

Not the Same Old Post-Doc

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Big Psychology Grants

Big Psychology Grants is an occasional series featuring large-scale studies and other notable programs in psychological science. This month, we look at a new training program in developmental research at the University of Wisconsin-Madison.

Writing a grant proposal is a little like designing your own house, says Morton Ann Gernsbacher. It helps if you've been able to see other people's successes and failures before you begin. Gernsbacher, who is currently president of APS, has had ample opportunity to do just that in the course of performing an essential service to the field: volunteering on peer review committees for the National Institutes of Health (NIH).

Gernsbacher's experience reviewing grant applications for NIH includes two four-year terms as a member of what are known as study sections, the second of which focused on proposals for training programs, career development awards, and large program projects. The latter was crucial to the success of her recent proposal for a postdoctoral training program at the University of Wisconsin, Madison.

In fact, the proposal grew out of her participation in reviewing the first round of applications for an initiative called "Interdisciplinary Health Research Training: Behavior, Environment, and Biology," developed by the National Institute of Mental Health's Division of Neuroscience and Basic Behavioral Science. When the request for applications was reissued for a second round in 2005, Gernsbacher decided to submit a proposal.

"I was just so fascinated by the mechanism, and by what it was trying to do by blending biological and behavioral approaches, that I thought it would be a great mechanism to apply for," says Gernsbacher.

In addition to providing the initial impetus for the proposal, Gernsbacher's observations as a reviewer convinced her of the crucial importance of mentoring in training programs. As a result, mentoring is at the core of the training program — Behavioral and Biological Approaches to Typical and Atypical Behavior Development (BBTAD) — which will open its national search for postdoctoral fellows this fall. The two- to three-year traineeships feature seminars, conferences, and other activities intended to bridge disciplinary divides and prepare trainees for the transition to research positions at universities or medical centers. Regular reviews by interdisciplinary mentoring committees will ensure that each trainee is making progress.

"We're really hoping that this won't be the same old postdoc, where the person just comes in and hides away in the given PI's lab," says Gernsbacher.

Twenty-two faculty members from a number of disciplines are affiliated with the BBTAD program. In addition to Gernsbacher, whose research centers on language comprehension and autism, the training

faculty includes specialists in developmental psychology, cognitive psychology, animal behavior, psychiatry, primatology, pediatrics, communicative disorders, neuroscience, medical physics, and genetics. Many of the faculty are associated with the University of Wisconsin's Waisman Center, a multidisciplinary research institute focused on human development, developmental disabilities, and neurodegenerative diseases.

The training faculty has a wide breadth of expertise and the program is open to all applicants whose research interests fall within its broad mandate, but it will undoubtedly attract applicants in areas where the University of Wisconsin is especially strong, says Gernsbacher.

One of those areas of strength is language development and communicative disorders. Maryellen MacDonald and Susan Ellis Weismer for example, are two members of the training faculty whose research bridges typical and atypical development. MacDonald's research focuses on individual differences in people's language abilities and the role of the environment in acquiring these abilities, while Ellis Weismer's research focuses on language development in both typical and atypical populations, including most recently — in collaboration with Gernsbacher — young children along the spectrum of autism.

The training program is supported by a five-year grant from the NIH Roadmap Initiative, a strategic planning effort that emphasizes the creation of interdisciplinary "research teams of the future" (see <http://nihroadmap.nih.gov/>). The grant will support stipends and research and travel expenses for four postdoctoral fellows, who will be evenly split between individuals with backgrounds in research and individuals with backgrounds in medicine. The goal is to encourage PhDs to think about clinical applications of their work and give MDs research experience.

"Many MDs, even if they have a talent for research, haven't had intensive research training," says Ruth Benca, a member of the program's training faculty who studies the relationship between sleep and psychological disorders (and who holds both an MD and PhD). Even MD/PhDs can have a hard time keeping up with their research field while completing residencies. For clinicians who want to pursue a research career, the BBTAD program will provide "an intensive, focused period of doing research" that will help ease the transition, says Benca.

Regardless of whether they come from a clinical or a research background, the program will encourage the postdocs to conduct research on both typical and atypical development. As Gernsbacher points out, many behaviors that are seen as abnormal in children with developmental disorders such as autism can also be found in children with typical developmental trajectories. When researchers study atypical and typical development separately, those similarities can get lost. "One really needs to have a handle on both forms of development," says Gernsbacher.

The program also will encourage a mixture of behavioral and biological approaches. "Many of us are blending biological and behavioral methodologies and techniques in our research," says Gernsbacher. "But even if we're not actually doing both types of research as a given individual or given research team, we all have to be familiar with the other components."

The BBTAD training program includes a number of community-building features, including a proseminar led by the training faculty, a research ethics seminar that brings together postdocs from

several training programs associated with the Waisman Center, and a BBTAD conference every several years. Trainees also will receive career development advice, including assistance from their mentoring committees in developing NIH R03 or K-award grant proposals.

“As we all know, we all are doing cross-disciplinary and interdisciplinary work, but we’re also — many of us — still entrenched in our disciplines,” says Gernsbacher. “So doing something like this is always fun but takes a lot of effort. You have to leave your neighborhood.”