

Establishing a National Center for Advancing the Career Development of Scientists

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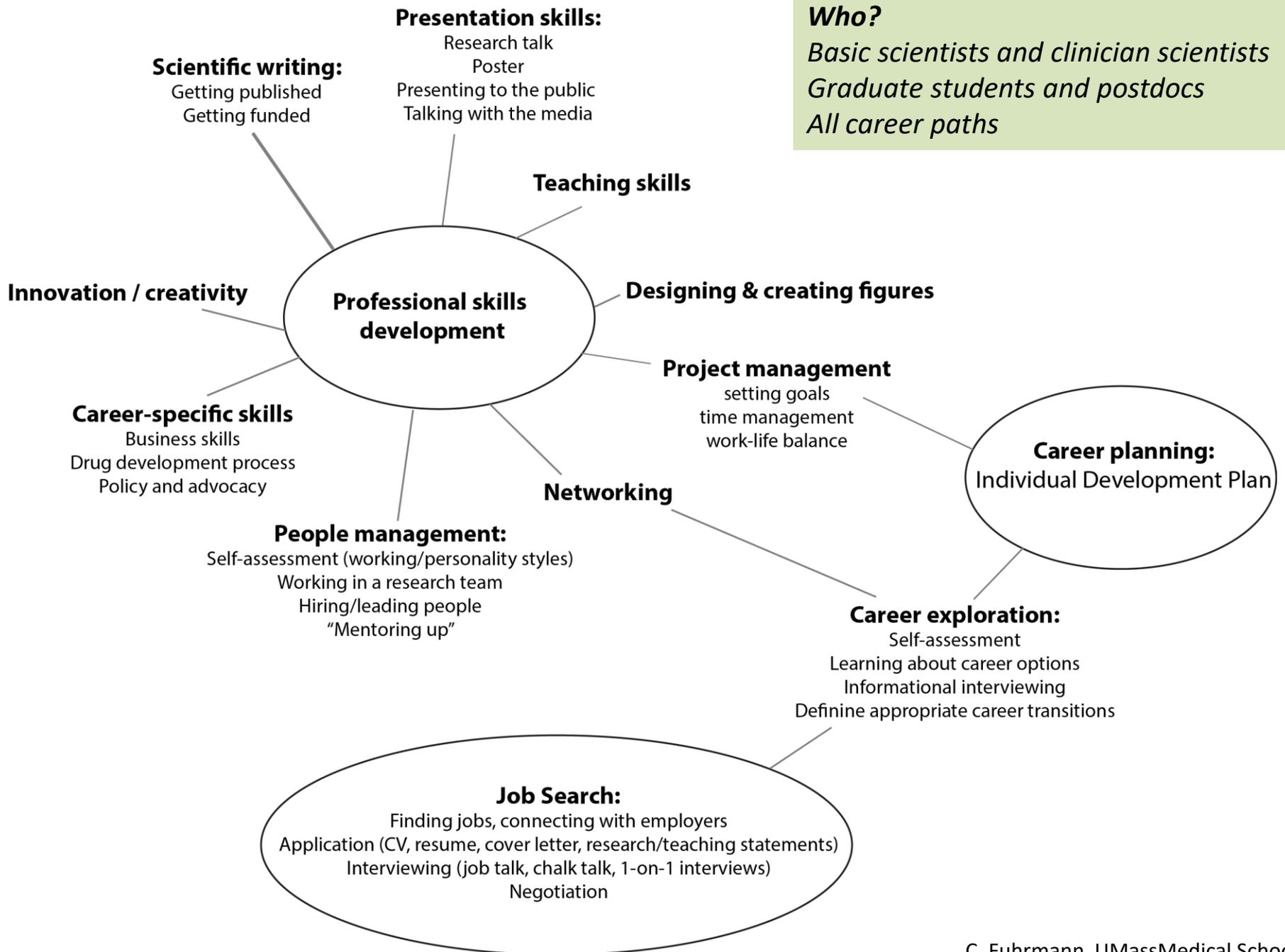
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Who?
Basic scientists and clinician scientists
Graduate students and postdocs
All career paths



ASBMB Summit on Sustaining the Biomedical Research Enterprise

- How do we make broad, high quality graduate and postdoctoral training universal?
- What are the barriers for universities in implementing professional development programs? How might we reduce those barriers?
- How can we promote research and the dissemination of evidence-based practices, making way for innovation rather than re-inventing the wheel?
- What stakeholders contribute to the professional development of scientists, and how might all join efforts for mutual benefit?

