

"DOE and [the National Nuclear Security Agency] both had some last-minute questions that we did not feel we could adequately answer in the time available," says UC spokesperson Michael Reese. DOE spokesperson Jeanne Lopatto says that Energy Secretary Spencer Abraham had "asked for more information." The planned announcement of the regents' decision, she adds, "was a bit premature." In addition to Juzaitis, currently associate director for weapons physics at Los Alamos, the other candidates are believed to be Jeff Wadsworth, Livermore's deputy director for science and technology; Michael Anastasio, deputy director for strategic operations; and Steven Koonin, a nuclear physicist and provost at the California Institute of Technology in Pasadena. Juzaitis declined to comment on his candidacy.

Typically, the university's regents rubber-stamp the president's choice for director, and DOE in turn approves the selection. But recent lab controversies have forced DOE to pay more attention. Livermore's eighth and current director, Bruce Tarter, announced his retirement in December amid problems at the National Ignition Facility that have tripled its estimated \$1.2 billion construction cost.

Choosing a Los Alamos manager would be "a strong rebuke to Livermore," says Hugh Gusterson, a Massachusetts Institute of Technology anthropologist who has written extensively on both labs. "Livermore has a tradition of weak management oversight," he adds, "while Los Alamos has always been thought to run a tighter ship." It would also go against the lab's history of promoting from within. "[Juzaitis] is certainly a choice that would have left people here stunned and demoralized," says one Livermore physicist.

—ANDREW LAWLER AND CHARLES SEIFE

ALCOHOLISM RESEARCH

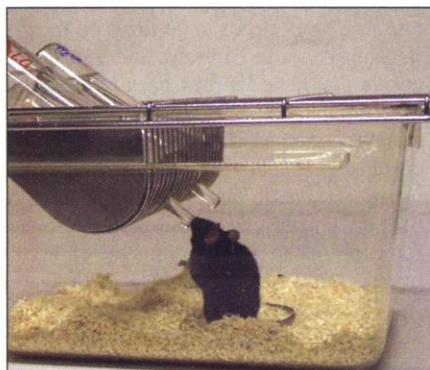
Stressed Mutant Mice Hit the Bottle

Some people can be moderate drinkers for years, only to become mired in alcohol after a stressful life event. A new mouse model described on page 931 may help explain why. In the mice, which have been genetically altered to lack a key component of their stress response system, stress apparently acts as a catalyst that makes them—perhaps permanently—more prone to drink. "This paper nicely shows the relationship between genetics and environment," says alcoholism researcher Todd Thiele of the University of North Carolina, Chapel Hill.

The work comes from behavioral pharmacologists Inge Sillaber, Rainer

Spanagel, and colleagues at the Max Planck Institute of Psychiatry in Munich, Germany. In previous experiments, Max Planck researchers found that mice lacking the gene encoding the receptor for corticotropin-releasing hormone (CRH) seemed to have a blunted stress response. For example, says Sillaber, the animals were less anxiety prone than normal mice, eagerly exploring well-lit boxes that nocturnal rodents normally avoid.

Because stress is a cause of drinking in humans, and because stress-induced drinking has been shown to have a genetic component, Sillaber and her colleagues wanted to see how the loss of the CRH receptor affected the animals' drinking habits. The researchers stocked the cages of normal and altered mice with two bottles to choose from: one with pure water, the other containing 2% to 8% alcohol. Both types of mice proved to be moderate tipplers, choosing pure water most of the time.



Stress response. Moderate drinkers increase intake after nasty experiences.

But the two groups diverged after being put through some difficult experiences. In one test, a model of "social defeat," a male mouse was put into the cage of a hostile stranger for a brief period 3 days in a row. When they were together, the resident mouse attacked the visitor; then they were separated by a wire mesh, preventing the visitor from being mauled but keeping him intimidated.

None of the mice's drinking behavior changed during or immediately after the test, the researchers report. But alcohol consumption by the mutant mice began to rise a couple of weeks after the unfriendly cage visits, and a month afterward, their drinking had more than doubled, whereas that of the normal mice hadn't changed.

