

SOUTHWESTERN NEWS

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JUMP-STARTING A MEDICAL-RESEARCH CAREER

DALLAS — August 2, 1995 — Dr. Bill Landschulz was an internal medicine resident on call at Johns Hopkins Hospital when a puzzling long-distance number came up on his beeper. He dialed the 214 area-code number and found himself talking to Nobel laureate Dr. Michael Brown.

"He was telling me about a fellowship called PEPR," said Landschulz, "and urging me to apply."

Landschulz did. In July 1993 he became UT Southwestern's second PEPR fellow.

PEPR is an acronym for Program of Excellence in Postgraduate Research, a unique program of independent research fellowships established at UT Southwestern in 1991.

PEPR's purpose is to give the most promising young M.D./Ph.D. graduates in the nation a chance to skip the traditional years of postdoctoral apprenticeship in other scientists' labs and to launch their own independent research. The program funds three years of independent research as a nontenured junior faculty member at UT Southwestern.

Dr. Dean Smith was the first PEPR fellow, joined by Landschulz and, in the fall of 1993, Dr. Andrew Zinn. Two more have been accepted and will begin their fellowships in 1996, when they finish clinical residencies at UT Southwestern.

This year Smith becomes PEPR's first graduate. He has accepted an invitation to stay as a tenure-track assistant professor of pharmacology.

"It's our expectation that all of these young researchers will be absorbed into different departments at UT Southwestern although PEPR fellows are given no guarantee of a permanent faculty position," said Dr. R. Sanders Williams, chairman of the PEPR fellowship committee.

"We're training for the nation, but we're training for Southwestern as well."

Williams, chief of cardiology and director of the Frank M. Ryburn Jr. Cardiac Center, holds the James T. Willerson, M.D., Distinguished Chair in Cardiovascular Diseases.

"We've been extraordinarily selective, and the people we've recruited are uniformly exceptional," Williams said.

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The PEPR committee, composed of Williams, Brown and Nobel laureates Dr. Joseph Goldstein and Dr. Alfred Gilman, receives 40 to 60 applications a year. They invite one to three of those to interview. So far they've chosen only five.

Brown directs the Erik Jonsson Center for Research in Molecular Genetics and Human Disease and holds the W.A. (Monty) Moncrief Distinguished Chair in Cholesterol and Arteriosclerosis Research. Goldstein is chairman of molecular genetics and holder of the Distinguished Chair in Biomedical Science. They share the Paul J. Thomas Chair in Medicine. Gilman is chairman of pharmacology and holder of the Raymond and Ellen Willie Distinguished Chair in Molecular Neuropharmacology, in Honor of Harold B. Crasilneck, Ph.D.

"The program is not for everyone," Williams explained. "We are looking for some very special qualities. Independent thought and scientific maturity are of primary importance. They have to be ready to function on their own. It's a bold step for a young person; it can be quite daunting."

Not that the PEPR fellows are really entirely on their own.

PEPR tries to provide a nurturing environment, in which the fellows have open access to the intellectual resources of the entire campus, as well as oversight — rather than supervision — of their work by some of the most senior scientists on campus, Williams explained. "They have immediate collaborative ties with virtually any laboratory on campus, and midstream corrections are encouraged and facilitated by the PEPR committee," he said.

"We're as independent as we want to be, but if we have a question or a problem, the PEPR committee and other faculty members are freely available to us," said Landschulz, an assistant professor of internal medicine.

Landschulz did run into a snag with his proposed research into the genetic basis of papillary thyroid cancer. He couldn't find enough patients and families to study. He turned to Brown and Goldstein, who helped the young scientist refocus his research. Now he's investigating how lactic acid, a byproduct of anaerobic metabolism, crosses cell membranes.

"That's a great thing about PEPR," said Landschulz. "You get to try out your lab wings — to learn the ins and outs of running a lab and a research project, and if something doesn't work out quite right, you can learn from your mistakes and keep right on going."

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Another benefit of PEPR is that it underwrites enough research to get preliminary results, putting the fellows in a much stronger position to get more research funding, said Zinn, whose work focuses on deletions or partial deletions of the X chromosome and the resulting genetic abnormalities. "It's difficult to get funding nowadays if you don't have some results to start with," he said.

Landschulz called it "a catch-22. You can't get money until you can prove that you can get results, and you can't get results until you can get some money."

Smith, whose research interests focus on signal transduction mechanisms underlying sensory systems, is studying the olfactory (smell) system in fruit flies. He said PEPR has freed him to focus completely on his work and to explore some novel directions that he probably wouldn't have been allowed to pursue as a traditional postdoctoral fellow in a senior scientist's lab and couldn't have afforded to pursue if he had to compete in the grant-writing arena immediately.

"That's far and away the single greatest thing about this program," Smith said. "It gives you three years of focused research time without the distraction of clinical work, teaching or grant-writing."

Smith, who came to PEPR from the University of Southern California, admits to an initial "West Coast bias" about UT Southwestern and Dallas. "Quite honestly, I just don't know how high Southwestern would have been on my list of places I wanted to work. But I've discovered that it's a tremendous place, a very exciting place. I didn't appreciate how many good scientists are here." He and his wife, who teaches economics at the University of North Texas, both love it here now.

Landschulz, whose wife, Dr. Katherine Landschulz, is an assistant instructor of molecular genetics, is doing an endocrinology fellowship along with his PEPR fellowship. His interest in endocrinology had made him aware of UT Southwestern through the reputations of Drs. Jean Wilson and Dan Foster. Wilson, chief of endocrinology and metabolism, holds the Charles Cameron Sprague Distinguished Chair in Biomedical Science. Foster, chairman of internal medicine, holds the Donald W. Seldin Distinguished Chair in Internal Medicine. "They were famous to me long before I came here," Landschulz said.

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For Zinn, who is single and hails from San Antonio, the PEPR fellowship was a homecoming. A 1988 graduate of UT Southwestern's M.D./Ph.D. program, he had left to do an internal medicine residency in Boston and had begun a postdoctoral fellowship in a genetics lab at the Massachusetts Institute of Technology when Dr. Joseph Sambrook, former chairman of biochemistry at UT Southwestern and a founder of PEPR, called to urge him to apply. "Boston was a bigger adjustment for me than coming back to Dallas was," said Zinn, an assistant professor of internal medicine.

But the pace of progress at UT Southwestern had far outstripped his expectations. "When I left in 1988, they'd just been given the land for a North Campus, and they were talking about the wonderful research buildings they were going to build there," he recalled. "The rocket was on its trajectory, but I had no idea how fast and how far it had flown."

Each PEPR fellow has his own well-equipped lab in the Simmons Biomedical Research Building on the North Campus, and they share core lab facilities that Williams called "the equivalent of those provided by a good basic-science department." They have had laboratory and clerical help, as well as administrative and moral support from PEPR administrators Martha Hirschey, administrative services officer in cardiology, and Tina Romero, administrative secretary in cardiology.

As Smith winds up his fellowship research and Landschulz and Zinn, who started their fellowships in 1993, pursue their research projects, the PEPR committee continues to comb the country for a few special M.D./Ph.D. students.

"This is an experiment in midstream, and so far it seems to be successful," Williams said. "Whether it should become a national model remains to be seen."

In any case, PEPR is giving UT Southwestern a competitive edge in identifying and attracting the very best clinically trained medical scientists, Williams said. "And it is invigorating to meet so many bright, promising young people. It's really a lot of fun."

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