

Tracking Career Outcomes - Graduate Degree Recipients

Council of Graduate Schools – December 2, 2010

Patricia Calarco, Graduate Dean, UCSF

Two institutions invited to initiate a discussion on career outcomes of academic graduates, primarily PhD.

- Tufts University
- University of California, San Francisco

We will explore data on career outcomes, what the faculty think they know, and what the students actually want.

Discussion and Q & A with attendees.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO



UCSF – CAREER OUTCOMES

What career paths do students **take**?

What career paths do faculty **think** they take?

What career paths do students **want** to take?

LIMITED DATA ON FIRST PLACEMENT

110 BIOMEDICAL SCIENCES PhD 2000-2009

Postdoc/Research Fellows	53%
Resident/Intern Fellow	15%
Research Biotech	13%
Career lab scientist	4%
Business ancillary	5%
Other	4%
<i>Academic Positions (2000 – 2007)</i>	8%
	* * *
Cohort 2000-2002 had 3/27 in tenure track	11%

FACULTY “DATA” ON FIRST PLACEMENT

- ✘ T32 (training grant) data is variable
- ✘ General belief is ~90% go on to postdocs
- ✘ -----
- ✘ Majority of faculty are resistant to non-academic goals
- ✘ Thought leaders such as Bruce Alberts are strongly in favor of expanding career choices and their exploration while a student

WHAT CAREERS DO STUDENTS WANT?

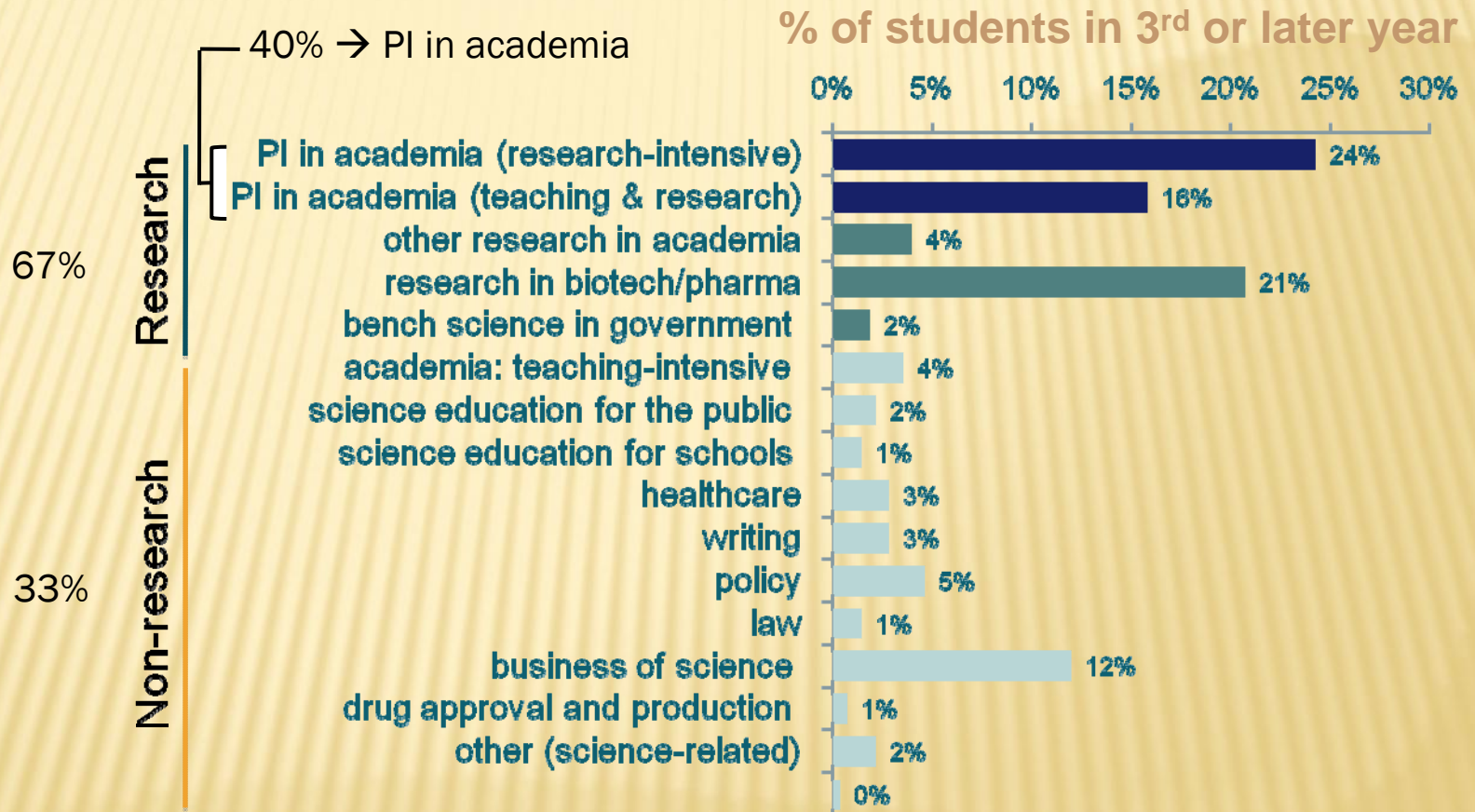
Survey of UCSF PhD students in life sciences 2008

