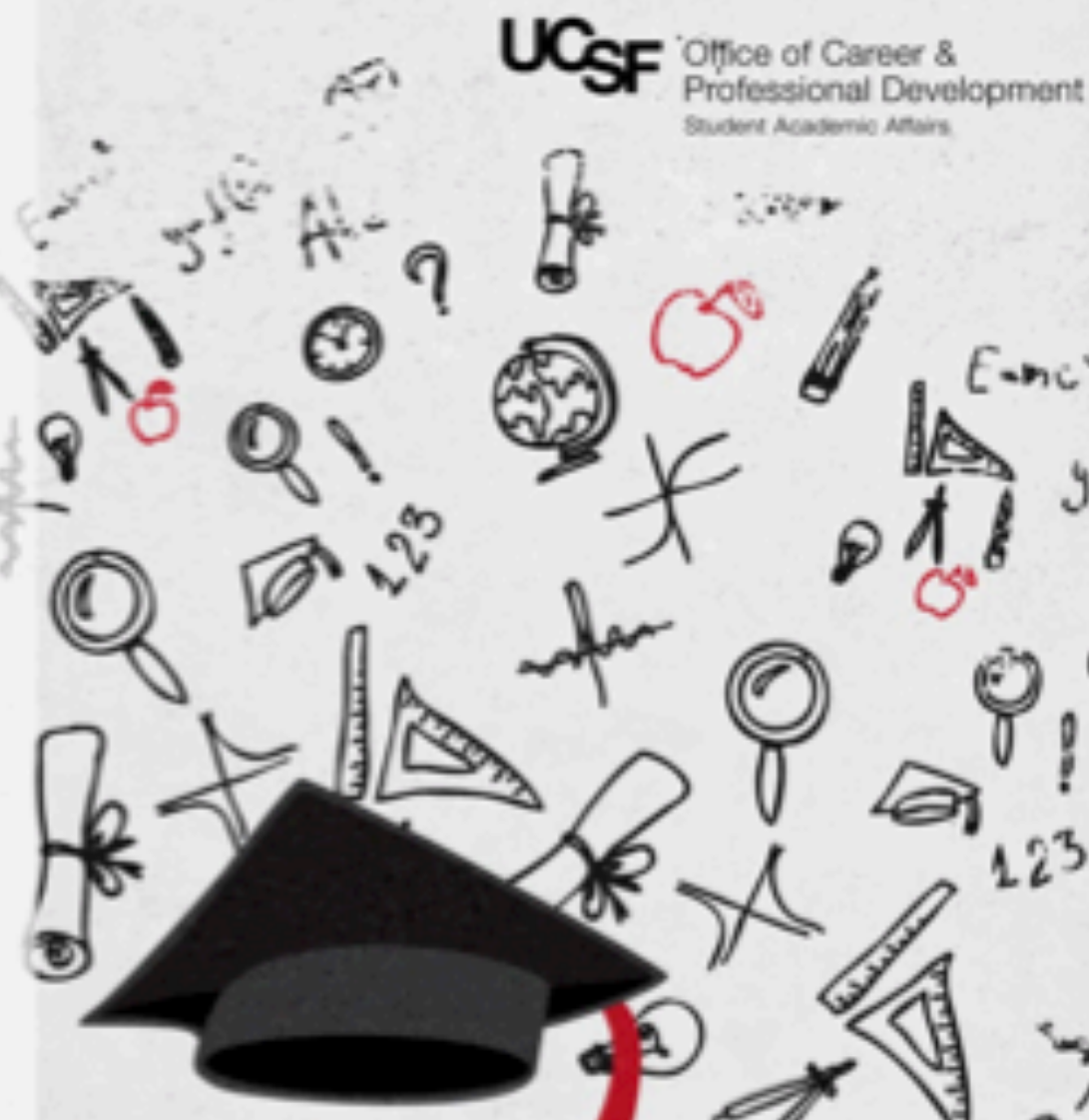


# Applying to Faculty Positions

How to strategically position yourself as a competitive candidate for faculty positions

Didn't complete the survey yet?  
Do it now! Check your email or use:  
[bit.ly/PACUP19-A](https://bit.ly/PACUP19-A)

Laurence Clement, PhD  
Director, Research in Career Education  
Program Director, Academic Career Development  
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Funded by: Burroughs Wellcome Fund



UCSF Office of Career & Professional Development  
Student Academic Affairs

# Getting Feedback on Your Application Materials

[bit.ly/ACRAfeedback](https://bit.ly/ACRAfeedback)

