

NANOTECHNOLOGY

RESEARCH PRODUCES BIG RESULTS

—by Jennifer Berghom

Research at The University of Texas-Pan American flourished during President Robert S. Nelsen's tenure. But one of its biggest achievements was one that focused on things small.

Research that mechanical engineering professors Dr. Karen Lozano and Dr. Kamal Sarkar had been conducting using nanotechnology led to the invention of Forcespinning® technology and the creation of UTPA's first multimillion dollar business venture, FibeRio® Technology Corp.

Lozano and Sarkar's work yielded more than \$1.5 million from the Texas Emerging Technology Fund and garnered several prestigious awards – the Silver Award at the World's Best Technology (WBT) Showcase, which is the nation's premier event exhibiting the largest collection of undiscovered technologies coming from the world's leading universities, labs and research institutions. Also, The Society of

Manufacturing Engineers named Forcespinning® one of eight Innovations That Could Change The Way You Manufacture.

"The way to improve the Valley is through education, it is through research, it is through partnering the way we are now with all the economic development leaders here in this Valley," Nelsen said in 2010.

Over the past few years, FibeRio® has grown to become a viable business. It moved into its own location in South McAllen in 2011 after being incubated at UTPA's Rapid Response Manufacturing Center for two years.

"It takes a village to create a FibeRio®," Nelsen said at the company headquarters grand opening. "And we have a real village here. ... This University, The University of Texas-Pan American, is committed to the Valley, committed to McAllen, committed to our citizens and students."



TACKLING THE GENDER GAP

More than half of the students at UTPA are female. But female faculty members, especially those in higher ranks, remain the minority.

Currently, women represent only 18 percent of all faculty in STEM (science, technology, engineering and math) fields at UTPA compared to a national average of 28 percent. For UTPA President Robert S. Nelsen the advancement of women in higher education, particularly in the STEM fields, was a major priority during his tenure. To support this mission, the University received a \$3.1 million ADVANCE grant from the National Science Foundation in Fall 2012 to recruit more female faculty.

"Increasing the number of Hispanic women who will serve as role models for our students is critical for the nation's future. I am incredibly proud of the team at Pan Am that is turning this necessity into a reality," said Nelsen. "Pan Am is doing the right thing."

FACULTY SUCCESS TAKES A BOW

UTPA President Robert S. Nelsen praised and cited the faculty as responsible for much of the progress that has occurred during his presidency.

"Our faculty is one of our strengths. They really care about our students and give to those students constantly," Nelsen said during the Faculty Excellence Award program in the spring. "We also have outstanding research going on here at Pan Am – as good as any place in America."

Four faculty were presented with the 2014 University-level Faculty Excellence Awards for their outstanding work in the areas of teaching, research, service and mentorship.

AND THE WINNERS ARE:



TEACHING
Dr. Victor Alvarado
professor, Dept. of Educational Psychology, College of Education

RESEARCH
Dr. Karen Yagdjian
professor, Dept. of Mathematics, College of Science and Mathematics

SERVICE
Dr. Marie Mora
professor, Dept. of Economics and Finance, College of Business Administration

MENTORSHIP
Dr. Frederic Zaidan III
chair and associate professor, Dept. of Biology, College of Science and Mathematics