Both groups of mice were then put through a second ordeal. For 3 days in a row, they had to spend 5 minutes in a container of water, unable to get out. The mutants' alcohol consumption rose even further. What's more, the authors report, the mutants were still drinking substantially more than the controls 6 months after their unpleasant involuntary

ScienceScope

Into the ITER Ring Spain has become the latest country to enter the competition to host the International Thermonuclear Experimental Reactor (ITER), a \$4 billion fusion energy project. Spain last week presented its candidate site at a Moscow meeting of the ITER partners. Spain's entry is expected to compete against offers from Canada, France, Japan, and Russia (*Science*, 22 June 2001, p. 2240).

Spain would build ITER on the site of a shuttered nuclear power plant in Vandellós, near Barcelona. Ministry of Science officials tout the site's accessibility and seismic stability. Whether those assets will give Spain an edge, however, won't be known until this summer, when European Union officials decide whether to forward one or both of the continent's entries to a final competition. The ITER parties are expected to select a winning site by the end of the year.

Imaging Chief Tapped An Atlanta radiologist will direct the newest institute at the National Institutes of Health (NIH). Roderic Pettigrew (below) of Emory University has accepted the job as chief of the year-old National Institute of Biomedical Imaging and Bioengineering.

Pettigrew, who holds a medical degree and a doctorate in radiation physics, has spent most of his career developing cardiovascular imaging techniques. His experience makes him "a very appropriate choice" to bridge the fields of bioengineering and imaging, says Emory radiology chair William Casarella. Pettigrew declined to comment on his appointment, which was expected to be announced this week.

One of Pettigrew's first tasks will be to shepherd the transfer of certain grants to his institute from the rest of NIH. He must also decide whether to create an intramural program. Pettigrew's appointment means that African Americans now permanently head three of NIH's 27 institutes and centers.



Political Peer Review In a highly unusual move, the French Academy of Sciences this week voted to endorse President Jacques Chirac in the 5 May presidential runoff election that pits Chirac against far-right candidate Jean-Marie Le Pen. Citing "exceptional circumstances," the nonpartisan academy declared that Chirac was the only candidate "capable of permitting the development of research."

Contributors: Xavier Bosch, Jocelyn Kaiser, Michael Balter

swims. For mice, that qualifies as a permanent change in how they respond to alcohol.

Exactly how loss of the CRH receptor alters the animals' drinking habits is not clear. The mutants don't appear to be any more shaken up by the stressful situations than are the normal mice. And because they don't start drinking more right away, they're not relying on alcohol to restore their courage. Jane Stewart of Concordia University in Montreal, Canada, who studies the involvement of CRH receptors in addictive behavior, explains that "the stress may activate pathways that have nothing directly to do with fear and anxiety but which alter the approach to alcohol itself."

The researchers are now doing association studies in humans in hopes of finding out more about such pathways. Specifically, Sillaber and Spanagel will look for variations in stress-related genes in alcoholics. Some alcoholics, they say, may have defects in their CRH receptors or other anomalies that disrupt the stress response system in a way similar to that seen in the mutant mice. This research, they say, may help pinpoint some of the genes that make an individual more likely to respond to the slings and arrows of outrageous fortune by turning to the bottle.

—CONSTANCE HOLDEN

POPULATION STUDIES

U.K.'s Mass Appeal for Disease Insights

LONDON—Plans shifted into high gear this week for a huge repository of information on the genetics and lifestyle of the population of the United Kingdom. The \$66 million BioBank UK hopes to collect data from half a million middle-aged Britons over the next decade. But a public battle is looming over how much access companies should have to the database.