Laurence Clement, PhD  
Director, Research in Career Education  
Program Director, Academic Career Development  
University of California, San Francisco  
Office of Career and Professional Development  
career.ucsf.edu  
Funded by: Burroughs Wellcome Fund



UCSF Office of Career & Professional Development  
Student Academic Affairs

# Getting Feedback on your Research Statement

Laurence Clement, PhD  
Director, Research in Career Education  
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UCSF Office of Career & Professional Development  
Student Academic Affairs

# Getting Feedback on your Teaching Statement

Laurence Clement, PhD  
Director, Research in Career Education  
Program Director, Academic Career Development  
University of California, San Francisco  
Office of Career and Professional Development  
career.ucsf.edu @LaurenceEdu @UCSFOPD



Use a header so readers can quickly situate you. It is common for trainees to use the institution's header for faculty applications.

**Laurence Clement, PhD**  
 Department of Physiology and Cell Biology  
 Center for Cell Signaling  
 University of California, San Francisco  
 San Francisco, CA 94143  
 Phone: (415) 502-3097  
 Laurence.clement@ucsf.edu

Make sure your contact info is listed on the first page

Department of Biology  
 University of California, Los Angeles  
 Biological Sciences Building  
 1200 Main Way, Los Angeles, CA 90095

One of the ways to show fit for a position is to address the requirements of the job description at the beginning of the Cover Letter, and to use similar key words. This CL would be a nice fit for a position that requires the use of innovative methodologies to address current research questions in cancer biology. It would also address the need for a strong research vision, since the vision is listed first, and for a collaborative approach.

Dear Professor Rabu,

August 19, 2015

Indicate which position you are applying for

I am writing to apply for the Assistant Professor position (Job ID#13456) in the Department of Biology at University of California, Los Angeles. I am currently a postdoctoral scholar working with Dr. Ju Cheng in the Department of Physiology and Cell Biology in the Center of Cell Signaling at the University of California San Francisco. My research focuses on the role of protein XYZ in the development of pancreatic cancer, and involves the use of a novel biological assay, which I developed at UCSF. I am enthusiastic about contributing to your growing and innovative department.

Reputation:  
Advisor & institution

Fit

Pancreatic adenocarcinoma accounts for about 85% of pancreatic cancer cases and, while survival rates have been improving in the last few decades, the prognosis for patients is still pessimistic. My research goals are to continue to elucidate the role of protein XYZ in diseases like pancreatic cancer and to further develop *in vivo* assays that could be used in clinical settings to help with early detection of such diseases. Particularly, I will continue my collaboration with Dr. Brown and Dr. Johnson at Harvard Medical School to explore the application of a novel detection method in certain forms of cancer, including pancreatic cancer.

Fundability:  
Clear Vision

Reputation:  
Collaborators

Productivity: findings,  
publications, patents

I developed this novel approach to measuring phosphorylation levels of protein XYZ *in vivo* during my postdoctoral training in Dr. Cheng's lab. My work resulted in a manuscript, which is currently under revision, and a patent, which is pending. For this work, I received a Travel Award from the American Biological Society and co-authored a grant with Dr. Cheng and Dr. Brown funded by the Next Science Fund.

Fundability:  
Past funding

Format: with hundreds of applications to read, faculty will need answers to their questions in the first paragraphs of the Cover Letter

My research goal is also to identify the downstream signaling cascade of protein XYZ, which will allow us to further elucidate the mechanisms involved in the PQR process. Because XYZ is involved in many diseases, and is a marker for some types of cancers, this result could have broad biomedical impacts. To achieve this goal, I plan to use a combination of molecular, cellular and physiological methods in the VETA organism model.

Fundability:  
Clear Vision

As a postdoctoral scholar, I used similar approaches to demonstrate that the PQR mechanism depended on the phosphorylation of protein XYZ (Clement et al., Nature, 2015). This work was funded by a Myriam Lee Postdoctoral Fellow award and resulted in a manuscript, which is in its last stage of review in JBC. I believe that this project would benefit from being further developed in your department, and can foresee potential collaborations with colleagues working on the VETA model, or on the HI signaling pathway.

