What is an NIGMS training grant program?
Total Number of NIH Pre- and Post-Doctoral Training Positions on T’s and F’s Supported by Institute, FY 2005 (NRSA)
NIGMS T32 Program Areas

- Behavioral-Biomedical Sciences Interface
- Bioinformatics and Computational Biology
- Biostatistics
- Biotechnology
- Cellular, Biochemical and Molecular Sciences
- Chemistry-Biology Interface
- Genetics
- Medical Scientist Training Program
- Molecular Biophysics
- Molecular Medicine
- Pharmacological Sciences
- Systems and Integrative Biology
Develop cross-disciplinary interactions that transcend departmental boundaries to provide interdisciplinary training in the broad research areas listed in the program announcement.

Develop mechanisms to provide a much broader training experience than would normally be available in a single laboratory or department (i.e., much broader than required for completion of their thesis research).
THE INGREDIENTS

Sizable group of high quality experienced faculty mentors from a number of departments/programs who have broad-based research interests and are committed to provide and participate in the specified type of interdisciplinary graduate education.

Sizable, distinct group of highly qualified students interested in the interdisciplinary research training to be provided.

Research training environment includes resources for students, for research, and strong institutional support [dedicated stipends from the institution, impresses]
Examples

Research training in which outstanding students receive outstanding research training in the laboratories of outstanding mentors who work in different disciplines would not be viewed as an outstanding training program...

...unless trainees from different laboratories are required to interact in a significant manner that ensures that each of them has the opportunity to receive broader enhanced interdisciplinary research training in the program designated area.
One Recipe?

A didactic component that provides the students with both discipline-specific and multi-disciplinary training; may consist of a core of courses for all trainees, or at least one required (capstone) course common to all trainees. Critical for focus and identity for the trainees, in early years of study.

Required laboratory rotations for mentor selection and/or to provide exposure to research experiences in more than one discipline.
Dedicated leadership and an effective administrative structure to ensure that all participants have representation and input.

Effective programmatic mechanisms for:

- Monitoring mentoring effectiveness and participation by the faculty... [selection and “de” selection, for participation, discipline diversity, and faculty mentorship ability.]

  - Selection of students to be supported

  - Monitoring progress of the trainees [thesis committee]

  - Providing trainees with enhanced career guidance.
Ongoing exposure to research in the various disciplines included in the broader area specified by the training grant.

Interactive research presentation mechanism for trainees /mentors; a required seminar and/or retreat, that significantly involves students throughout their graduate training.
NIH NRSA institutional research training grants: Applications, awards, and success rates
NIH Research Training Grants and Fellowships: Funding in current and constant dollars
BIOMEDICAL RESEARCH AND RESEARCH TRAINING [BRT] REVIEW COMMITTEE

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Standing committees

SEPS
SITE VISIT “POLICY”

Deferred applications

Ongoing program not visited for 10 years

Ongoing program suggested for visit in previous review

Ongoing program at first renewal

Ongoing program with new PI, student-related problems

Ongoing programs

Amended or New programs
### Table 12A. Predoctoral Trainees Supported by this Training Grant (Renewal Applications Only) Predoctoral (and MSTP) Trainees (Listed sequentially by Entering Class):

<table>
<thead>
<tr>
<th>Trainee, Year of Entry Prior Degree &amp; Institution (Mentor - Department/program)</th>
<th>Source(s) of Support Each Grant Year/Academic Year</th>
<th>Title of Research Project or Research Topic</th>
<th>Degree(s) Received (Year)</th>
<th>Current Position and Institution (grant support obtained)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cox, C., 1994 BA, Cornell Univ. (Jones-Biochem.)</td>
<td>TG, TG, RG, RG/TG3</td>
<td>Cloning of Human Globin Genes</td>
<td>MD, PhD (2002)</td>
<td>Asst. Prof. Hematology, Rutgers (50% clinical, 50% research, NIH K11)</td>
</tr>
<tr>
<td>Smolock, Y., 2005 BS, UCLA (Rifkind-Genetics)</td>
<td>UF, UF, TG</td>
<td>Purine Synthesis Mutants in Mammalian Cells</td>
<td></td>
<td>In Training</td>
</tr>
<tr>
<td>Thomas, G., 2007 DVM, U. Penn (unassigned)</td>
<td>TG</td>
<td></td>
<td></td>
<td>In Training</td>
</tr>
</tbody>
</table>

