

MONITOR EDITORIAL

Border health

Hidalgo County leading way in international dialogue to combat Zika virus here

As the Zika virus dominates the news, bringing fear to pregnant mothers that their offspring may be born with the brain disorder microcephaly — which is associated with the tropical mosquito-spread illness — we have learned about the difficulties that border health officials have trying to get and give medical information with their colleagues in Mexico.

So we praise the efforts of Hidalgo County Health and Human Services

Chief Administrative Officer Eddie Olivarez who has been working to convene an international health conference in McAllen to get health representatives from Hidalgo, Cameron and Starr counties together with health officials from the Mexican cities of Reynosa, Matamoros and Ciudad Camargo, near Rio Grande City.

The meeting is scheduled for Feb. 29 at the McAllen Convention Center and will be the first of its kind in over a year, Olivarez told us. Texas health officials from Austin are planning to come, as well as Mexican health officials from Ciudad Victoria, he said.

And while the Zika virus undoubtedly will be on everyone's mind, Olivarez says his intent with this initial afternoon meeting is to open international dialogue to get a structure in place to facilitate future communication about dangerous illnesses like Zika.

Olivarez, who is former president of the U.S./Mexico Border Health Association, is certainly well versed in this type of international dialogue and we should count our region fortunate to have his leadership at a time like this.

The Rio Grande Valley has not had any cases of Zika, but Reynosa has had at least one confirmed case and Monterrey has had at least seven cases, he told us on Friday.

But there could be many more that we

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don't know about and that Mexican health officials will explain to our health leaders later this month. That's the importance of holding such a meeting. We also could learn methods that Mexican officials are using to stop the spread of this mosquito-born virus, as well as other harmful tropical illnesses like Dengue Fever, Chikungunya and West Nile, which killed 17 people in Hidalgo County four years ago.

Brazil has reported over 4,000 cases of microcephaly related to the Zika virus. And the virus is spreading north.

"Zika is going to hit us. It's going to happen. We can't stop Mother Nature, but we want to open up this dialogue because we're going to be working on this for months to come and we need to work together," Olivarez said. "We need to develop this trust to help one another."

We agree with Olivarez' desire for our federal government to return to funding the U.S. Border State Early Warning Infectious Disease Surveillance (EWIDS) Project that enhances the ability of border states to rapidly detect infectious disease outbreaks.

Without such a system in place, if Olivarez wants to get information from Mexico, he must call officials in Austin who will contact our State Department in Washington, D.C., who will contact state officials in Mexico who will contact their local health directors. That process can take a week, he told us. And in the case of a spreading pandemic, that is far too long and puts the public's health at risk.

Therefore we agree that our region needs a more workable solution to sharing time-sensitive medical information with our Mexican neighbors and we hope this meeting will help to bring about one.

We thank the Mexican officials for coming and we hope it is the first of many more that will help keep our Valley healthier.



COMMENTARY | Dr. Juliet Garcia

RGV is on the frontier of discovery

EDITOR'S NOTE: Dr. Juliet V. Garcia, former president of the University of Texas at Brownsville, spoke Thursday morning at a news conference in Brownsville regarding last week's announcement of the groundbreaking scientific discovery of gravitational waves in our universe. Scientists at UTB and the University of Texas Rio Grande Valley have contributed to this discovery. The column below expands upon her remarks last week:

I was in Austin years ago when I overheard a conversation about a gravitational wave physics conference that was going to occur in Texas. One of the fellows said: "I hear it's going to be held at one of the UT campuses." So, I listened a bit more carefully. A second fellow said: "Where? Which UT School?" The first fellow responded: "Well it's got to be in Austin, UT's flagship." The second fellow said: "No, it's not Austin this time, so it must be Dallas, because UT Dallas has a superb physics department." The second fellow said: "No, it's strange, it's not UT Dallas either." So then a third fellow piped into the conversation and said: "It's going to happen at UT Brownsville." The first two speakers were aghast and asked: "Why at UT Brownsville?" The third fellow said: "Because that's where the physicists are that are doing the research in gravitational waves."

The National Science Foundation announcement of the discovery of ripples in the fabric of spacetime, known as gravitational waves, not only confirmed Albert Einstein's 1915 general theory of relativity, it also confirmed to the world that our local physicists are on the frontiers of scientific discovery. This highly noteworthy international scientific discovery collaborative includes more than 20 authors from The University of Texas Rio Grande Valley.