Productivity: findings,  
publications

Fundability:  
Past funding

Fit

Pages get lost: indicate total number of pages

# ACRA-related materials on our website

## RT ACRA checklist: Can you find this information in the Research Statement?

Feasibility	
Can this project be executed with limited resources? Does the candidate signal they understand the resource constraints of RT institutions?	
Communication of research	
Is the research plan understandable by a non-expert faculty from the same department? Will undergrads find it exciting?	
Inclusion of undergraduates	
Can undergrads conduct this research with limited knowledge and time? What will they learn from working on these projects?	
Mentoring experience	
Does the candidate know how to work with undergrads in the lab?	
Can they serve the needs of a diverse student population?	
Fit	
Does it look like this application is a backup plan for the candidate (ie does it look too much like a R research statement)?	

## R ACRA checklist: Can you find this information in the CV or Cover Letter?

Publications: Productivity & Impact	
Candidate has produced first author papers during postdoc and PhD, with at least one paper contributing significantly to the field.	
(+) Has a Cell, Nature, Science paper	
Funding Plan	
Proposed research program is ambitious and impactful enough to be funded by an R01 grant.	
Fit for position	
Research fits the needs of the department	
(+) Potential synergies with others in department	
Research program	
1. Vision & Strategy	
Research program is exciting, with a clear direction	
(+) Interesting, broad, research question that fills important gaps in the field and provides direction for the next 5 to 10 years.	
2. Independence	
Candidate shows ability lead a research program, by developing own ideas and new collaborations independently.	
(+) Candidate's proposed research program does not appear to be in competition with their current advisor's.	

# A little bit more about our programs

## Manage-Up Series

**Manage-Up for Third Year students**  
(Having a career conversation with your PI,  
Managing your relationship with your research mentor,  
Identifying and managing your mentorship team)

**Manage-Up for Applying to Positions**  
(Strengthening your candidacy,  
Handling Q&A,  
Interviewing while pregnant,  
Interviewing to find if a place is the right fit)

### Recommendations

Enthusiastic and personalized recommendations from both PD and PhD advisors.

Letters from other respected scientists who are well known by the search committee AND who know the candidate well.

### MANAGE-UP

[career.ucsf.edu/  
ManageUp](http://career.ucsf.edu/ManageUp)

We teach trainees to assess and navigate any professional relationship and environment, for improved productivity and well-being.

# Agenda

ACRA  
Academic Career Readiness Assessment

Winner of the First Prize 2019 AAMC Innovations in Research and Research Education Award

Clarifying Training Expectations for Future Faculty in the Life Sciences

Laurence Clement, PhD  
Jennie Dorman, PhD  
Rick McGee, PhD

Developed with the support of Burroughs Wellcome Fund

UCSF Office of Career and Professional Development  
Student Academic Affairs

What is ACRA

Qualification	Teaching Experience	Pedagogical Practices	Ability to Serve a Diverse Student Population
Level of training required (majority institutions)	Trainee has been fully responsible for organizing and teaching a course.	Trainee is familiar with the evidence supporting the use of active learning strategies in the classroom.	Trainee demonstrates the sensitivity, respect for individuals of all backgrounds, and the interpersonal skills to interact with them.
Additional level of training required (more demanding positions)	Trainee has been fully responsible for organizing and teaching a variety of courses with undergraduate students.	Trainee demonstrates that they can use active learning strategies effectively in the classroom, reflects on own teaching effectiveness and uses an iterative process to teaching to improve outcomes.	Trainee has immersed and/or mentored, advised or taught diverse populations of students.
OCPO Programs	STEP-UP Introduction to Pedagogy Course career.ucsf.edu/step-up-course (GRAD 300)		
	STEP-UP USF-UCSF Teaching Residency career.ucsf.edu/step-up-teaching-residencies-usf	STEP-UP CCSF-UCSF Teaching Residency career.ucsf.edu/step-up-teaching-residencies-ucsf	TRAIN-UP CCSF-UCSF Mentoring Partnership career.ucsf.edu/HGFATEC/18
Qualification	Publications, Scholarship	Research Vision & Strategy	Funding Plan
Level of training required (majority institutions)	Trainee has produced first author papers during postdoc and PhD regardless of impact.	Research program is exciting with a clear direction and includes explicit, feasible steps to attain this direction over the first couple of years.	Trainee can suggest specific funding agencies and program names to fund proposed research program.
Additional level of training required (more demanding positions)	Trainee has produced first author papers during postdoc and PhD, with at least one paper contributing significantly to the field.	There is an interesting, broad, research question that fits gaps in the field and provides direction for the next 5 to 10 years. The question is broken down into smaller, feasible projects that use appropriate methods.	
OCPO Programs	PAC-UP Applying for faculty positions <a href="https://career.ucsf.edu/pac-up-events">https://career.ucsf.edu/pac-up-events</a>	PAC-UP Preparing for an Academic Career Developing an independent research program PAC-UP Getting feedback on your research site Giving a chalk talk for a faculty	