62% response rate (n=470)

C.N. Fuhrmann*, D.G. Halme, P. O'Sullivan, B. Lindstaedt

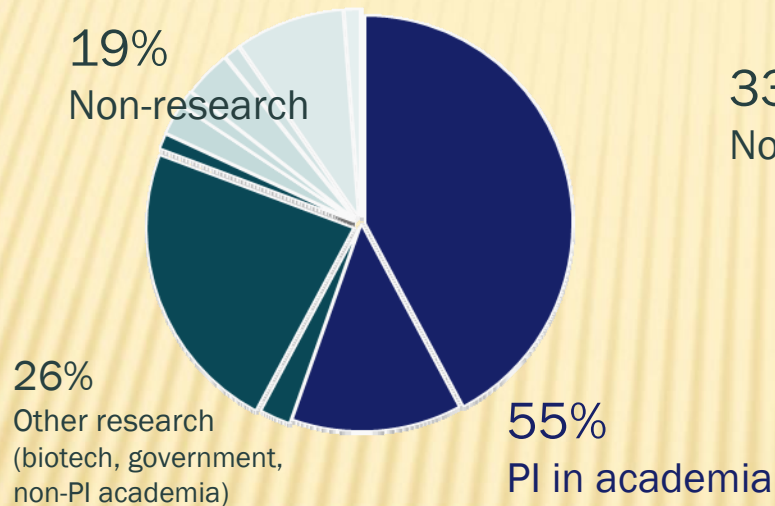
Details: cynthia.fuhrmann@ucsf.edu

If you had to choose now, what *one* career path would you choose?

