



*Training Directions
at The National Institute of
Biomedical Imaging and
Bioengineering*

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NIBIB Training Program Philosophy

- Provide opportunities for bioengineering and bioimaging training using existing NIH mechanisms and creative approaches.
- Retain flexibility in developing training programs.
- Fill critical gaps in career continuum and attract students to research careers in bioengineering and bioimaging.
- Enhance participation of under-represented populations.
- Communication and outreach.



NIBIB Training and Career Development Ongoing Opportunities

- **F31** (Predoctoral NRSA Minority and Disability only)
- **F32** (Postdoctoral NRSA)
- **F33** (Senior NRSA)
- **T32** (Institutional Predoc/Postdoc NRSA)
- **Minority and Disability Training Supplements**
- **K01** (Mentored Research Scientist CDA)
- **K02** (Independent Scientist CDA)
- **K08** (Mentored Clinical Research CDA)
- **K23** (Mentored Patient-Oriented Research CDA)
- **K24** (Mid-career Patient-Oriented Research CDA)
- **K25** (Mentored Quantitative CDA)



NIBIB Training and Career Development Activities

- **Other Activities**
 - **NIH-NSF BBSI (Bioengineering and Bioinformatics Summer Institutes Program)**
 - **Assign AREA grants (R15) to the DIDT portfolio**
 - **Develop database system to provide ongoing tracking & evaluation**
 - **Plan Annual Training Grantees Meeting**
 - **Visits to Funded T32 Grantees**



Institutional Training Grant Visits

- **Purpose:**

To become familiar with the existing NIBIB-funded T32 institutional training grants and acquaint grantees with NIBIB

- **Meeting Format:**

Informal meetings with training directors, faculty, students/fellows



Institutional Training Grant Visits: Outcome

- **A number of common problems/frustrations identified:**
 - **Administrative issues**
 - **Support for key personnel, including administrators**
 - **NRSA restrictions**
 - **Citizenship**
 - **Funds inflexibility**
 - **Recruitment problems, especially at postdoc level**



Institutional Training Grant Visits: Outcome

- **Interesting Features:**
 - **Co-mentoring**
 - **Interdisciplinary (trans-department) training opportunities**
 - **Clinical and/or industry rotations as part of the curriculum**
 - **Grants that appoint trainees from different disciplines**



NIBIB Training: Immediate Goals

- **Modified Institutional Training Program**
 - Address infrastructure needs, support of coordinators, interaction among career levels, and inter-departmental issues
- **Medical Residency Research Program** - Attract residents to research
- **Postdoc-Faculty Transition Award**- Assist junior investigators in transition from postdoctoral fellow to faculty position



Modifications to Institutional Training

- **Utilize other grant mechanisms to complement existing T32 mechanism**
- **Items to consider: administrative support funds, training funds for undergraduates or non-US citizens, curriculum development, funds for the training director?**



Training of Residents

- **Initial phase: Supplements program**
- **Provide supplements to existing NIBIB PI's to add residents to a grant**
- **1-2 year experience**
- **Project proposal required**
- **Undergo peer review**
- **Evaluate success for future program development**
- **Pipeline for K awards?**



Career Transition

- **Use the NIH K22 mechanism**
- **Two Phase Award: Postdoctoral/Faculty Transition— 5 years total for award**
- **2-3 yr. Postdoc (at NIH, other government agency or in academia)**
- **2-3 yr. Faculty position (elsewhere encouraged)**
- **Administrative review between phases**