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How we use ACRA



How you could use ACRA

# Mapping our programs to ACRA qualifications

Qualification	Teaching Experience	Pedagogical Practices	Ability to Serve a Diverse Student Population	Recommendations	Inclusion of Undergraduate Research Experiences in Research Plan	Experience Conducting Research with Students
Level of training required (majority institutions)	Trainee has been fully responsible for organizing and teaching a course.	Trainee is familiar with the evidence supporting the use of active learning strategies in the classroom.	Trainee demonstrates the sensitivity, respect for individuals of all backgrounds, and the interpersonal skills to interact with them.	Enthusiastic and personalized recommendations from both PD and PhD advisors.	Research plan is specifically tailored to the institution's undergraduate and/or Master's population.	Trainee can articulate a scientific mentoring philosophy that meets the needs of the non-PhD student population served by this institution.
Additional level of training required (more demanding positions)	Trainee has been fully responsible for organizing and teaching a variety of courses with undergraduate students.	Trainee demonstrates that they can use active learning strategies effectively in the classroom, reflects on teaching effectiveness and uses an iterative process to teaching to improve curriculum.	Trainee has immersed self in a diverse community, or has mentored, advised or taught diverse populations of students.	Letters from other respected scientists who are well known by the search committee AND who know the candidate well.	Trainee is able to propose projects of different calibers for different student populations.	Trainee has experience conducting research with non-PhD students
OCPD Programs	<b>STEP-UP Introduction to Pedagogy Course</b> <a href="http://career.ucsf.edu/step-up-course">career.ucsf.edu/step-up-course</a> (GRAD 302)			<b>MANAGE-UP</b> <a href="http://career.ucsf.edu/ManageUp">career.ucsf.edu/ManageUp</a>	<b>TRAIN-UP Introduction to Mentoring Course</b> <a href="http://career.ucsf.edu/TRAIN-UP-course">career.ucsf.edu/TRAIN-UP-course</a>	
	<b>STEP-UP USF-UCSF Teaching Residency</b> <a href="http://career.ucsf.edu/step-up-teaching-residencies-usf">career.ucsf.edu/step-up-teaching-residencies-usf</a>	<b>STEP-UP CCSF-UCSF Teaching Residency</b> <a href="http://career.ucsf.edu/step-up-teaching-residencies-usf">career.ucsf.edu/step-up-teaching-residencies-usf</a>	<b>TRAIN-UP CCSF-UCSF Mentoring Partnership</b> <a href="http://career.ucsf.edu/NSFATE2018">career.ucsf.edu/NSFATE2018</a>		<b>TRAIN-UP CCSF-UCSF Mentoring Partnership</b> <a href="http://career.ucsf.edu/NSFATE2018">career.ucsf.edu/NSFATE2018</a>	

Qualification	Publications, Scholarship	Research Vision & Strategy	Funding Plan
Level of training required (majority institutions)	Trainee has produced first author papers during postdoc and PhD (regardless of impact)	Research program is exciting with a clear direction and includes explicit, feasible steps to attain this direction over the first couple of years	Trainee can suggest specific funding agencies and program names to fund proposed research program.
Additional level of training required (more demanding positions)	Trainee has produced first author papers during postdoc and PhD, with at least one paper contributing significantly to the field .	There is an interesting, broad, research question that fills gaps in the field and provides direction for the next 5 to 10 years. The question is broken down into smaller, feasible projects that use appropriate methods.	
OCPD Programs	<b>PAC-UP Applying for faculty positions</b> <a href="https://career.ucsf.edu/pac-up-events">https://career.ucsf.edu/pac-up-events</a>	<b>PAC-UP Preparing for an Academic Career</b> <i>Developing an independent research program</i> <b>PAC-UP Getting feedback on your research statement</b> <b>Giving a chalk talk for a faculty position</b>	

Mentors can use this language to **set expectations** with their trainees.

