

Day 1

Communicating: Recognizing and Telling a Good Story

- Find commonality with your audience and connect with them on a personal level.
- Make the audience the hero or center of your story.
- Create credible, modest but impactful connections between solutions you offer and relevant needs for your audience.
- Identify the specific audiences before making a proposal - draw a line from your solution to their needs and/or wants, which can only be done when you know your audience well.

Leadership Wellness and Improvement in the Face of Change

- Learn the importance of personal health in promoting the health of others.
- Assess your own resilience and need for personal improvement.
- Create a personal vision by analyzing and prioritizing areas for personal improvement.
- Create an actionable personal improvement plan.

Implementation of Individual Development Plans

Create an Individual Development Plan (IDP) as a reflective process for trainees involving a purposeful self-assessment of skills and values that results in a living document with both short and long-term goals.

Strategies:

- Make it relevant and specific to scientific training.
- Introduce the IDP with an in-person workshop.
- Provide additional resources as needed.
- Get faculty buy-in.

Mentor Training for Trainees

- Teach trainees and principal investigators (PIs) to think broadly about mentoring relationships.
- Learn practices from other institutions that already provide training experiences, such as the NIH Office of Intramural Training and Education.
- Incorporate different approaches when teaching the material: lecture, reflective writing, case studies and discussion, and strategy discussions.

Research and Research Training: Missions in Need of Change?

Academic medical centers conducting biomedical research and research training are asking themselves if they need to recast their mission.

- Consider opportunities for cross-training PhDs with masters degrees and other clinical and professional degrees.
- Engage faculty in the process of change to accelerate discovery into clinical impact.
- Move faculty from recipients of news to agents of change.
- Embrace the full spectrum of research.

John Perkins Policy Session

The research community is facing changing demographics: there are four times as many PIs over 65 as under 36 and, as costs of research shift onto universities, its more difficult for institutions to support early career scientists.

2015 GREAT group/GRAND Professional Development Meeting
Baltimore, MD Sept 9-12

- Despite the problems that we are seeing, research is still an enormously successful system.
- The community must own up to the magnitude and urgency of the need to support young scientists.
- *Strategies:*
 - 21st Century Cures Act is a huge investment in research.
 - "Capstone award" and other programs to help career transitions.
 - Enhanced peer-review.

Exceptional Opportunities in Biomedical Research

The framework for the five-year NIH-wide strategic plan has been developed with extensive community input and will be released in December.

Opportunities:

- Big data: Big Data to Knowledge (BD2K) facilitates the broad use and sharing of large, complex biomedical data sets.
- Precision Medicine: integrating patient partnerships, electronic health records, mobile technologies, genomics, and data science. More than 1 million volunteers. Participants are involved in design and implementation; are able to share genomic data, lifestyle information, biological samples; and can choose how and when to participate.
- Evaluation of training programs: BEST initiative, BUILD, NRMN, CEC are unlike other programs because they are being evaluated in real time. There is a commitment to early stage investigators, there are new high risk/high reward opportunities, an early independence award program, and the NIH Director's New Innovator award.

Day 2

Through the Looking-Glass: Research Rigor and Transparency

Factors that impact rigor and transparency include the complexity of science, limitations in description of methods in published findings, insufficient structures or incentives for sharing of negative results, and publication bias among other factors.

- Bring trainees into the process of doing background research for grants.
- Learn from pharma because they have to be rigorous in order to be competitive.
- Institutions should assess their reward systems. The community must come together to find solutions for data sharing.

Preparing a Diverse Workforce: Identifying and Implementing Innovative Elements of Diversity Programs

Increasing diversity of the scientific workforce is a shared responsibility among institutions, NIH, and other partners.

- Facilitate opportunities for trainees to get teaching experiences and provide competitive funding for trainees to attend career development activities.
- Engage faculty leadership, seek partnerships, and use evidence-based research to design activities and programs.
- Establish a culture of research among undergraduates, engage current graduate students and postdoctoral scientists, build network and collaborations.

Partnerships and Engagement to Diversify Resources

To sustain a productive research enterprise, academic scientists must seek partnerships beyond the NIH, exploring current and future potential benefits from partnering with foundations and venture philanthropists.

Insights:

- Learn best practices from venture philanthropies and don't expect them to play by your rules.
- Scientists working on a foundation's project should communicate with the academic medical center's tech transfer offices to protect intellectual property.
- Train PhD students to communicate their research to different audiences.
- Partnering with patient advocacy groups:
 - Start with the relationship.
 - Demonstrate share progress.
 - Go beyond the standard funding mechanisms.
 - Encourage PIs to submit grants applications.
 - Leverage your research infrastructure and patient base.
 - Co-create a plan and an impactful program with patient advocacy groups.
 - Make the pitch with all your partners.

Tracking and Measuring Trainee Progress in Research Training and its Outcomes

Approaches to tracking research trainees are varied: data collection systems vary, automation and interoperability are primary technical challenges, career outcomes data are incomplete, postdoctoral researcher data are limited, and databases are used in multiple ways. See AAMC report on [Institutional Approaches to Tracking Research Trainee Information](#).

Solutions:

- Identify institutional champions that support tracking of research trainees.
- Engage in conversations with the alumni office regarding potential partnerships for tracking former trainees.
- Connect with trainees prior to them leaving the institution.

Scientists and Development Officers: Building the Partnership

Good relationships with donors are intentional and strategic. Connect with your development officer to identify: best person to connect with donor, the right time to ask for a donation, etc.

Strategies:

- Steward early gifts and demonstrate impact of investments.
- Keep it short and sweet. Communication must be clear, articulate, and concise.
- Demonstrate how your project advances donor's or funder's cause.
- Be persistent, thoughtful, maintain frequent contact, and be patient. Philanthropy is a result of relationships!
- Make the case that funds for graduate students actually go to investing in the future of research.

Day 3

Development of the Staff Scientist

Establishing a professional career track for "staff scientists" in academic research is being widely considered as a step in developing a research ecosystem that is more stable and sustainable.

Things to consider:

- Creating a greater number of compelling career choices in academia would provide an alternate mechanism for early career scientists to stay in the research workforce.
- Addressing questions of feasibility and expense for supporting a staff scientist track at an institution (suggestions were made for funding opportunities through a NIH Research Project Grant or Supplement Award, or from a private foundation).
- Building opportunities for recognition and advancement for staff scientists, such as an annual travel award.

Entrepreneurship

Successful institutions develop a culture that values practices and policies that enable discovery transfer while still allowing faculty and trainees to continue their academic mission successfully.

Strategies and recommendations:

- Make sure entrepreneurship education (entrepreneurship centers, classes, etc.) is in place to ensure faculty members are aware of the process, licensing pitfalls, etc.
- Streamline startup and licensing policies (Quick Start License, Carolina Express).
- Starting small is important and the best way to fund everything is to get a license.
- Putting the CEO in the same place as the company can prevent certain problems.
- Connect with your local entrepreneurial ecosystem.

Creating Positive Change at Your Institution

New strategies and tools can shift you and colleagues from a negative to positive mindset in the current research and research training environment.

Insights:

- Difficult choices can be made easier if there is a continuous cycle of trust and transparency.
- The ingredients for transformation are people, time, space, and dollars.
- Build mechanisms for success and fix or remove mechanisms that are unproductive.
- *Four tools for transformation:*
 - Shift your orientation to the future by learning from the past, listening generously, leading others, and asking questions.
 - Improve your presence through mindfulness meditation.
 - Focus on solutions.
 - End the "blame game."