

that, prior to coming to Washington, have come to know each other, and so it really gives them the ability to talk outside their bureaucratic silos.

**Are there examples of where science can lead to better policy?**

I think the business community is very interested in seeing science play a larger part in policy-making. Take nanotechnology and synthetic biology, for example. They are going to be big growth industries for our future. But there are health and safety concerns — and there can either be a perceived risk to health and safety or an actual one. So it is important that we get an early start on transparent research in health and safety in these two areas so that the public can feel comfortable that if there is a problem, then we're getting it off the shelf, and if there isn't, then there's a body of evidence that they can see.

**Are you disappointed that Congress has not passed a climate bill?**

I voted for the House bill but I'm less interested in a particular bill than I am in trying to deal with the problem. I'm very concerned that we're outliers compared with the rest of the world. In term of our international stature, that really has hurt, particularly in Europe.

**You are known for reaching out to European legislators. What has been your aim in doing so?**

Between the European Parliament and the US Congress, you have two legislative bodies that represent 800 million people and over half the world's GDP. The European Union and the United States also share similar cultures and wage scales. I really think it's important for us to be collaborating, intellectually and financially, in bringing more symmetry to standards and regulations and reducing barriers between our two regions. We have a common interest, for example, in clean energy. Some of those areas, such as next-generation nuclear power, carbon capture and sequestration, and fusion are hugely expensive. I think those are areas where we can collaborate.

**Do you have any advice for your successor as chairman?**

Try to maintain the civility that allowed us to work together. I tried to bring the Republicans in early to make them a part of the process. It made our bills better, and because of that we were able to go to the floor with a unified effort and pass legislation in a bipartisan manner — and if you want legislation to continue here, it needs to be bipartisan. ■

INTERVIEW BY IVAN SEMENIUK

LATIN AMERICA

# Chávez squeezes scientific freedom

*A string of new laws and a presidential power grab unsettle researchers in Venezuela.*

BY ANNA PETHERICK

Venezuela's beleaguered scientists are facing renewed pressure from their government, which this week assumes control of levies from private companies that represent one of the main sources of research funding in the country. Meanwhile, President Hugo Chávez has gained fresh powers to enact legislation by decree, which some researchers fear he will use to close universities or curtail academic freedom.

These changes were hurried through Venezuela's National Assembly following the national elections on 26 September — when Chávez's party lost its two-thirds majority. The new assembly convenes on 5 January. "There are problems particularly for us in science," says mycologist Gioconda San-Blas, an emeritus professor at the Venezuelan Institute for Scientific Research in Caracas. "First we have a new law for science and technology, then restrictions to the Internet. Now there is a new law relating to universities as well."

The changes to the science and technology law, known as LOCTI, are manifold. Enacted in 2005, LOCTI provided a boost to science funding in Venezuela by requiring larger companies to plough money into research — which could be done either in-house, or at a university or research institute chosen by the company. Today, LOCTI funds amount to 3–4% of Venezuela's gross domestic product (GDP), compared with government science funding of about 0.5% GDP. Although LOCTI funds did not always reach the best public labs, some companies "gave generously to university projects with very good results", says Jaime

Requena, a former president of the Institute for Advanced Studies in Caracas, who was dismissed in 2009 after criticizing the government. But "the new version forces all private enterprises to surrender their LOCTI contribution to an office within the Ministry of Science and Technology", he says. "Now the destiny of all collected funds from private sources will be decided by the government according to the 'Socialist Plan for the Nation'."

The amendments also narrow the fields of enquiry that can receive LOCTI funds to just four categories — climate change, energy innovation, building materials and urban development — and enable almost anyone to carry out the research, regardless of their qualifications. "According to the government, everyone can do science," says San-Blas, who worries that science in the country will become less professional as a result. The changes were approved without consultation with the research community.

Other legal changes mean that university budgets will now be controlled by 'communal councils' made up of local citizens, which will also elect university vice-chancellors. A new telecommunications bill mandates Internet providers to censor web pages according to government guidelines, potentially restricting scientists' access to information.

Orlando Alborno, a sociologist at the Central University of Venezuela, Caracas, fears that Chávez's augmented presidential powers could be used to close universities that host professors who vocally oppose him. "If he closes down the autonomous universities he may face an ugly fight, but having the power in his hands he will oblige his enemies to negotiate on his terms," he says. "I see more and more control." ■



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