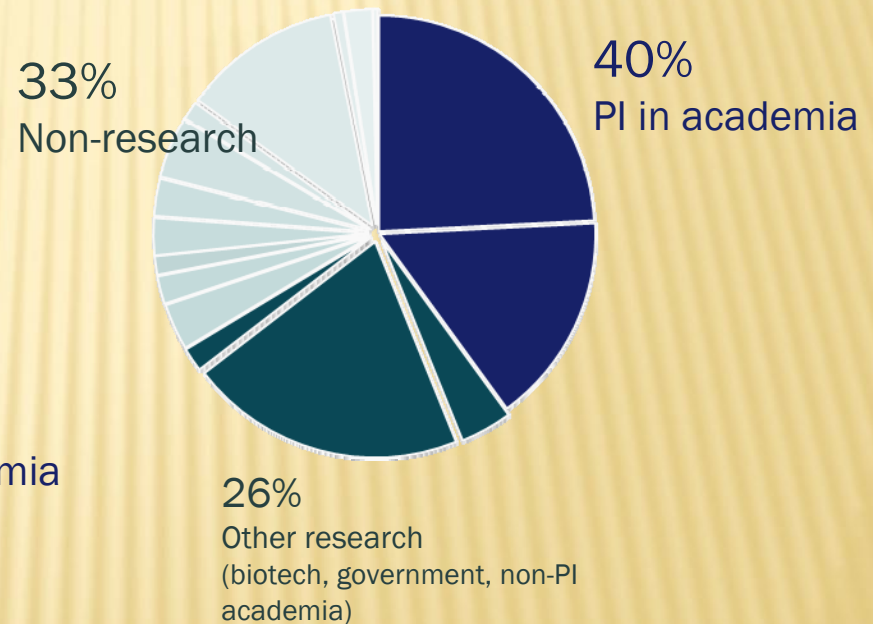


BY MIDPOINT IN TRAINING, STUDENTS DEMONSTRATE GREAT DIVERSITY IN CAREER PREFERENCES.

First year students



Third and later year students



Fuhrmann, Halme, O'Sullivan, Lindstaedt*

SUMMARY OF THE DATA...

- ✘ Graduate school *decreases confidence* in early career choice
- ✘ Career preferences shift during *first 3 years* of doctoral training (after beginning full-time research)
- ✘ By the time of graduation, *one-third of students* would choose a *non-research career path* (only 40% would choose a PI-in-academia path).

WHAT ARE UCSF'S RESPONSES?

Offer opportunities for the following:

- ✘ *Self-awareness* of skills, interests = IDP
- ✘ Understand *career options*
- ✘ Career planning *opportunities*
- ✘ *Networking* – create opportunities to seek mentors beyond academe
- ✘ Develop *transferable skills* (writing, communication, leadership skills)
- ✘ Internship *experience* in the desired path

ONE RESPONSE IS A PILOT PROGRAM



GSICE provides opportunities for UCSF graduate students to:

- Develop the professional skills necessary for non-academic careers
- Receive dedicated mentorship around pursuing and exploring non-traditional science careers
- Gain hands-on experience in appropriate career environments to determine where their skills and interests lie. Usually one quarter.

• *Contact is Alexandra.Schnoes@UCSF.edu*

GSICE STUDENT COHORT 2009-2010

GRADUATE PROGRAM DISTRIBUTION

<p>Industry</p> <p>3 Bioengineering; 1 Biomedical Sciences 1 Pharmaceutical Sciences & Pharmacogenomics 2 Tetrad*</p>	<p>Law</p> <p>1 Biophysics 1 Tetrad*</p>
<p>Business</p> <p>2 Bioengineering 2 Tetrad*</p>	<p>Science Policy, Communication & Education</p> <p>4 Tetrad*</p>

**Biochemistry, Cell Biology, Developmental Biology & Genetics*

GSICE INTERNSHIP SITES

<p>Industry</p> <p>Amyris LS9 Green Pacific Biologicals SRI International Illumina Novartis* Genentech*</p>	<p>Law</p> <p>Morrison & Foerster Fluidigm*</p>
<p>Business</p> <p>Burrill & Co.* iHub Deloitte Recap</p>	<p>Science Policy, Communication & Education</p> <p>BioCentury* KQED* UCSF SEP* UC Office of the President Chabot Space and Science Museum</p>

*Internship placements

SECOND RESPONSE

CENTER FOR BIOENTREPRENEURSHIP

- ✘ Courses and programs led by industry experts
- ✘ Educate students, postdocs, faculty in business skills
- ✘ Facilitate academia – industry interactions