When I became president of UT Brownsville in 1992, one of UTRGV's legacy institutions, we had half of a physicist. That is, the same faculty member who taught physics also taught chemistry. The next

physicist we hired wrote a grant that allowed us to hire another physicist and then another and then those physicists wrote more grants. Today, UTRGV's physics department is composed of 25 faculty members. They are international leaders in their fields of radio astronomy, gravitational wave astronomy, relativistic astrophysics, experimental physics, nanotechnology, biophysics and physics education.

It wasn't easy to grow programs at a young university during a time of scarce state resources. But our faculty is ambitious and determined. I remember going with our then-Provost Dr. Jose Martin, a nuclear engineer, and one of our first physicists, Dr. Mario Diaz, to the National Science Foundation in Washington D.C., seeking grant money for our research. The two scientists taught me just enough physics to be able to talk to NSF program officers about what we were doing at UT Brownsville. We visited with three NSF program officers that day, and each one was very courteous. But each one looked at us as if to say, 'Pobrecitos, I wish they'd go back to wherever they came from because they're obviously not ready yet to compete nationally for research funding.' Every one of them turned us down flat. Essentially, they told us to return in about 10 years when we had a mature program. The three of us got back into the elevator optimistically *con abrazos y felicidades* having survived our first interview with NSF: "We'll come back in five years," we said. And we did.

In the last five years alone, our physics faculty has attracted more than \$20 million of external research funding from NSF, NASA, DOD, NIH, the UT System and the State of Texas.

Research at our universities serves many purposes but chief among them is to launch the next generation of scientists. Individually, we are here but for a brief moment, so our primary job is to fling open the doors of opportunity for the next generation.

We knew that if we



At left, Dr. Juliet Garcia, former president of the University of Texas at Brownsville, speaks Thursday at a news conference at UTRGV's Brownsville campus after it was announced scientists have discovered gravitational waves with help from Brownsville physicists. Courtesy photo

wanted to help Texas close the gaps in producing STEM graduates, we had to reach students early in their studies, so our faculty have been exceptionally creative in their outreach. For over a decade, our physicists have been hosting a summer gravitational wave astronomy summer school at South Padre Island, attracting university physics students from all over the world. Locally, our physics program hosts research experiences for teachers of science and monthly public telescope viewings, as well as a monthly Science Café gathering in historic downtown Brownsville. In addition, UTRGV physics students take their Physics Circus on the road, performing dynamic, and sometimes explosive, experiments for schools and community groups.

While our physics program used to mirror others across the state that would produce only one physics graduate every couple of years, this outreach changed the trajectory of science education in our region. During its last several years as UT Brownsville, UTB was named one of the top 10 universities in the nation, producing the most Hispanic baccalaureate physics graduates. Among all physics graduates, UTB ranked No. 23 in the nation for producing undergraduate physics graduates and No. 18 in the production of master's physics graduates. In its inaugural year, UTRGV is positioned well to continue this legacy with 90 declared physics majors.

And while the numbers of graduates continue to grow, so does their quality. Our

graduates are employed in diverse sectors in the job market — they are accepted in top doctoral programs throughout the nation, including MIT and CALTECH and internationally at the Max Planck Institute in Germany. They become exceptional high school teachers and university faculty members. They are recruited by scientific divisions of the U.S. Navy and employed in the finance and technology industries.

Perhaps most exciting for our region is the partnership being forged with SpaceX, which is expected to begin launching rockets from our Gulf Coast as early as this year. Through UTRGV's STARGATE project, local physics students and graduates will track SpaceX rockets as they hurl through space. And, in between launches, they will conduct cutting-edge research.

Physics represents but only one of several exceptional programs that have been cultivated in the Rio Grande Valley, but it is one I speak of often because it seems to astound people to imagine that we can do important physics here. I speak of it often also because it proves that there is nothing wrong with the human capital in the Rio Grande Valley that a little opportunity can't solve. And as UTRGV evolves, I look forward to learning of the breakthroughs in diabetes and obesity, coastal studies, bi-literacy and many other areas in which our inherent assets position us to become a global leader.

Dr. Juliet Garcia is former president of the University of Texas at Brownsville.

SUBMITTING A GUEST COLUMN

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