# Mapping our programs to ACRA qualifications

Qualification	Teaching Experience	Pedagogical Practices	Ability to Serve a Diverse Student Population	Recommendations	Inclusion of Undergraduate Research Experiences in Research Plan	Experience Conducting Research with Students
Level of training required (majority institutions)	Trainee has been fully responsible for organizing and teaching a course.	Trainee is familiar with the evidence supporting the use of active learning strategies in the classroom.	Trainee demonstrates the sensitivity, respect for individuals of all backgrounds, and the interpersonal skills to interact with them.	Enthusiastic and personalized recommendations from both PD and PhD advisors.	Research plan is specifically tailored to the institution's undergraduate and/or Master's population.	Trainee can articulate a scientific mentoring philosophy that meets the needs of the non-PhD student population served by this institution.
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OCPD Programs	<b>STEP-UP Introduction to Pedagogy Course</b> <a href="http://career.ucsf.edu/step-up-course">career.ucsf.edu/step-up-course</a> (GRAD 302)			<b>MANAGE-UP</b> <a href="http://career.ucsf.edu/ManageUp">career.ucsf.edu/ManageUp</a>	<b>TRAIN-UP Introduction to Mentoring Course</b> <a href="http://career.ucsf.edu/TRAIN-UP-course">career.ucsf.edu/TRAIN-UP-course</a>	<b>TRAIN-UP CCSF-UCSF Mentoring Partnership</b> <a href="http://career.ucsf.edu/NSFATE2018">career.ucsf.edu/NSFATE2018</a>
	<b>STEP-UP USF-UCSF Teaching Residency</b> <a href="http://career.ucsf.edu/step-up-teaching-residencies-usf">career.ucsf.edu/step-up-teaching-residencies-usf</a>	<b>STEP-UP CCSF-UCSF Teaching Residency</b> <a href="http://career.ucsf.edu/step-up-teaching-residencies-usf">career.ucsf.edu/step-up-teaching-residencies-usf</a>	<b>TRAIN-UP CCSF-UCSF Mentoring Partnership</b> <a href="http://career.ucsf.edu/NSFATE2018">career.ucsf.edu/NSFATE2018</a>			

Qualification	Publications, Scholarship	Research Vision & Strategy	Funding Plan
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OCPD Programs	<b>PAC-UP Applying for faculty positions</b> <a href="https://career.ucsf.edu/pac-up-events">https://career.ucsf.edu/pac-up-events</a>	<b>PAC-UP Preparing for an Academic Career</b> <i>Developing an independent research program</i>	<b>PAC-UP Getting feedback on your research statement</b> <b>Giving a chalk talk for a faculty position</b>

Mentors can use this language to **provide specific feedback** on how **performance and behavior** meet these success metrics, or don't.

# Setting clear expectations is one of many inclusive practices for mentors

Mitigate bias in hiring/selecting

Set clear expectations

Evaluate progress systematically

Provide equitable access to resources and support

Provide regular, actionable feedback

Be transparent about rewards and consequences

Manage conflict (culture, values and behaviors)

Create an inclusive culture that takes into account work styles and learning styles, cultural backgrounds, lifestyle and responsibilities, cultural and social capital.

TRAIN-UP Series

TrainResearchers and Interns

# Setting clear expectations is one of many inclusive practices for mentors

Mitigate bias in hiring/selecting

**Set clear expectations**

Evaluate progress systematically

Provide equitable access to resources and support

Provide regular, actionable feedback

Be transparent about rewards and consequences

Manage conflict (culture, values and behaviors)

Create an inclusive culture that takes into account work styles and learning styles, cultural backgrounds, lifestyle and responsibilities, cultural and social capital.



# There are different types of training expectations for trainees and their mentors

Role	Is responsible for...
The traditional mentor (advisor)	Career development*
	Psychological support*

# There are different types of training expectations for trainees and their mentors

Role**	Is responsible for...
The traditional mentor (advisor)	Career development
	Psychological support
The educator (trainer)	Scientific knowledge
	Technical skills
	Critical and analytical thinking
	Identification of creative projects
The supervisor (manager)	Performance
	Behavior
	Productivity

\*\*Laurence Clement, Karen Leung, James Lewis and Naledi Saul, 2016

# There are different types of training expectations for trainees and their mentors

Role**	Is responsible for...	When?
The traditional mentor (advisor)	<ul style="list-style-type: none"><li>Career development</li><li>Psychological support</li></ul>	When you are expected to support a mentee to attain their career goal or navigate professional challenges.
The educator (trainer)	<ul style="list-style-type: none"><li>Scientific knowledge</li><li>Technical skills</li><li>Critical and analytical thinking</li><li>Identification of creative projects</li></ul>	When your mentee is expected to learn new knowledge and skills for which you have expertise during their time with you, as part of an educational or training program.
The supervisor (manager)	<ul style="list-style-type: none"><li>Performance</li><li>Behavior</li><li>Productivity</li></ul>	When the performance, behavior and productivity of the mentee impacts your success or that of someone on your team, and you have the authority to hire, fire, pay, and recommend someone for promotion.

