

Directorate Investments in Biology Education

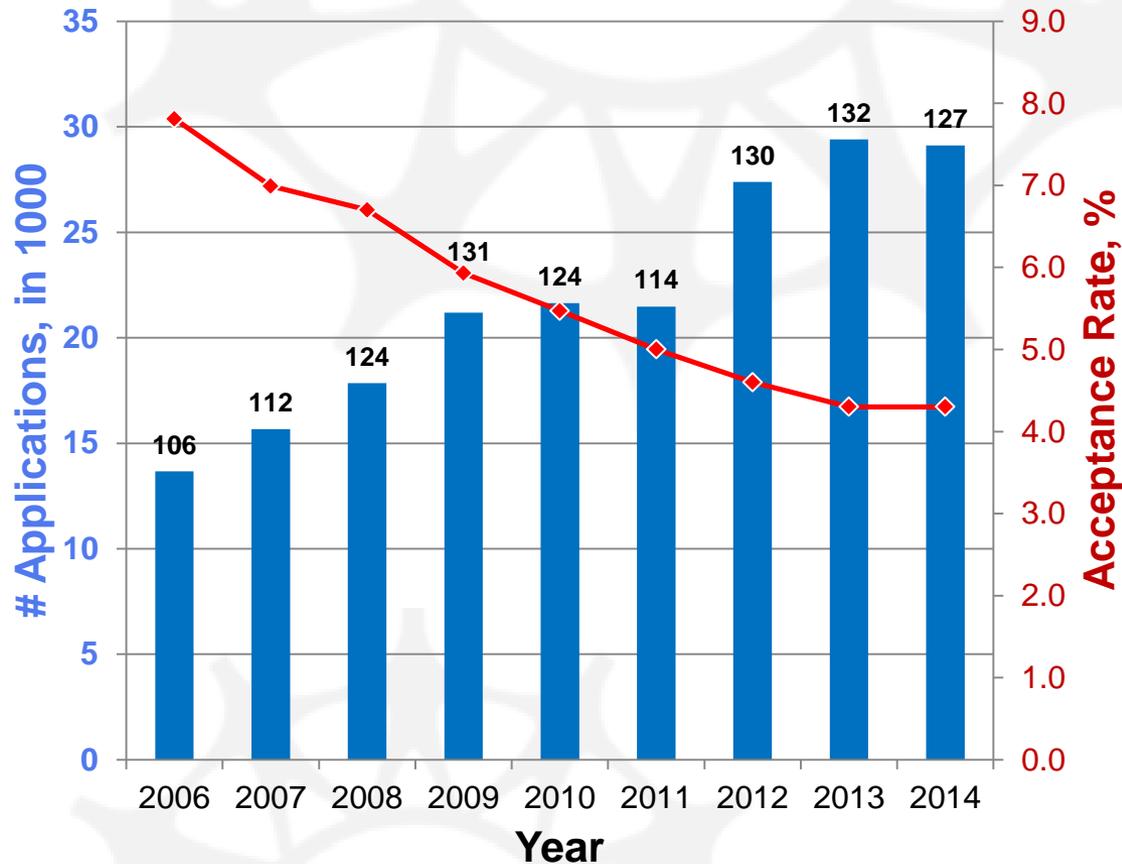
- ❖ Fellowships and Traineeships
 - Undergraduate, Graduate and Postdoc
- ❖ Programs to improve courses/curricula
 - RCN – UBE
 - PULSE



Traineeships for Undergraduates

- **Research Experiences for Undergraduates (REU)**
 - Two types: Sites and Supplements
 - REU Sites – a summer program that includes 6-12 students mostly recruited from outside the host college/university. Program has organized activities such as orientation, skills development workshops, ethics training, journal discussions, seminars, and end-of-program symposium. Every Site uses common assessment tool so aggregated data is available on student reported benefits.
 - REU Supplements – student joins a lab and works on a component of an ongoing NSF-funded project
 - Estimate of number of students supported in FY14
 - REU supplement: 470
 - REU Sites: 1242 (127 Sites)
 - Data for REU Site participants collected since 2006:
 - Gender, race/ethnicity, academic level, type of institution, prior REU participation
 - Number of applications received by each Site

Example Data on REU Site Student Applications



Blue bar: # applications in thousands

Number on top of bar: # Sites for that summer

Red line: ratio of # students who participated to the total # of applications received (in %)

Traineeship for Graduate Students

- **NSF Research Traineeship (NRT)**

- New in 2014 (replaced IGERT)
- Initiative to promote the development of innovative, evidence-based models for graduate education while catalyzing cutting-edge research in high priority research areas
- 1st solicitation released in March 2014 with priority area in data-enabled science and engineering (DESE)
- 258 NRT proposals received: 65% DESE and 25% on other interdisciplinary themes
- 13 NRT panels to be held (late August – late October)
- 1st awards will be made in early FY 2015
- 8-10 awards are anticipated

Fellowship for Postdocs

- **Postdoctoral Research Fellowship in Biology (PRFB)**
 - Four Tracks:
 - Broadening Participation in Biology (DBI)
 - Intersections of Biology and Mathematical and Physical Sciences and Engineering (DBI)
 - National Plant Genome Initiative (IOS)
 - International Postdoctoral Research Fellowships in Biology (DBI)
 - 222 proposals received in FY14:
20% Broadening Participation; 41% Intersections; 17% Plant Genome; and 22% International

Programs to Improve Biology Education

- Research Coordination Networks in Undergraduate Biology Education (RCN-UBE)
 - Goal: build communities of biology faculty to improve participation, learning, or assessment in undergraduate biology education
 - Since 2008, a total of 36 projects funded
 - 17 full proposals and 19 incubator awards
 - FY13 proposals received: 21 full and incubator; average # over 6 years is 14

- Partnership for Undergraduate Life Sciences Education (PULSE)
 - Partnership of NSF, NIH and HHMI
 - Outcome of Vision and Change activity
 - 40 PULSE Fellows represent different academic positions (Chair, Dean) from different types of institutions (2-yr, 4-yr, R1)