What is the landscape, and how has it changed in the last 5 years?



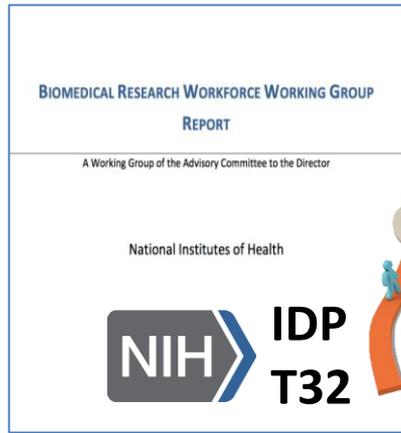
GCC

- GRADUATE CAREER CONSORTIUM -

(est. 1987)



What is the landscape, and how has it changed in the last 5 years?



2012

2013

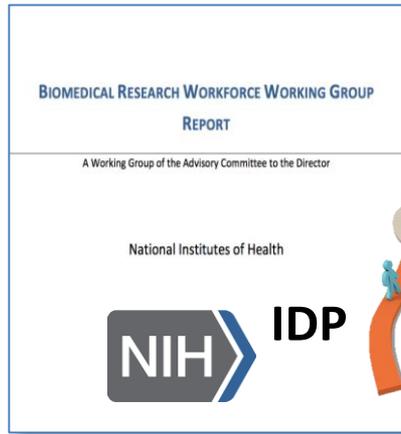
2014

2015

2016

2017

What is the landscape, and how has it changed in the last 5 years?



2012

2013

2014

2015

2016

2017

BURROUGHS
WELLCOME
FUND 

Career Guidance for
Trainees Award



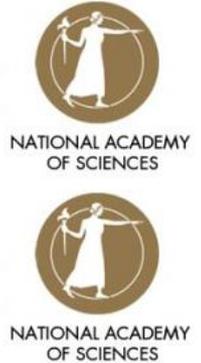
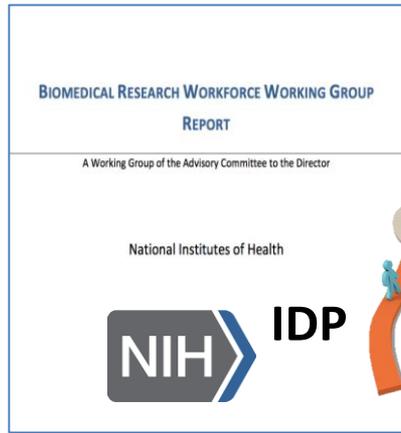
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Career Guidance for
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Future of
Research



What is the landscape, and how has it changed in the last 5 years?



Rapid expansion of career development has created a thirst for models

- Universities and other stakeholders rapidly embracing career development as part of the academic mission
- Programs launching or expanding
- PhD scientists moving into career development
- Opportunities and interest in rigorous evaluation & dissemination



~50% members in the field 0-4 years

30% GCC members come from a life sciences background

62% GCC members are PhD degree-holders

* 2017 GCC Member Survey
(n=242; 73% response rate)

No central practice of dissemination or evaluation

- Career development professionals disseminate by word-of-mouth and rarely publish
- What is available is difficult to find
- Replication is inefficient. Sharing slides or syllabus leaves out implementation strategies key to success
- Neither scientists nor career development professionals have training in evaluation or education research

Stakeholders have complementary expertise but work within different networks & cultures

