Reconciling the cultures & career tracks of academia and industry

Richard T. Moxley, III, M.D.

NINDS Optimizing the Predictive Value of Preclinical Research

June 21st 2012

Career growth

Brief overview of current promotion criteria at University of Rochester Medical Center; examples include:

- Goals with recognized achievements in teaching and research (1-2+ grants, publications, lectures).
- Review periods based on 5 year intervals.

How can we revamp tenure guidelines to encourage validation studies?

- Establish goals and incentives for senior investigators to mentor, plan, and implement validation studies.
- Reward junior faculty who conduct validation experiments (amend promotion criteria to include goals to learn new techniques, to develop validation studies, & to publish).

➢ Obtain “buy in" of the Deans, department Chairs, and mentors for research who have "grown up in the hypothesis driven environment.

➢ Is it a “sea-change” or what are the optimal first steps to implement?

➢ ***What resources and incentives are required to achieve such change?***

Opportunities to build resources

Funding agencies

- support validation studies through education, guidelines, & grants;
- develop guidelines for study sections and ways to assess “innovation and impact”, gold standards of grant reviews;
- support registries and repositories -- vital to sharing of resources.

Journal editors

- Allow longer methods sections in published papers, provide more stringent reviews, and create more procedural or “methods” only journals.

Industry leaders

- Partner with academia more often in pre-clinical stages;
- Share knowledge and resources (e.g., use the same definitions of “safety”, fund training programs, and provide “seed money” for validation studies for young investigators).

Challenges and Discussion

Training

- Can there be a "healthy mixture" of hypothesis driven and milestone driven funded research by the same investigator? Or should we train strictly academic “validators”?

Competition

- What are the most appropriate approaches to assure adequate opportunities to describe methods and study design with sufficient detail in publications and grant applications to permit constructive critical review?
  - How do we guard against bias of senior investigators reviewing studies “replicating” their results?
- Are there ways best suited for academia to lessen stress, adhere to standards, and guard against fraud in an era of ever tightening budgets and “instant-access” timelines?

Patient centered

- How can model systems better match clinical manifestations of patients?
- What matters most to patients and how can we harmonize their participation with preclinical research?