BIOENTREPRENEURSHIP COURSES

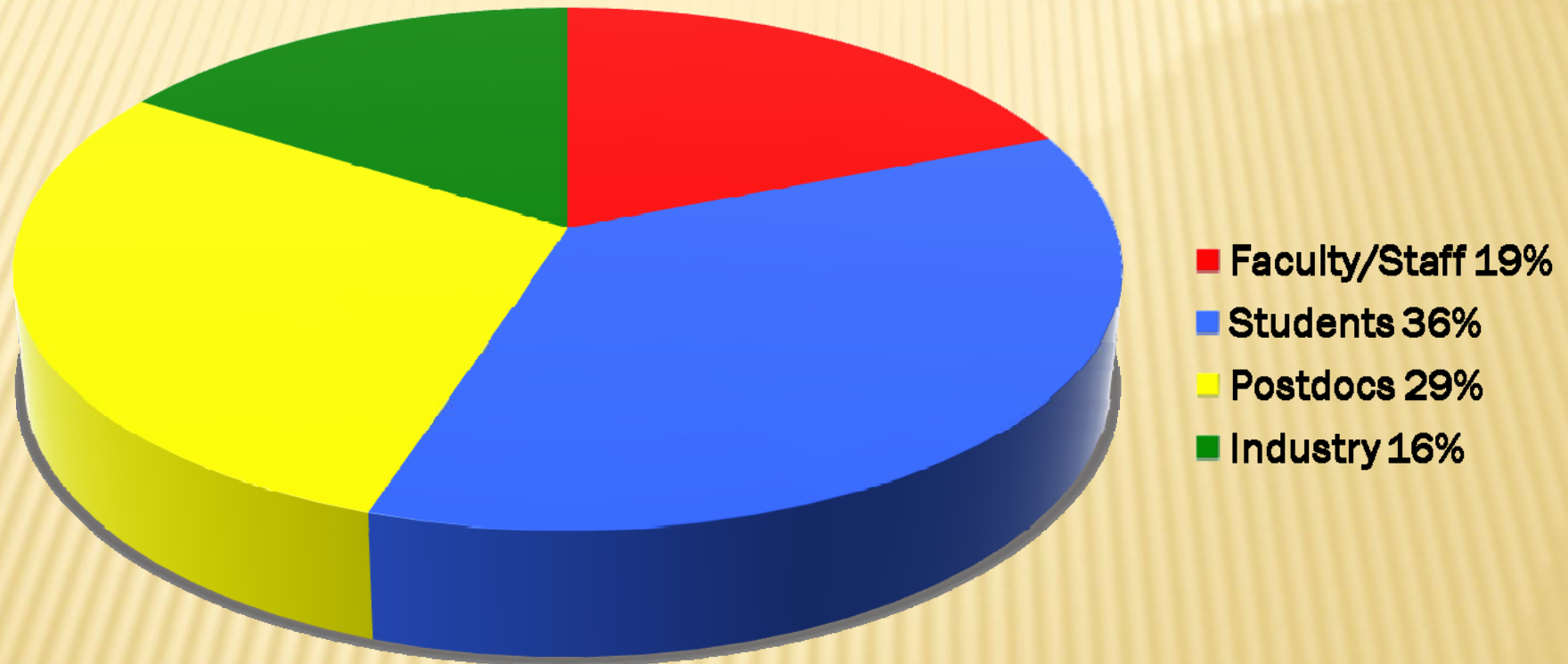
- ✘ Idea to IPO...and Beyond
- ✘ Drug Discovery...and Design
- ✘ Corporate Finance Survival Skills
- ✘ Intellectual Property...Life Sciences

SUCCESS METRICS

- ✘ Registrants in courses & programs ~1000 annual
- ✘ 62 industry people involved
- ✘ High evaluation marks (4.5/5.0)
- ✘ Five new companies started

PARTICIPANTS IN “IDEA TO IPO”

2000 - 2009



NEW KNOWLEDGE → NEW DESTINATIONS