- Scientific societies
- Professional associations with an emphasis on sharing practices in career development
- Advocacy organizations
- Policy-focused groups or organizations
- Universities or organizations representing universities
- University staff or administrators overseeing career development programs
- Faculty
- Graduate students or graduate student organizations
- Postdocs or postdoctoral associations
- Employers
- Researchers who study theories of student development, career decision making, and other related fields
- Private funders
- Government funding agencies
- Businesses or resources for PhD career development
- Science or science education journals

Our goals

Support **local and national efforts** to enhance career development programs

Develop communities and networks across stakeholders to draw on diverse areas of expertise

Develop and sustain a culture supportive of all career outcomes and proactive preparation for careers

Drive innovation and research in the field of PhD career development

National Center for Advancing the Career Development of Scientists



Existing models

| | Repository | Train-the-Trainer Workshops | Training Advisors | Ambassadors | Administration and Funding Models |
|--|------------|-----------------------------|-------------------|-------------|-----------------------------------|
| CBE-Life Sciences Education | X | | | | X |
| Alan Alda Center for Communicating Science | X | X | | X | X |
| Survival Skills and Ethics Course Train-the-Trainers | | X | | | X |
| Graduate Career Consortium (GCC) Train-the-Trainers Preconference workshop | | X | | | |
| NIH Office of Intramural Training and Education | | X | | | |
| Course Source | X | | | | X |
| MedEd Portal | X | | | X | X |
| SENCER | X | | | X | X |
| Council on Undergraduate Research (CUR) | X | | X | | X |
| POGIL Project (process oriented guided inquiry learning) | | X | X | | X |
| Genomics Education Partnership (GEP) | | X | | | |
| DOE faculty training | | X | | | |
| Versatile PhD | | | | | X |
| ASAP Bio | X | | | X | X |

Repository of Annotated Lesson Plans

- **Annotated**, complete lesson plans & materials
- **Standardized format** for annotation
- **Curated but inclusive**: both open solicitation and invitation
- **Community** postings
- Published by **collection**
- Editor-developed **guide** to collection
- **Flexible, modular**
- Intentional **diversity** (approaches used, type of setting, learner population, etc.)
- Paired with deep-dive **train-the-trainer workshop** & certified **training advisors**

Additional resources

- List of speakers (by topic, geographic region)
- Models for funding, structuring career development programs
- Resources to fuel innovation
- Resources for enhancing culture
- Links to key resources for trainees

These must ultimately be shaped by stakeholder needs and interests!

Ambassadors

- **Prominent leaders** in science, across stakeholder groups
- **Advocate for core principles** of the National Center
- **Build prestige and credibility** of the National Center
- **Leverage networks, connections, resources** to build new opportunities and collaborations for the National Center
- Role for **community advocates**

Advisory Board and Committees

- **Representation across stakeholder groups**
- **Leverage expertise** of stakeholder groups
 - In developing and leading the National Center
 - For National Center projects
 - Defining standards
 - Developing resources
 - Staying current
 - Policy and advocacy
- **Maintain credibility, sustainability** of the National Center
- **Leverage networks, connections, resources** to build new opportunities and collaborations for the National Center

Next step: Planning & Pilot Phase (18 months)

- Develop and initiate business plan for long-term sustainability
 - “Go public”
 - Broaden and deepen connections with stakeholders
 - Recruit and empower ambassadors and advocates
 - Establish an advisory board and committees
 - Define a blended funding model
- Develop and pilot core functions

National Center Transition Team

- Ryan Bixenmann, Michigan State University
- Cynthia Fuhrmann, UMass Medical School
- Louis Justement, Univ. Alabama Birmingham
- Bill Lindstaedt, UCSF
- Mary O'Riordan, University of Michigan
- Erica Siebrasse, Van Andel Institute
- Melanie Sinche, Jackson Labs
- Wes Sundquist, University of Utah
- Bruce Alberts, UCSF (advisor)



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