

HADAR GOREN

► downs of university and graduate studies. Meyerhoff scholars live together in residential housing during their first year at university, and are strongly encouraged to maintain study groups. The programme's staff advisers offer insights into coursework and research experiences; peers and graduates give moral support; and a network of Meyerhoff mentors provides career advice.

The programme also places students in summer research internships so that they can gain laboratory experience.

In a bid to improve the lacklustre numbers of minority undergraduates at Penn State and UNC who continue on for PhDs — fewer than ten a year at each — university administrators sought advice from UMBC biochemist Michael Summers, who helped to design the original Meyerhoff programme. Those discussions led to a joint proposal to the HHMI to study how the programme is implemented at both campuses, and the HHMI made the five-year funding commitment in May.

For many students, the adjustment to university is a challenge, which makes it all the more important to build an institutional culture to support minority scholars, says Mary Williams, associate dean for undergraduate education at Penn State. She says that the university is aiming to embrace the idea that excellence is accomplished through diversity, and that this project may help to eliminate stereotypes.

Meyerhoff graduate Lola Eniola-Adefeso, now a chemical engineer at the University of Michigan in Ann Arbor, says that UMBC's supportive culture may be difficult to replicate at other institutions. "UMBC started with the premise that minority students could achieve at an equal level to majority students, and all the faculty and staff fostered that sense of community," she says. She adds that the nurturing environment percolated down from the university's president through the rest of the campus. She scored top marks at UMBC, she says, "because I had that push to do well all around me".

Former Meyerhoff students often become research mentors themselves. Kafui Dzirasa, a neuroengineer at Duke University Medical Center in Durham, North Carolina, and a graduate of the programme, often brings Meyerhoff students into his lab as interns. Dzirasa stresses the importance of research experiences in helping students to decide



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David Asai

on a career path. After a successful internship at the University of Lancaster, UK, Dzirasa took a position at a petrol company. He realized that an industry post was not for him. "It was valuable for figuring out what I didn't want to do," he says. Now he enjoys helping current Meyerhoff scholars along on their academic journey.

There will be challenges in translating the programme to other institutions. Penn State and UNC will have to determine how to identify students who will succeed in the programme, says UMBC president Freeman Hrabowski. Applicants to UMBC's programme are nominated by secondary-school administrators, guidance counsellors or teachers. Finalists are selected on the basis of their intent to pursue an advanced STEM degree as well as their academic records, test scores, recommendation letters and community-service activities.

UMBC will work with UNC and Penn State to determine how to adapt the programme to fit each school's culture, demographics and research portfolio, and how to document how each aspect of the programme contributes to its overall success. Universities will have to assess, for example, the amount of academic preparation necessary for students to be successful. "If we're serious about getting other research universities to try programmes of their own, we have to look at each of the programme components to find out how and where they can work — and what adaptations need to be made," says Asai.

Once the UNC and Penn State programmes are fully implemented, each will endeavour to expand slowly to 35–40 students. Hrabowski and Asai hope that what they learn from the project will encourage other universities, foundations and agencies to adapt the programme.

"We in science education should be looking for dissemination of effective programmes — not every programme needs to be new," says Asai. "The goal is to learn from this so others are encouraged to try it."

Hrabowski agrees. "The vision is not simply creating a programme that encourages diversity in science but one that works to produce the best scientists in the world," he says. "That's what's revolutionary." ■

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ACADEMIA

Postdoc policies probed

Less than two-thirds of US institutions say that their postdoctoral researchers earn at least the US National Institutes of Health-recommended minimum of US\$39,264, a survey has found. Health-care benefits are available to postdocs working as employees under a principal investigator's grant at some 95% of responding institutions, but less than two-thirds offer such benefits to those classified as trainees or on fellowships.

The US National Postdoctoral Association (NPA) in Washington DC, which represents about 70,000 postdocs across 190 US and Canadian institutions, this month released preliminary data from its Institutional Policy Survey. Building on a 2011 survey, the association polled 167 private, public and government institutions on postdoc policies concerning pay and benefits, career-development services and career-tracking practices, among others. It received full responses from 74 institutions.

No other agency or organization has produced similar information on postdocs. The NPA estimates that there are up to 91,000 postdocs in the United States, including those who are not NPA members.

The survey results showed that career-development services for postdocs vary widely. Most institutions (96%) offer training in writing grant applications, for example, but only just over three-quarters run programmes on presentation skills, and smaller proportions provide interview training, networking events or career-counselling appointments. Institutions with fewer than 750 postdocs offer especially scanty services. Some 57% of institutions say they have no postdoc handbook, and about one-fifth set no limit on how long a researcher can be classified as a postdoc. Just six institutions reported that they have a system to track postdocs' career arcs after they have left the institution.

Belinda Huang, executive director of the NPA, says that the association is preparing a report on the findings, for distribution to policy-makers, funders and university and institution administrations. It will call for extra training for careers outside academia, as well as more tracking of postdocs after they leave. "Now we have hard data," she says.



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"For me, the summer bridge was pivotal."
Lekelia Jenkins

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