UNIVERSITY'S PATENT PROGRAM

allows faculty to '**BE BOLD**' with ideas

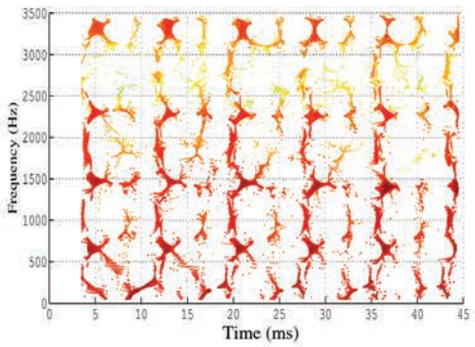
by Lanny Larson

At Fresno State, intellectual property encompasses speaker ID analysis, delaying Alzheimer's disease, new crops for old soil and shrimp control — and each area boasts the patents to protect university researchers' inventiveness.

Through its intellectual property program, the university's Office of Research and Sponsored Programs facilitates the transfer of knowledge, helps faculty members learn about registration and guides applications for patents, trademarks and copyrights.

Dr. Sean Fulop, a linguistics professor, says the program came about after he went through a lengthy and costly patent application program beginning in 2007. Fulop and Dr. Young Kim, an electrical engineering professor, invented a voice-recognition algorithm to determine whether audio samples were spoken by the same person.

The patent wasn't registered until 2011 and has not attracted financial support for further development, Fulop says, although there has been interest internationally in the invention. "Like 98 percent of all patents," he says, "it didn't really go anywhere."



Example of audio sample

However, it became known as Fresno State's first patent.

Dr. Thomas McClanahan, associate vice president for research and sponsored programs, says the intellectual property focus came about because "we decided to fill a need not only in the Valley, but also in the California State University system, and we're making significant strides in these areas in a short period of time."

Patent attorney Grace Liu was hired in 2011 to work on intellectual property issues and on grant applications. McClanahan says Liu has been the catalyst for the university's outstanding progress in this area.

Liu encourages faculty to make invention disclosures so she can assist them in finding industry or government-agency partners or funding to develop ideas to marketability. Asked about the financial benefits resulting from the first seven patents, Liu suggests that's the wrong question, because Fresno State does not have a licensing program.

Liu says Fresno State's intellectual property program will help attract research investment, expanding opportunities for faculty and students and making more investors and researchers aware of the university's work. But, she says, it will take more resources in her office.

She's optimistic because of Fresno State President Joseph I. Castro's enthusiasm for research and interest in new ideas. At his first Spring Assembly Castro called for "boldness in creativity," then added, "Let's generate new ideas, try new things, push ourselves into new realms."

The intellectual property focus is new in the CSU system, Liu says, with only the Fresno, San Diego and Pomona campuses actively engaged. Liu helps other CSU campuses through consultations, application preparation and education about intellectual property law.

She provides the legal expertise for applications, removing a substantial cost barrier by not having to hire outside counsel, as was necessary for Fulop's invention. Liu also educates Fresno State researchers to "change their thinking from being investigators to being inventors."

Instead of asking "why," Liu says, researchers must ask how they can solve a problem and what can be created. "I'm teaching them to consider what they're doing and what's patentable," she says.

Part of her excitement comes from the variety of inventiveness behind Fresno State's patents.

A year and 13 days after the Fulop-Kim patent, the U.S. Patent and Trademark Office awarded a patent to biology professor Brian Tsukimura for an organic chemical composition using a hormone to inhibit the growth of tadpole shrimp. It could be used in manufacturing pesticides for organic-farming practices.

Fresno State and partners Red Rock Ranch of Five Points and the U.S. Department of Agriculture received four patents in 2013 for cultivated varieties of Opuntia cactus pears that grow in high-selenium, boron-saturated, water-starved soils. Such conditions exist on the San Joaquin Valley's West Side, where 400,000 acres were taken out of production, causing economic hardship for growers and residents of one of California's most impoverished regions.

Fresno State's most recent patent was issued in January 2014 for a method of slowing or stopping the progress of Alzheimer's disease. Organic chemistry professor Santanu Maitra and research partner Nilay Patel, a cell biology professor at California State University, Fullerton, invented the process based on easily administered organic molecules.

Invention will accelerate at Fresno State with construction of the Jordan Research Center, with research programs across the campus dedicated to resolving regional needs and with new investment by government, private industry and individuals.

"We're starting new conversations about research on campus and it's very exciting," says Liu, who hopes to build on the early successes so Fresno State can meet today's research needs and lay the groundwork for the university's inventors of tomorrow.

– Lanny Larson is a freelance writer and editor in Clovis.