12 Scientists Will Share $120-Million From Saudis

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Bruce E. Logan has a problem, one few researchers face in their scientific careers. He has to figure out how to spend $2-million every year for the next five years. This spring he and 11 other scientists found themselves in that unusual position. The money adds up to $10-million per researcher.

"It's hard to spend that much money," says Mr. Logan, a professor of environmental engineering at Pennsylvania State University's main campus. But "it's a challenge that we're glad to take upon ourselves."

In May the researchers made a pilgrimage to the source of the generous grants: King Abdullah University of Science and Technology, a graduate research institution better known as Kaust. It is scheduled to open in Saudi Arabia in September 2009, thanks to $10-billion of King Abdullah bin Abdul Aziz's fortune. The new Kaust investigators are expected to visit for at least three weeks every year during their grant periods.

The 11 men and one woman were chosen in part because they are prominent in their fields and work on topics of interest to Saudi Arabia, like solar energy and water desalination. With $10-million to back them, they will surely gain further prominence.

In interviews with The Chronicle, several of the researchers explained what getting some of the most generous science financing available means for their careers.

Grants to individual investigators from the National Science Foundation, the National Institutes of Health, and other government and philanthropic organizations rarely exceed $1-million. Multi-investigator grants, such as NSF's engineering research centers, are the only things that come close.

The Kaust grants will generally be administered in the same way as other grants. For instance, the scientist's university will keep intellectual-property rights, and Kaust, as the source of funds, will retain certain licensing rights. But one important difference from some grants is that scientists will be free to work on projects without needing to show progress from one year to the next to get the money renewed.

"It's much less structured than the way you have to work with industry and even with NSF," says William J. Koros, a Kaust investigator at the Georgia Institute of Technology.

Such freedom to pursue research goals is exciting to the investigators and is enhanced by the length of the grants. Most other research grants last three years or less.

Still, none of the scientists expect a quantum shift in their research approach or in their careers — not even the sole untenured professor among the group.

"I guess it will help," says Yi Cui, with a laugh. The assistant professor of materials science and engineering at Stanford University has already begun hir-
ing new graduate students and postdoctoral fellows with the Kaust money, which began flowing to his laboratory on May 1.

And despite the windfall for their institutions, none of those contacted by The Chronicle will receive a raise in their salaries, which will be paid by Kaust in proportion to the amount of their work that is dedicated to the grant. (The rest will be covered by other grants or the institution.) What's more, none of the Kaust investigators have been courted for new jobs even though many an institution may be eager to tap into the researchers' forefront ideas -- and into their Kaust funds.

But many parts of the investigators' work lives are likely to change. The Kaust-financed freedom extends to the types of questions they pursue in their laboratories and provides the chance to hire more people as graduate students and research associates. Many of the scientists will also receive a break from some of their teaching requirements to allow them to focus on their research.

Not all of the Kaust investigators are getting that break. Paulo J.M. Monteiro, a professor of civil and environmental engineering at the University of California at Berkeley, will not only teach the same number of courses but will begin serving as chairman of a University of California committee on international education.

How will he fit it all in? "You know," he says, "you sleep less."

Four of these lucky winners now share details of their plans, revealing the extent to which money does, and does not, change an academic life.

* William J. Koros: More Basic Science

* Edward H. Sargent: Luring Industry Researchers

* Bruce E. Logan: More Applied Research

* Peter A. Markowich: Paying Salaries