



- Campus News
- Student Life
- Calendar
- Research
- Arts & Culture
- UK HealthCare
- Professional News
- UK Athletics
- UK Happenings
- Blogs
- President's Blog
- Multimedia



By Allison Perry
Colleges: Pharmacy

Guo, World-Renowned Nanobiotechnology Expert, to Join Faculty at UK

Published: Aug 17, 2011

SHARE: [f](#) [t](#) [g+](#) [+](#) [Printer-friendly](#)

LEXINGTON, Ky. (Aug. 17, 2011) – The University of Kentucky announced today that Peixuan Guo, director of the National Cancer Institute Cancer Nanotechnology Platform Partnerships Program at the University of Cincinnati and considered one of the top three nanobiotechnology experts in the world, will join the university in the fall, bringing the national program with him.

Nanotechnology is the development and engineering of devices so small that they are measured on a nanometer scale. Nanoscale devices can work as parts of body organs, tissues, and drug carriers to interact with biomolecules on both the surface and inside cells. Because they have access to so many areas of the body, they have the potential to detect diseases and deliver treatments in newer and more effective ways.

For the past four years, Guo has also been the director of a National Institutes of Health (NIH) Nanomedicine Development Center, one of only eight such centers in the country. His center includes labs at the University of California Davis, University of Illinois at Urbana-Champaign, Purdue University, University of Southern Mississippi, Beckman Institute, and University of Cincinnati, as well as other labs of affiliate members at North Carolina State University, Indiana University School of Medicine, Northwestern University, and Duke University. Members of his lab, including four research faculty members, five postdoctoral fellows, and 13 graduate students, will join Guo at UK.

He will serve as a professor in the College of Pharmacy's Department of Pharmaceutical Sciences and will hold the William S. Farish Fund Endowed Chair in Nanobiotechnology for the UK Markey Cancer Center.

Guo will come to UK from the University of Cincinnati, where he serves as the Dane and Mary Louise Miller Endowed Chair in Biomedical Engineering and a professor of molecular virology. Guo's lab has been continuously supported by grants from the National Institutes of Health (NIH), the National Science Foundation (NSF), and the Department of Defense. He currently has five active and two pending grants. Upon arrival to UK, Guo will bring more than \$10 million in research funding.

Guo will strengthen collaborations between the College of Pharmacy and the Markey Cancer Center, thanks to a nanotechnology cancer program grant that he received from the National Cancer Institute last year. This grant – combined with other experts on UK's campus in cancer, pharmacy and engineering – places UK among the nation's leaders in cancer nanotechnology, providing UK the ability to deliver novel cancer therapeutics and advanced diagnostic capabilities.

Guo is also a high-tech entrepreneur and is the founder of two biotechnology companies including Kylin Therapeutics, Inc.

At UK, Guo will focus much of his work on the use of ribonucleic acid (RNA) nanoparticles and a viral nano-motor to fight cancer, viral infections and genetic diseases. He is well-known for his pioneering work of constructing RNA nanoparticles as drug carriers.

"The College of Pharmacy is excited to partner with the Markey Cancer Center to bring Dr. Guo to the Commonwealth," said Timothy S. Tracy, dean of the UK College of Pharmacy. "Dr. Guo is one of the very top nanotech researchers in the world. He and his research team will help enhance our reputation as one of the nation's top colleges of pharmacies, while helping us build our collaborative efforts with Dr. Evers and other researchers across UK's biomedical community."

"Peixuan Guo's research and experience in cancer nanotechnology will be a huge benefit to UK," said Dr. Mark Evers, director of the Markey Cancer Center. "His grant, along with the Cancer Nanotechnology Center grant awarded to us last year, puts UK in a position to provide improved screening and diagnostic capabilities, as well as develop and deliver new cancer therapies. As we move towards applying for our NCI cancer center designation, Dr. Guo's team will be important to our success."

Dr. Michael Karpf, UK's executive vice president for health affairs, says Guo's recruitment is another major step towards the university's research goals.

"The University of Kentucky has always strived to recruit top-level talent, and Peixuan Guo is a shining example of this," Karpf said. "Guo's work in nanotechnology will help put us another step closer to achieving status as a premier academic medical research center."

Guo received his doctorate in microbiology and genetics at the University of Minnesota/School of Dentistry in 1987 under Dwight Anderson, with training in biophysics. Guo constructed the first viral DNA packaging motor and discovered a motor RNA during his graduate studies. He completed postdoctoral fellowships with Enzo Paoletti at the Wadsworth Center of the New York State Department of Health and as a NIH visiting scientist in 1990 with Bernard Moss, a member of the National Academy of Sciences and the international leader in vaccinia virus research.

He joined Purdue University in 1990, was tenured in 1993, and became a full professor in 1997. In 1998 he was awarded as Purdue Faculty Scholar, the highest honor for young faculty at Purdue. He was the founder and director of the Purdue Bionanotechnology Interdisciplinary Graduate Program, while serving as the director of NIH Nanomedicine Development Center also headquartered at Purdue.