NIBIB Training: Future Goals

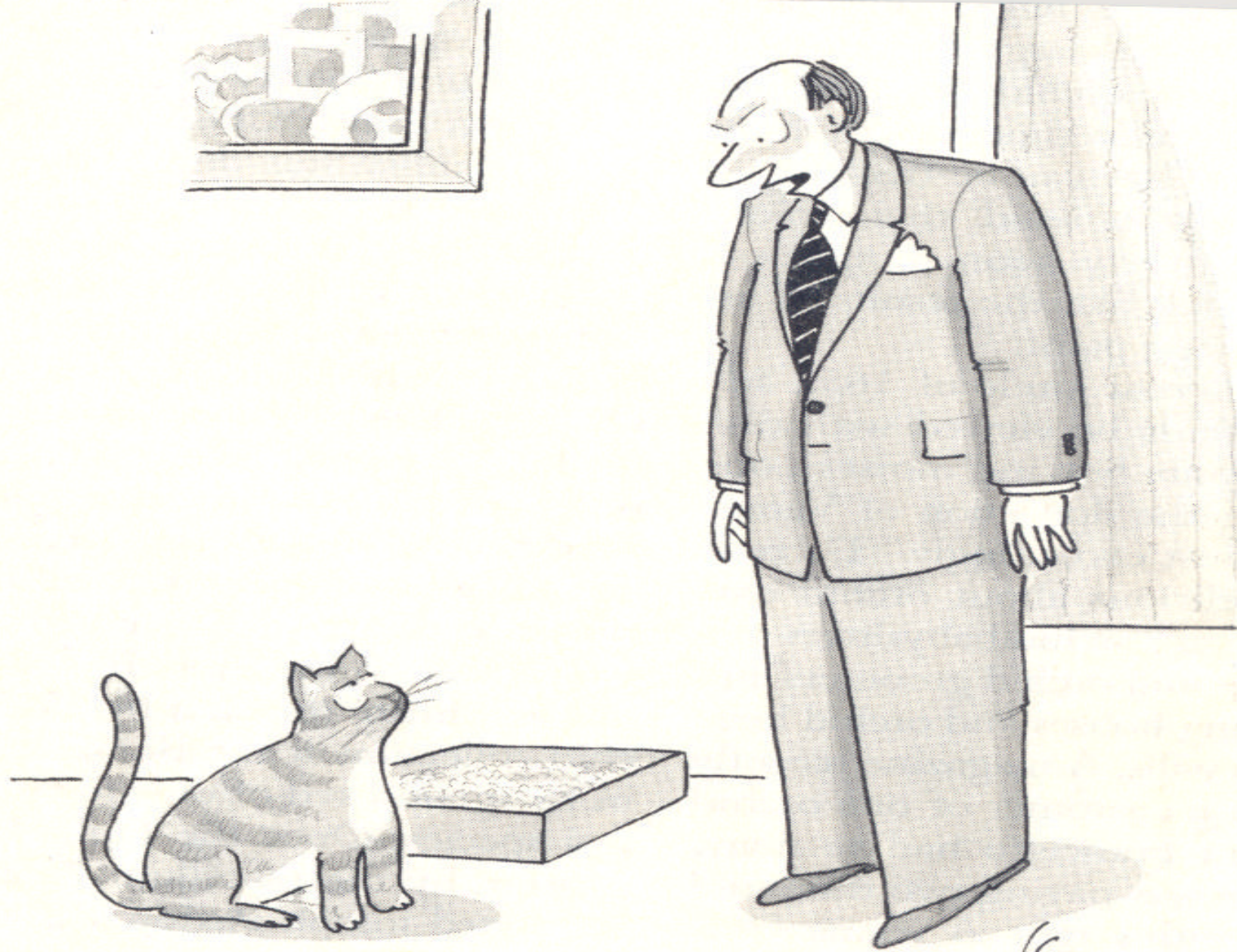
- **Expand F31 eligibility**
- **Revitalization of the AREA program**
- **Participation in NIH Roadmap Activities**
 - **Curriculum Development**
 - **Short Course Training Opportunities**
 - **Interdisciplinary Centers**
 - **Institutional Clinical Research Centers**
 - **Others to come....**



Challenges to Creating the Interdisciplinary Researcher of the Future

- **NIBIB serves a broad-based community**
- **Breadth of need**
- **“Cultural differences”**
- **Broader community “buy-in”**





Geo
Cullen

"Never, ever, think outside the box."