If you are a recent PhD graduate interested in a career that combines research and teaching, the Institutional Research and Academic Career Development Awards (IRACDA) program may be of value to you. The objective of the program is to build partnerships between research-intensive universities and minority-serving institutions (MSIs) in the U.S. that will simultaneously develop student and faculty talent, promote institutional change, and leverage diversity.

**National IRACDA Program Network**

The IRACDA program was launched just over 10 years ago through the vision of Clifton Poodry, Director of the Minority Opportunities in Research programs at the National Institute of General Medical Sciences (NIGMS), with input from institutional training directors across the country. Recently, Shiva Singh assumed responsibility for heading the IRACDA program at NIGMS. There are now 17 programs supporting 192 postdoctoral trainees and 37 MSI partners. Eight IRACDA program directors are women, and two are present or former ASCB Women in Cell Biology (WICB) Committee members. Each IRACDA institution has a unique flavor based on location, number of fellows, whether the research emphasis is interdisciplinary or focused, and the nature of its MSI partner. (MSIs range from community colleges to research universities.)

A list of the currently funded IRACDA institutions with website links is available on the NIGMS IRACDA homepage (www.nigms.nih.gov/Training/CareerDev/MOREInstRes.htm). IRACDA programs’ include several that emphasize cell biology:

- **IRACDA Scholars in Science** (University of California, San Francisco)
- **Training in Education and Critical Research Skills** (Tufts University)

**Skill Development**

IRACDA aims to leverage diversity to increase the number of highly qualified science faculty and stimulate undergraduate interest in, and access to, research-oriented science careers through targeted skill development. IRACDA fellows formulate individualized career development plans that include customized research training plus classroom teaching experience at a partner MSI.

The program allows fellows to spend about 25% of their time enriching their educational skills, including receiving:

- **Training in pedagogy**
- **Hands-on experience developing courses and curricula that emphasize student-centered learning**
- **Training in linking learning objectives to assessment**
- **Practical experience in classroom teaching and student mentoring**

Educational training may occur through local resources/workshops/classes and in partnership with education mentors at the MSIs. Some IRACDA fellows have competed to participate...
in the National Science Foundation Faculty
Institutes for Reforming Science Teaching:
Focus on Postdoctoral Scholars program and
in Howard Hughes Medical Institute/National
Academy of Sciences faculty development
programs that emphasize undergraduate biology
curriculum development.

Fellows spend the remaining 75% of
their time developing their research skills,
through work in cutting-edge
research areas with program-
affiliated research mentors of
their choosing. Training in
responsible conduct in research, communication skills, grant
writing, scientific writing, and
job hunting are among career
development opportunities
offered by most programs.

Networking with a
Community of Peers
at Local and National
Levels
IRACDA programs offer the
opportunity to forge new
partnerships with program
faculty at the home institution
and at partnered MSIs through
formal mentor interactions,
annual retreats, and career symposia, among
other joint activities. But training is not limited
to local interactions. Networking with faculty
and peers can also extend to other IRACDA
programs, conferences, and workshops. For
example, IRACDA fellows receive funds for
travel to research meetings, faculty development
workshops, and the annual IRACDA
conference.

The annual IRACDA conference is hosted
by a different program each year and provides
important opportunities for demonstrating
research and education scholarship and for
learning about job prospects and new research
and teaching strategies. The poster session is
a great venue to network among peers and
faculty from other institutions; the atmosphere
is conducive to exchanging ideas and sharing
knowledge. The benefits of networking are
many, from sharing ideas and knowledge to
making important connections that may lead to
the next career step. Networking among peers
can also be a key source of valuable advice and
support, which can help increase the chances
of finding funding and job opportunities and
building new collaborations. By meeting face-to-
face and sharing contact information, IRACDA
fellows make lasting friendships so that exchange
can continue in spite of distance.

Perspectives of IRACDA
Participants on Landing a Job and
Career Impact
Several scientists who have participated in
IRACDA programs report that the experience
has been important for their
careers. Nicole Gerardo is
currently an assistant professor
in Biology at Emory University.
She states that IRACDA
training at the University of
Arizona Postdoctoral Excellence
in Research and Teaching
program helped her while
interviewing and meeting
with prospective colleagues
with interests in teaching,
research, or a combination of
the two. Gerardo explains, “My
combination of postdoctoral
teaching and research
experience gave me some way
in which I could relate to
everyone that I met with during
the interview process.” Once
in the new position, Gerardo
says she had a lot to learn to get started, but she
felt less nervous about the teaching process than
colleagues who did not participate in IRACDA.

Laurie Krug is currently an assistant professor
at Stony Brook University in the Department
of Molecular Genetics and Microbiology, and
Sarah Stabenfeldt is an assistant professor
at Arizona State University in the School of
Biological and Health Systems Engineering.
Both participated in the FIRST program at
Emory University, and both had multiple
interviews and job offers. They attribute their
competitive edge to excellent mentoring, like-
mined peers, a strong teaching portfolio, and
knowledge about new pedagogical techniques
and active learning developed through their
IRACDA training. They will be using these
skills in their classrooms.

How to Apply for IRACDA
Postdoctoral Fellowship Positions
Most IRACDA training programs require
applicants to provide a curriculum vita,
recommendation letters, and a personal
statement that details career goals and research
and educational experiences. In some cases,
the programs encourage prospective fellows to contact potential research mentors before applying to the program, while other programs assist fellows in finding a research lab once they are accepted into the program.

Candidates go through a competitive evaluation process, which usually includes interviews with the program director and research and teaching mentors and a seminar presentation. The IRACDA training programs solicit applications annually from recent PhD graduates, usually in the spring with a fall start date. Fellows who are selected for the program receive full stipend support as well as a modest sum for research and/or teaching supplies.

Individuals seeking to achieve excellence as both educators and research scientists, women, and those from disadvantaged or underrepresented minority groups are strongly encouraged to apply.

—Olivia George, University of New Mexico; Triscia Hendrickson, Morehouse College; Gloriana Trujillo, University of New Mexico; Angela Wandinger-Ness, University of New Mexico

Notes
Olivia George and Gloriana Trujillo are ASERT fellows. Triscia Hendrickson participated in the FIRST program at Emory University. Angela Wandinger-Ness is PI of ASERT.

The other IRACDA programs are Fellowships in Research and Science Teaching (FIRST; Emory University); Houston Education and Research Training Program (Baylor College of Medicine); IRACDA New Jersey/New York for Science Partnerships in Research & Education (University of Medicine & Dentistry of New Jersey, Robert Wood Johnson Medical School); Medical University of South Carolina IRACDA; Mentored Experiences in Research, Instruction, and Teaching (University of Alabama at Birmingham); Northwestern University Select Teaching and Research Training Program (Northwestern University); PENN–Postdoctoral Opportunities in Research and Teaching (University of Pennsylvania); Postdoctoral Excellence in Research and Teaching (University of Arizona); Professors for the Future (University of California, San Diego); SPIRE (University of North Carolina, Chapel Hill); Stanford University IRACDA; University of Kansas–Haskell Indian Nations University IRACDA; University of Minnesota IRACDA; Virginia Commonwealth University IRACDA.

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