The project, first proposed more than 2 years ago, aims to use the trove of data on the British population's genetic makeup and way of life to flush out factors that influence common diseases such as cancer, diabetes, and heart disease (*Science*, 18 February 2000, p. 1184). On 29 April, the Medical Research Council, the Department of Health, and the Wellcome Trust, a mammoth biomedical charity, announced their financial backing for BioBank, which will collect blood samples and information on diet, smoking, and other lifestyle choices from 500,000 volunteers aged 45 through 69, then track their health for at least 10 years. Researchers will mine the database for disease-related patterns, such as genes that heighten vulnerability to

the cancer-causing effects of smoking.

The study is a logical follow-up to the Human Genome Project, says Wellcome Trust director Michael Dexter. "It is part of an overall strategy to really ensure that the [sequencing] research we've done does have health benefits," he says. The human genome sequence, he says, will allow researchers to more quickly identify DNA variations in the U.K. population that correlate with disease. BioBank will stand out from a growing pack of genetic databases—including deCODE, which probes for disease genes in Iceland (*Science*, 1 January 1999, p. 13)—because it will collect detailed data on lifestyle choices and risk factors across several ethnic groups. The search for an executive director and a headquarters site will begin in the next few months.

An oversight committee, to be established by BioBank's funders, will hammer out the rules for access to the data. These are expected to come under intense scrutiny. "A lot more work needs to be done on the relationship between BioBank and industry" to ensure that benefits flow back to the public, asserts David S. King, coordinator of Human Genetics Alert in London. The watchdog group is lobbying for a ban on patents based on genetic discoveries that come out of the database. The group is also pressing for BioBank to allow volunteers to opt out of research they may object to, such as studies on behavioral genetics. Dexter argues that industry researchers must be given access for the project to succeed. "At the end



Pay later? BioBank UK will probe the links between genes, lifestyle, and disease.

of the day," he says, "they're the ones who develop the drugs."

BioBank has time to address such issues: Full-scale enrollment of volunteers is not likely to get under way until 2004, says a Wellcome Trust spokesperson. The real test will come then, when doctors start pitching the project in earnest to their patients. "It is an opportunity to get people on board for this kind of new biology," says Dexter.

—GRETCHEN VOGEL

GENOME RESEARCH

Venter Is Back With Two New Institutes

After 3 months of rare silence, genome scientist J. Craig Venter is back on the air. Venter, who abruptly resigned in January as president of Celera Genomics of Rockville, Maryland (*Science*, 25 January, p. 601), announced 30 April that he plans to establish two new institutes that will focus on ethics, clean energy, and the environment. Venter also made headlines last week by confirming a persistent rumor about Celera's research: "Three-fifths" of the human genome the company sequenced and published in 2001 is his own.

Venter says he is establishing an outfit called the J. Craig Venter Science Foundation. It will be the financial and legal umbrella for three nonprofit organizations whose boards he will chair, all located in Rockville. One is already well established: The Institute for Genomic Research (TIGR), a sequencing and gene analysis operation presided over by Venter's wife, microbiologist Claire Fraser. TIGR's two new siblings will be a think tank called the TIGR Center for the Advancement of Genomics (TCAG) and a research institute called the Institute for Biological Energy Alternatives (IBEA). All three will share TIGR's current endowment, which is estimated to be worth about \$140 million, according to Venter. The fund was established with stocks Venter received from Celera and from an earlier partnership with Human Genome Sciences of Rockville.

The broadest of the new operations, TCAG, will enter a field already well populated with serious thinkers. TCAG will concern itself with "public policy and ethical issues related to the sequencing of the human genome," says Venter. Initially it will take up four topics: risks of discrimination and a mistaken public emphasis on "genetic determinism"; fallacies about race; genetics and medicine; and stem cell biology. Venter says, for example, that congressional efforts to "criminalize" scientific research by banning some cloning and embryonic stem cell studies are "unprecedented" and deserve much wider comment. He plans to recruit a staff of 20 to 30 people to support up to 30 visiting faculty, who will come for periods of 3 to 12 months.

TCAG's turf overlaps to some degree with that of another new center announced in April, the Genetics and Public Policy Center of Washington, D.C., backed by the Pew Charitable Trusts and Johns Hopkins University in Baltimore. The Hopkins center, headed by former National Human

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