The 17-year experience of his lab within the NCI-designated Purdue Cancer Center motivated his move into the field of cancer therapeutics. In 1998, he proposed the pioneering concept of RNA nanotechnology and demonstrated that RNA nanoparticles can be constructed purely with reengineered RNA fragments, which was published in *Molecular Cell* and featured in *Cell*.

In recognition of his research efforts at Purdue, Guo was the recipient of an NIH First Award in 1992 and the "Pfizer Distinguished Faculty Award for Research Excellence" in 1995. He was one of five finalists for the Feynman (Nobel Prize Laureate) Nanotechnology Award in 2005. He has published more than 100 original research papers in refereed journals including *Science*, *PNAS*, *Nature Nanotechnology*, *EMBO J* and *Molecular Cell*; 17 reviews; and more than 100 conference reports.

In 2010, the Markey Cancer Center received a five-year grant from the National Cancer Institute to establish the UK Cancer Nanotechnology Training Center, with first-year funding in the amount of \$335,580. The Markey Cancer Center was one of only six institutions nationwide selected to receive this award. Guo will work with the investigators involved with this grant.

Trainees of the center will be immersed in a research environment designed to take advantage of the multiple research strengths of faculty at UK and will emerge with a broad yet detailed knowledge of cancer diagnostics, intervention, and related nanotechnology applications including drug delivery, early detection, and treatment.

MEDIA CONTACT: Allison Perry, (859) 323-2399 or allison.perry@uky.edu



Tags: Markey Cancer Center, UK Healthcare

Related Articles

[Guo, World-Renowned Nanobiotechnology Expert, to Join Faculty at UK](#) | [Help for Alzheimer's Caregivers in Kentucky, Ohio](#) | [Nursing Faculty Honored at National Conference](#) | [UK Chandler Emergency Department Receives National Recognition](#) | [UK College of Medicine Dean Coats His First Medical Students](#)

Search UKNow

Most Popular Articles

- UK HealthCare Turnaround Helping Lead University Toward Top 20
05/13/2011 - 3:13pm
- Preferred Presidential Candidate to Participate in Forums Today
05/02/2011 - 3:03pm
- Preparing for the 144th Commencement Ceremony
05/13/2011 - 2:59pm
- Todds Leave Legacy of Being the "Students' President" and "First Mom"
06/20/2011 - 9:46am
- Athletics During the Todd Years: A Story of Integrity, Progress Toward Being Best in Country
04/07/2011 - 4:41pm

Most Recent Articles

- Welcome to the University of Kentucky
08/16/2011 - 10:02pm
- Guo, World-Renowned Nanobiotechnology Expert, to Join Faculty at UK
08/17/2011 - 8:52am
- UK Professor, Alumni Featured in Kentucky Homes & Gardens
08/17/2011 - 4:01am
- Help for Alzheimer's Caregivers in Kentucky, Ohio
08/16/2011 - 4:57pm
- Sustainable Agriculture Education Is Growing
08/16/2011 - 4:01am

Campus Calendar

August

1 Mon	2 Tue	3 Wed	4 Thu	5 Fri	6 Sat
7 Sun	8 Mon	9 Tue	10 Wed	11 Thu	12 Fri
13 Sat	14 Sun	15 Mon	16 Tue	17 Wed	18 Thu
19 Fri	20 Sat	21 Sun	22 Mon	23 Tue	24 Wed
25 Thu	26 Fri	27 Sat	28 Sun	29 Mon	30 Tue
31 Wed					

AUG 17 Fine Arts Institute Art Classes for Adults

SUBMIT EVENT VIEW ALL

Reset Page

Navigation

- Campus News
- Student Life
- Campus Calendar
- Research
- Arts & Culture
- UK HealthCare
- Professional News
- UK Athletics
- UK Happenings
- Blogs
- President's Blog
- Multimedia

More

- Graphic Standards
- Contact UK
- Administration
- News Archives 99-'09
- Tobacco-Free UK
- PR/Marketing Staff

In the news

- University of Kentucky gets \$7 million grant to continue Alzheimer's research
Herald-Leader (kentucky.com) (Eli Capilouto; Michael Karpf; Linda Van Eldik), also featured on wkyt.com, lanereport.com, lex18.com, bizlex.com
- University of Kentucky gets \$14.5 million federal grant
Herald-Leader (kentucky.com), also featured on lex18.com, bizlex.com
- University of Kentucky dorm offers free iPad and special courses
Herald-Leader (kentucky.com) (Mark Kornbluh; Cristina Alcalde; Nathan DeWall; Adrienne McMahan)
- East End youth earn free bikes and ride on Legacy Trail through donor generosity
kyforward.com (Frank X Walker)

View Full Section

Suggest a UKNOW Story