\*\*Laurence Clement, Karen Leung, James Lewis and Naledi Saul, 2016

# There are different types of training expectations for trainees and their mentors

Role**	Is responsible for...	Examples of expectations
The traditional mentor (advisor)	Career development Psychological support	<ul style="list-style-type: none"><li>• “Engage with me in a specific type of way when seeking career development support</li><li>• Communicate your expectations and your needs to me in a particular way</li><li>• Follow through on my recommendations”</li></ul>
The educator (trainer)	Scientific knowledge Technical skills Critical and analytical thinking Identification of creative projects	<ul style="list-style-type: none"><li>• “Develop this expert-level scientific knowledge</li><li>• Develop these higher order thinking skills</li><li>• Master these basic and these novel techniques</li><li>• Develop creative ideas to address important issues in our field”</li></ul>
The supervisor (manager)	Performance Behavior Productivity	<ul style="list-style-type: none"><li>• “Perform at this quality standard and at this minimum productivity level</li><li>• Engage in these behaviors, which support my mission and my goals for the lab</li><li>• Manage projects independently and according to bioethical guidelines”</li></ul>

\*\*Laurence Clement, Karen Leung, James Lewis and Naledi Saul, 2016

# There are different types of training expectations for trainees and their mentors

*“As a mentor, my role is to help you achieve your career goals to the best of my capacity. For a position at a PUI, you will need to develop pedagogical practices - this not in my area of expertise at all. The OCPD offers these services - check them out and then tell me what you will need to do to get to these outcomes so we can discuss how to get you there. I can also connect you with a lab buddy who is at SFSU.”*

*“The first step in developing a research vision is going to be for you to develop the ability to identify gaps in the field. What this means is that you will need to identify areas of research that have not been explored in our field, questions that may not have been asked yet or have not been fully answered. For example, (labmate name) is working on ..., which addresses an important question in our field: ... The first thing you will need to learn to do will be to review the literature and identify research questions.”*

*“My goal is for you to produce enough data for X papers in your first Y years. This means that you will need to have completed A, B, and C experiments by December of next year. Let’s talk together through what it will take to get these experiments completed in this time, and what you will need from me in terms of support.”*

## Pedagogical Practices

Trainee is familiar with the evidence supporting the use of active learning strategies in the classroom.

Trainee demonstrates that they can use active learning strategies effectively in the classroom, reflects on own teaching effectiveness and uses an iterative process to teaching to improve curriculum.

## Research Vision & Strategy

Research program is exciting with a clear direction and includes explicit, feasible steps to attain this direction over the first couple of years

There is an interesting, broad, research question that fills gaps in the field and provides direction for the next 5 to 10 years. The question is broken down into smaller, feasible projects that use appropriate methods.

## Publications, Scholarship

Trainee has produced first author papers during postdoc and PhD (regardless of impact)

Trainee has produced first author papers during postdoc and PhD, with at least one paper contributing significantly to the field .

## Examples of expectations

- Advising/Mentoring:
- “Engage with me in a specific type of way when seeking career development support
- Communicate your expectations and your needs to me in a particular way
- Follow through on my recommendations”

- Training/Educating:
- “Develop this expert-level scientific knowledge
- Develop these higher order thinking skills
- Master these basic and these novel techniques
- Develop creative ideas to address important issues in our field”

- Supervising/Managing:
- “Perform at this quality standard and at this minimum productivity level
- Engage in these behaviors, which support my mission and my goals for the lab
- Manage projects independently and according to biosafety guidelines”

# There are different types of training expectations for trainees and their mentors

Role	Is responsible for...
The traditional mentor (advisor)	Career development
	Psychological support
The educator (trainer)	Scientific knowledge
	Technical skills
	Critical and analytical thinking
	Identification of creative projects
The supervisor (manager)	Performance
	Behavior
	Productivity

There are potential role conflicts between these roles.

# There are different types of training expectations for trainees and their mentors

Role	Is responsible for...
The traditional mentor (advisor)	Career development
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The educator (trainer)	Scientific knowledge
	Technical skills
	Critical and analytical thinking
	Identification of creative projects
The supervisor (manager)	Performance
	Behavior
	Productivity

There are potential role conflicts between these roles.

Finish the Survey  
Tell us more



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@Laurenceedu

More on this program:  
[mentoring.ucsf.edu](http://mentoring.ucsf.edu)