



p1016 No shot: India was not prepared to deal with its encephalitis outbreak.



p1020 Early warning: US states are preparing to test newborns for metabolic disorders.



p1022 Lone voice: Dominique Toran-Allerand has made a career out of defying dogma.

Research losses surface in hurricane Katrina's aftermath

When hurricane Katrina hit New Orleans on 29 August, Wai-Choi Leung, a pathologist at the Tulane Cancer Center, stayed on campus, determined to save his department's frozen cells and tissue samples. But the next day, when flood waters seeped into the building and shut down emergency generators, he realized his efforts might be futile.

Two days later, the university's security staff directed Leung and others who had stayed to tend to patients and research to evacuate. Leung spent the next 24 hours on his building's roof, waiting for a rescue helicopter and listening to rifle fire in the city below.

In the aftermath of Katrina, much of New Orleans lay submerged under two meters of water. With damage estimates of up to \$200 billion, the hurricane is likely to be the costliest natural disaster in US history. The death toll as of 16 September was approaching 800; Leung had located three of his lab members, but still hadn't heard from one graduate student.

Scientists probably won't know the extent

of their research losses for weeks. New Orleans researchers collectively have about \$150 million each year in grants from the US National Institutes of Health (NIH). "But you can't put a monetary value on many of the materials that might have been lost," says Norka Ruiz Bravo, NIH deputy director for extramural research.

Leung sent a recovery team and crates of dry ice to bring samples back to borrowed lab space in Baton Rouge, where he set up shop after the evacuation. But members of the national guard patrolling the building turned them away.

Still, he is one of the luckier ones—most of his lost cell lines are replaceable. Bruce Bunnell, a Tulane biologist, says years of samples from gene therapy and stem cell treatments for Tay-Sachs disease were destroyed in his thawed freezers. "Irreplaceable stem cells are now lost," he says.

As evacuees were flown to faraway shelters, scientists who worked at the city's universities were trying desperately to return to the city. Like Leung, many are still trying to retrieve samples and equipment from damaged buildings. Others are setting up makeshift labs with generous collaborators or with universities who opened their doors to them. "We have no idea when we can go back," says Bunnell.

At Tulane, public health and epidemiology studies were among the hardest hit. Thousands of blood samples from the landmark Bogalusa Heart Study, which examines cardiovascular risk factors in minority children, were lost when the emergency generators failed.

Tyler Curiel, head of Tulane's largest cancer lab, co-opted a private jet and police helicopters

Meetings relocated due to hurricane Katrina

New venue/dates	Conference
December 16–19 Washington, DC	American Society for Microbiology 45th Annual Interscience Conference on Antimicrobial Agents and Chemotherapy
December 10–14 Philadelphia	American Public Health Association 133rd Annual Meeting and Exposition
December 10–13 Atlanta	American Society of Hematology 47th Annual Meeting and Exposition
November 18–22 Orlando	Gerontological Society of America 58th Annual Scientific Meeting
July 9–10 Washington, DC	3rd International Conference Cancer on the Internet

and managed to save blood and tissue samples from an ongoing immunology trial, as well as unique cancer cell lines. Darwin Prockop, director for the Center for Gene Therapy, also saved an extensive collection of cell lines from the center that will be used to develop treatments for spinal cord injury and heart failure. Curiel says his team was booted from the medical school, at gunpoint, three hours earlier than expected, so they could not recover colleagues' research.

The NIH has extended grant deadlines for these researchers and plans to offer supplemental grants for new equipment and supplies. Universities may also be eligible for construction grants, which were given to Texas schools after a devastating flood in 2001.

Professional organizations such as the Association of American Medical Colleges set up websites to coordinate offers of housing and lab space for researchers and students displaced by the storm. And Texas-area medical schools banded together to offer freezers and lab benches, as well as space for makeshift classes.

But for many researchers, it is likely to take at least a year to get labs back on track. "NIH has been very supportive, but I'd like to see something a little more creative for people getting back on their feet," says Bunnell. "A lot of us are concerned about our long-term futures."

Emily Singer, Boston

Katrina disease fears unfounded

Researchers in New Orleans who double as clinicians spent the days after the hurricane tending to patients and sick evacuees. Fortunately, the flood-borne epidemics doctors feared never came to pass.

Officials have not yet detected signs of West Nile virus, which was a primary concern after the hurricane. Three people have died after infections with *Vibrio vulnificus*, a bacterium common in warm seawaters, and there have been small outbreaks of Norovirus among evacuees in Houston shelters.

The US Centers for Disease Control and Prevention has sent teams to the region, but the broad scattering of evacuees makes illnesses difficult to document. The agency also recommended that evacuees living in shelters be brought up to date on their vaccinations. It is unclear whether existing stockpiles hold enough of several crucial vaccines, such as those that prevent tetanus and flu, to treat everyone in need.

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Water damage: Years of research samples might be lost forever, scientists fear.

Jam Knapik/Splash News