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Cranford: Texas Tech researchers were among the first to wade into the oily waters of the Gulf of Mexico after last summer's Deepwater Horizon oil spill. On this episode of AcademiCast – we look at two separate studies.

I'm Leslie Cranford.

The Gulf of Mexico Research Initiative is funding a Texas Tech project to collect samples of a common bait fish this summer.

The project – in conjunction with Tulane University – looks at how the oil – and the dispersant used to break up the spill – may have affected the reproductive status of fish. Biology professor James Carr's team is using Killifish (Kill-e-fish) to act as a sentinel species because they breed continuously throughout the summer.

Carr: *And if there any potential effects on the reproductive status of these fish we should pick it up in the Killifish. Likewise, if we see effects in the Killifish then that may indicate that other fish species, including larger kinds of game fish and commercial fish, may be impacted.*

Cranford: Carr's team will collect Gulf killifish at oil-impacted sites off of southern Louisiana, as well as sites not hit by the oil near Southeast Texas.

And at Texas Tech Institute of Environmental and Human Health, researchers have published a study how the oil impacts duck eggs. The study was published in July in *Environmental Toxicology and Chemistry*, the peer-reviewed flagship journal of Society of Environmental Toxicology and Chemistry.

Researchers recovered oil off of the Alabama coast about a month after the spill. Here in Lubbock, they coated fertilized mallard duck eggs with the oil. Their findings? A coating as small as 8-to-9 percent of the shell's surface resulted in a mortality rate of about 50-percent. The scientists also found that the longer the oil remained at sea and was exposed to weather the less toxic it is to the eggs.

Chemistry professor Guigen Li has received a four-year, one million dollar grant from the National Institutes of Health to study more cost-effective ways to sterilize the compounds used to make pharmaceuticals.

The experimental purification concept -- called GAP chemistry – or Group Assistant Purification -- could speed up drug production in the future as well as cut costs. Li says that it can take more time to purify the compounds used to make the drugs than it does to manufacture the actual

drugs. The new purification technique he helped create could make drug discovery faster and more cost-effective

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With agriculture officials projecting drought-related losses reaching more than 3-billion dollars across Texas, two new Web-based programs developed by Texas Tech's Department of Agricultural and Applied Economics will help West Texas and Panhandle farmers better utilize their water resources. The first program utilizes the dozens of Texas Tech Mesonet weather stations scattered across the region. Cotton, corn, sorghum and wheat producers can track soil moisture in real time to develop customized irrigation schedules for specific fields. The second tool helps producers determine which crops will maximize the profit potential of a given field.

This month's Integrated Scholar's love for learning formed early – in the third grade Janet Perez knew she would earn a doctorate. Today she is a noted scholar in Spanish literature. Provost Bob Smith has more on Dr. Perez and how her research intertwines with her teaching.

INTERVIEW

Smith: Professor Janet Pérez has had numerous experiences in academia.

She is currently the Paul Whitfield Horn Professor of Romance Languages & the Qualia Chair of Spanish in the Department of Classical & Modern Languages & Literature at Texas Tech.

Even as a young girl, Professor Pérez believed she could excel in academic studies. And, with her lifelong passion for writing & Spanish language & literature, it's no surprise that Professor Pérez has exceeded even her own expectations—amassing an impressive set of achievements that have propelled her into the ranks of a truly notable integrated scholar…

Pérez: *I knew from the time I was a very small child that I was going to get my Ph.D., because school was the most important thing in the world to me. I knew that I was going to go as far as you could go. I found out when I was in third grade that going as far as you could go was getting a Ph.D., and I told my third grade teacher that I was going to get my Ph.D.*

Smith: Dr. Pérez came to Texas Tech in 1977 as a visiting professor from the University of North Carolina at Chapel Hill. She only had a commitment to stay for a year, but Pérez grew fond of the University & the City of Lubbock & decided to leave her position at UNC-Chapel Hill to work full-time at Texas Tech.

By the time she started teaching at TTU, Professor Pérez had already contributed a significant higher education milestone in becoming the first female in 200 years to be hired full-time in the romance languages department at UNC-Chapel Hill.

Now, after 34 years at Texas Tech, Professor Pérez has developed an enviable record in teaching, research & service.

Throughout her career, Pérez has taught a variety of undergraduate and graduate level courses, including her favorites: 19th and 20th century Spanish literature.

In addition, she has supervised the completion of a large number of master's theses & doctoral dissertations & has mentored many students & faculty through the Texas Tech Teaching Academy…

Pérez: *Mainly it's been working with students and mentoring students in particular and mentoring junior faculty. This is something that to me is very important. So, I mentored a lot of junior women faculty, not necessarily in my department although in my department also.*

Smith: Besides teaching, Dr. Pérez is active in writing & editing.

She has served as editor of the journal *Hispania*, which has a worldwide subscription of greater than 14 thousand. She has also held the founding co-editorship of *The Monographic Review*. Professor Pérez is currently working on two research projects including the second part of a volume of one completed in 1996 & titled *Modern & Contemporary Spanish Poets*. She is also working on a book entitled *The Novel of Spanish Exile*…

Pérez*: I have two book-length projects. One of them came with me from the University of North Carolina, so it's been around a while. This is the literature of exile, and it's mainly the exile from the Spanish Civil War. The Spanish Civil War interestingly enough, although it was kind of small potatoes compared to World War II, many historians have seen it kind of as the dress rehearsal for World War II. It was very inspiring to people who were defending the Republican side, particularly the international brigades. I met people who were exiles or who had been in jail because they were on the Republican side. I became very interested in it, and I started researching it and collecting works. Of course it was totally illegal in Spain under Franco. The first many times I went to Spain, it was the Franco dictatorship still, up until '75. I had made I don't know how many trips to Spain, and I spent two or three years there close succession learning about conditions under Franco and meeting people who were writing there and also finding out about the things you could not talk about and the censorship and how it worked. I started collecting all of this information, and I never had time to write it. So, last year when I had the faculty development leave, my project was the literature of exile. I wanted to write up at least some of the stuff that I have.*

Smith: When describing her work ethic, Dr. Pérez admits she is a workaholic. However, she also says that the best way to manage her time as an integrated scholar is to interconnect research & teaching topics & efforts…

Pérez: *I'm a workaholic, but it's also trying to find things that have some of overlap. Do research in areas that I teach, and then teach authors that I have researched and add that to courses so you have the overlap there.*

Smith: It is axiomatic to say that Professor Janet Pérez is a dedicated scholar in the field of Spanish language & literature, as demonstrated through her numerous publications & outstanding achievement awards. But, probably less apparent to the outside world is how she has been able to blend this passion & commitment with teaching & service during her academic career.

We would like to thank Dr. Pérez for her integrated scholarship & contributions to Texas Tech & beyond. Thanks for listening! I'm Bob Smith.

Cranford: Thanks Dr. Smith

Texas Tech has one of the best meat judging teams in the world. The team won the title World Champion recently by taking first place at the Australian Intercollegiate Meat Judging Contest. All 13 team members placed among the event's top 15 contestants.

That's all for this edition of Academicast. Join us in two weeks for more research and academic news from Texas Tech University.