**Instructions:** Table 12A. List sequentially, by entering year, all trainees who were, or are, supported by this training grant (past 10 years only, if applicable). For each student provide: 1) name; 2) year of entry into the training program; 3) prior institution and degree at entry; 4) in parenthesis name of research mentor and department/program; 5) the source of support during each year of training, e.g., this training grant, another training grant (specify), research grant, university fellowship, individual fellowship (specify), etc.; 6) research topic; 7) degree and year awarded, and 8) for trainees who have completed the program, their current...
Some of the key features found in successful institutional research training programs

1. Sizable, distinct group of highly qualified students interested in the interdisciplinary research training to be provided.

2. Sizable group of high quality experienced faculty mentors from a number of departments/programs who have broad-based research interests and are committed to provide and participate in the specified type of interdisciplinary graduate education.

3. A didactic component that provides the students with both discipline-specific and multi-disciplinary training; may consist of a core of courses for all trainees, or at least one required (capstone) course common to all trainees. Critical for focus and identity for the trainees, in early years of study.

4. Required laboratory rotations for mentor selection and/or to provide exposure to research experiences in more than one discipline.
Some of the key features found in successful institutional research training programs (cont)

5. An interactive research presentation mechanism for trainees / mentors; a required seminar and/or retreat, that significantly involves students throughout their graduate training. Ongoing exposure to research in the various disciplines included in the broader area specified by the training grant.

6. Dedicated leadership and an effective administrative structure to ensure that all participants have representation and input.

7. Effective programmatic mechanisms for monitoring mentoring effectiveness and participation by the faculty and for monitoring progress of the trainees and providing them with enhanced career guidance.
Training Grant Expenses

- **Tuition and fees:** For institutional training grants (T32, T34, and T35), an amount per predoctoral trainee equal to 60% of the level requested by the applicant institution, up to $16,000 per year, will be provided. If the program supports formally combined dual-degree training (e.g., M.D.-Ph.D, D.D.S.-Ph.D.), the amount provided per trainee will be up to $21,000 per year. For institutional training grants (T32 and T35), an amount per postdoctoral trainee equal to 60% of the level requested by the applicant institution, up to $4,500 per year, will be provided. If the program supports postdoctoral individuals in formal degree-granting training, the amount provided per trainee enrolled in a degree-granting program will be up to $16,000 per year.

- **Training related expenses:** For institutional training grants (T32, T34, and T35), the training related expenses category will be modified to include health insurance as an allowable expense. An additional $2,000 per predoctoral trainee, per year, and an additional $4,000 per postdoctoral trainee, per year, will be provided in this category. This category will continue to be referred to as training related expenses but will now include health insurance as an allowable cost.
T32 Trainees

- Must be Citizen, non-citizen national, or lawfully admitted for permanent residence.
- Must have been admitted for permanent residency at time of appointment.
- Baccalaureate degree & be enrolled in doctoral program leading to Ph.D., comparable research doctoral degree or dual research/clinical doctorate like the MD/Ph.D.

Duration of Support
- 5 years maximum
- Aggregate limits, including any combination from individual and/or institutional awards
Stipends

- Subsistence Allowance to help defray living expenses
- Not a salary, not considered employees of either Government or Institution
- NIH publishes levels in NIH Guide when increases are approved
- Grantees may supplement
- Predoctoral: One level for all individuals, regardless of years of experience
### Predoctoral Training Grant Application Deadlines

<table>
<thead>
<tr>
<th>Application Receipt Date</th>
<th>Initial Review Group Meeting</th>
<th>Advisory Council Review</th>
<th>Earliest Start Date</th>
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### Postdoctoral Training Grant Application Deadlines

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