



line at the big sequencing centers that are now scrambling to decipher the genetic code of humans, mice, and rats, says NHGRI director Francis Collins.

The list is intended to bring order out of chaos. In the past couple of years, vari-

ous researchers have lobbied the big sequencing labs—including those at Washington University, Baylor College of Medicine, and the Whitehead Institute for Biomedical Research—which now have excess capacity, to sequence their pet organism. Some succeeded: The Whitehead Institute recently deciphered the genomes of a fungus and a tunicate.

To make the process fairer, NHGRI last summer invited researchers to justify why their organism should jump to the front of the queue. Each proposal was peer reviewed and rated according to the organism's importance to medical research, basic biology, and evolutionary studies. The selection committee also considered how many researchers would benefit from the sequence and how amenable it was to study.

In setting sequencing priorities, NHGRI was also indirectly determining which model organisms biologists will be studying in the coming years. "The viability of your model system is really dependent in this day and age on having a genome sequence," says James Coffman, a developmental biologist at the Stowers Institute for Medical Research in Kansas City, Missouri.

The sea urchin made the cut after 75 biologists wrote effusive letters about its usefulness in developmental biology, cell biology, biochemistry, and studies of gene regulation.

Honey bee proponents, including entomologist Gene Robinson of the University of Illinois, Urbana-Champaign, swayed the committee by de-

scribing the insights the bee can offer into the genetics underlying complex behaviors.

Fungi made it for practical reasons—small genome size, big impact on crops and health—and its potential contribution to evolutionary biology. "With them, we can learn about a whole kingdom in one fell swoop," says Ralph Dean, a fungus expert at North Carolina State University in Raleigh (*Science*, 22 June 2001, p. 2273).

Lobbyists for the rhesus macaque got an assurance that it will be first in line once these six are done. But advocates of the cow and *Xenopus* will have to wait.

—ELIZABETH PENNISI

MEXICAN BIOTECHNOLOGY

New Law Could Turn Scientists Into Outlaws

Imprison your leading scientists for doing ... research? That could be the effect of a sweeping new law that effectively bans most biotechnology in Mexico. So broad are its restrictions, in fact, that they could block researchers from working with any transgenic organisms, even in the lab. Although Parliament passed the law in February, many of the nation's molecular biologists are just now learning of it, and they are up in arms.

The law, perhaps the world's most sweeping biotech regulation, is part of a larger initiative to reform biosafety rules in Mexico. Most of the law deals with relatively uncontroversial matters: regulating the disposal of hazardous wastes, controlling toxic chemicals in urban areas, and blocking the introduction of exotic species. But the little-noted Article 420 of the new law imposes up to a 9-year prison sentence on anyone who, "in violation of the established applicable norms, imports, exports, traffics, transports, stores or releases into the environment any genetically modified organism that changes or

can change negatively the components, structure, or function of natural ecosystems." According to Article 420, "genetically modified organism" means "any organism with a new combination of genetic material that has been created by the techniques of biotechnology, including those deriving from the techniques of genetic engineering."

The draconian ban might have been a legislative response to the controversial report that maize in southern Mexico, the center of diversity for that crop, contained genes apparently acquired from illegally planted transgenic stock (*Science*, 1 March, p. 1617; 12 April, p. 236). If so, scientists say, it is a ludicrous overreaction that seems at cross-purposes with government efforts to encourage home-grown biotech. Indeed, the government body intended to supervise these efforts, the Consultative Committee on Biotechnology, complained in a 26 April letter to Parliament that its members "could be threatened with prison by a simple claim that the transgenic organisms that we developed, stored or transported *could* have negative effects on the environment."

Although Article 420 is in effect, it is not yet being enforced, because the relevant "established applicable norms" do not exist. SEMARNAT, Mexico's environment ministry, has told researchers that it is developing the "norms," which will be published in draft form in the *Diario Oficial*, probably next month, for a 60-day comment period. Scientists inside and outside SEMARNAT are demanding that the norms be used to rein in the law.

But researchers in Mexico are far from complacent. "Nobody is sure how the law will affect them, nor how it will be enforced," *Science* was told by one geneticist in Mexico, who has asked for anonymity because of the "delicate" situation. "It is very difficult to envision that the Mexican government is going to send some of its best scientists to jail for following what were the laws before this latest act was passed." But that, this researcher said, might end up being the case.

—CHARLES C. MANN

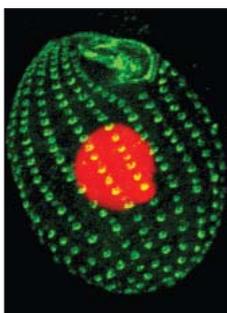


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Illegal action? A researcher obtains DNA at a maize research lab, CIMMYT, outside Mexico City.