

terrorism Preparedness and Response Act (H.R. 3448; energycommerce.house.gov) will require tighter laboratory security, government registration, and background checks for scientists and others handling more than three dozen potential bioterror agents identified by the government. The \$4.6 billion measure, which addresses everything from food and water supply safety to prescription drug testing, also calls for more money for

research by setting realistic regulatory timetables. It requires "prompt" government screening of researchers and technicians working with select agents and offers an appeals process for workers who say they were improperly placed into a barred category, such as drug user or felon. But a definition of "prompt" must still be written, notes Leventhal.

The new law sets a 6-month timeline for implementing the rules, which will take effect just as the National Institutes of Health (NIH) makes a new set of awards to combat bioterrorism. With that in mind, the legislative report urges NIH officials to remind grant seekers "to begin the registration and screening process ... so as not to delay this important research."

The bill also approves \$600 million over the next 2 years for CDC to address "extreme disrepair" at its laboratories and \$415 million for USDA to improve agricultural security. CDC is expected to get at least \$20 million to boost lab inspections and to set up a national database to help track stolen or misplaced agents back to their source. An effort to study antibiotic resistance receives \$50 million. Congress has already agreed in separate bills to provide money for most of these projects.

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NEUROSCIENCE

Redrawing the Brain's Map of the Body

One of the more distinctive images taught in introductory biology or psychology courses is the motor homunculus: a deformed map of the body drawn on the primary motor cortex, a part of the brain that guides movements. Lots of neurons in this region help control the hands and face, so these features of the homunculus are exaggerated, the lesson goes. In contrast, less nimble body parts, such as the torso, look relatively scrawny.

As is often the case, experts knew that reality was somewhat more complicated; for instance, the areas representing different body parts weren't as well defined as the picture implies. But new findings go even farther, suggesting that the role of the primary motor cortex might be fundamentally different than originally thought. Rather than simply controlling different parts of the body, it might direct a host of body parts to assume complex postures. What's more, the map appears to be organized not just according to muscle groups but by the positions in space where

ScienceScope

Stem Cell Hostage? Final approval of the European Union's flagship research program has become entangled in the politics of embryo research. Several countries this week threatened to hold the \$17 billion Framework program hostage to demands for stricter prohibitions on human embryo research. The 6th Framework, a 4-year program slated to begin this fall, rules out research on reproductive cloning and the creation of embryos for research. But four E.U. members—Germany, Austria, Ireland, and Italy—were hoping to add prohibitions against therapeutic cloning and the derivation of new human embryonic stem cell lines, on the grounds that such work is not permitted in their countries. Together the four would have enough votes to block the Framework's approval in the E.U. Council, which still must approve the program. But the coalition appeared to be unraveling as *Science* went to press; if it does, say officials in Austria and Germany, they will continue to push for more-restrictive language in ongoing budget debates.

Legal Threat The Pasteur Institute in Paris faces a potentially expensive day of reckoning. For a decade, the Pasteur and the Association France-Hypophyse, an endocrinology group, have been at the center of a controversy over cases of the fatal brain-wasting condition, Creutzfeldt-Jakob disease (CJD), linked to the use of contaminated human growth hormone (HGH). Several scientists are under criminal investigation for their roles in preparing HGH derived from cadavers tainted with aberrant prion proteins implicated in CJD. The hormone stocks were prescribed to children in 1984 and 1985, before France switched to recombinant growth hormone (*Science*, 30 July 1993, p. 543).

The French government has offered the families of 81 CJD victims, out of 1200 at-risk individuals, compensation of \$250,000 each. But the family of Pascale Fachin, who died last June at age 30, is seeking greater damages—\$800,000—from Pasteur and the association. A civil court will rule on its claim on 9 July.

The exact wording of the ruling will be critical. According to a Pasteur spokesperson, the institute's insurance would not cover a judgment finding it responsible as the manufacturer of the tainted preparation; but a ruling that it was merely the supplier of the raw materials would be covered. Either way, a judgment against Pasteur could spur litigation by other families.

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United front. HHS Secretary Tommy Thompson, far right, joins legislators from both parties at briefing on bioterrorism bill.

research, upgrading labs, and developing better systems for tracking and detecting threats to human health and agriculture. "Congress did a good job of providing clarity to researchers about their responsibilities," says George Leventhal, a lobbyist with the Association of American Universities in Washington, D.C. But "the development of sound regulations will be extremely important," adds Janet Shoemaker of the American Society for Microbiology, also in Washington.

The anthrax letters triggered an immediate reaction from Congress, including calls to bar all non-U.S. citizens from working in labs that handle dangerous agents. The research community mobilized quickly against such extreme measures and gained time to make its case after the bill became bogged down over disagreements on food-safety and drug-testing provisions.

The final version reflects some of the researchers' input. It avoids a blanket ban on foreign scientists, as well as an earlier one-size-fits-all approach to regulating the 42 viruses, organisms, and toxins on the list of dangerous "select agents" compiled by the federal Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia (*Science*, 16 November 2001, p. 1438). Instead, it gives regulators with the Department of Health and Human Services (HHS, CDC's parent agency) "flexibility to impose different levels of security requirements on different select agents," according to a report accompanying the bill. The U.S. Department of Agriculture (USDA) must develop its own list of potential agroterror agents that will be subject to regulation; it will have similar leeway. Violators face fines and jail terms of up to 5 years.

The new law also calls on HHS and USDA to "minimize disruption" of existing