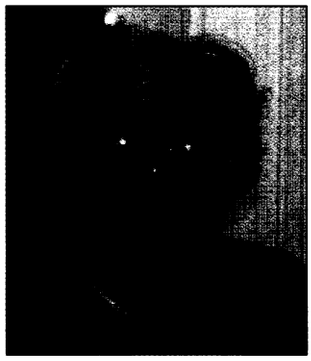
SWITZERLAND

Voters Reject Antigenetics Initiative

BERN—Swiss biological scientists were partying this week after a nationwide referendum rejected by a surprisingly strong 2-to-1 margin a proposal to ban research in Switzerland involving transgenic animals and the patenting of genetically modified organisms. The vote capped an unprecedented 2-year debate over the benefits and potential threats of transgenic research.

"Scientists made a difference in this campaign by getting out of their labs and establishing a dialogue with the Swiss people," says Heidi Diggelmann, a University of Lausanne virologist who is also head of the Swiss National Science Foundation's Research Council. "We now want to continue improving that relationship between Swiss science and society." After the polls closed last Sunday evening, Diggelmann cooked barbecue at her home for the scientists and staffers at her Institute of Microbiology who had worked tirelessly to help defeat the initiative. Immunologist Hans Hengartner, who co-directs the University of Zurich's Institute for Experimental Immunology, also threw a party for his researchers. "This is great news for young scientists in Switzerland," he says. The vote showed that "Swiss people did not respond well to the scare tactics used by the initiative's sponsors. In the end, what counted the most was objective information."



"Scientists made a difference in this campaign. ... "

—Heidi Diggelmann

The final tally was 1.25 million against (66.7%) and 624,752 in favor of the so-called "Gene Protection Initiative"—with about 41% of Switzerland's electorate turning out to vote. To become part of the Swiss constitution, the initiative would have had to have been approved by a majority of voters, as well as by a majority of the country's 26 cantons, or states. In the end, not one of the cantons supported the initiative, and the French-speaking cantons rejected it by the widest margin. The decisive defeat is expected to prevent an exodus of Swiss molecular biologists.

Sunday's vote ended an intense public campaign by Swiss biologists and Swiss-based pharmaceutical companies to convince the at-times-skeptical public that transgenic laboratory animals are essential to biomedical research and that genetic engineering can provide benefits without posing a serious threat to the environment. Last month, for example, some 3000 scientists and supporters marched through the streets of Zurich; four of Switzerland's five living Nobel Prize winners held a news conference to oppose the initiative; and scientists wrote newspaper columns and appeared at public forums across the country to explain the nature of transgenic research.

This campaign has created a momentum among researchers and government agencies to strengthen the dialogue with the public on key issues of research ethics. The government recently formed a bioethics commission and is moving to establish a foundation to promote better relations between science and the public. In addition, the Parliament is expected to give final approval early next year to a legislative package, called "Gene-Lex," that aims to plug gaps in current laws governing transgenic research, in a way that is acceptable to most researchers.

"We have learned through this campaign that it is best to be as open as possible about your research and to let people know that there are inherent controls in science that prevent abuses," says Richard Braun, a microbiologist who chairs the Gen Suisse foundation in Bern, which has worked to promote better public understanding of biotechnology. "Now, even with this decisive vote, scientists cannot withdraw back into an ivory tower. We have to keep up this dialogue with the public." That may be especially important because proponents of the initiative—a diverse coalition of environmental, animal-rights, and political groups that collected 111,000 signatures to bring the proposal to a vote—may develop another initiative with a different focus, says Florianne Koechlin, a leader of the proponents. Although supporters were disappointed by the vote, Koechlin says they were pleased that the initiative sparked widespread discussion about bioethics.

Switzerland's powerful pharmaceutical industry, which had worked hard to defeat the initiative, breathed a collective sigh of relief. In a 2-year campaign that cost more than $10 million, the industry prepared reports on the job losses threatened by the initiative, organized numerous public-information sessions, and blanketed Swiss newspapers and magazines with advertisements. Thomas B. Cueni, who heads the Interpharma group that coordinated industry's effort, says that "the involvement of scientists in this campaign had a tremendous impact on public opinion." He calls the overwhelming margin against the initiative "a strong vote of confidence in Switzerland as a center of excellence in scientific research." That sentiment was shared by university officials. Says physicist Olaf Kübler, president of Zurich's Swiss Federal Institute of Technology: "The scientific community has risen to the challenge and responded to the concerns expressed. The net result, hopefully, is restored trust in what research and academia are doing."

–Robert Koenig

Robert Koenig is a writer in Bern.

RESEARCH FRAUD

Editors Call for Misconduct Watchdog

British journal editors and medical societies are calling for the establishment of a national body to investigate allegations of fraud and other misconduct and promote good research practice. "We have seen enough complaints to warrant action among the whole profession," says Neil Marshall, a spokesperson for Britain's General Medical Council (GMC), responsible for registering doctors.

The call for a fraud-busting body comes from the authors of a report published last week by the Committee on Publication Ethics (COPE), an alliance of journal editors. The GMC will make a similar call in its own report, to be issued later this year. Both organizations, alarmed at the rising number of misconduct accusations and the lack of any mechanism for investigating them, believe that Britain needs a national watchdog body, along the lines of the U.S. Office of Research Integrity or the Danish national committee for scientific dishonesty. "It should have the power to investigate, which we don't have," says Richard Smith, editor of the *British Medical Journal* (*BMJ*).

Smith and his colleagues first met 12 months ago to discuss growing concerns about the lack of clear guidelines on how to deal with breaches of research and publication ethics. The group founded COPE, and since then it has heard of numerous dubious studies sent by researchers to medical journals. COPE's first report describes 22 of those cases and what the committee decided should be done about them. "It is the tip of an iceberg," says Smith. "They probably came from 10 editors, but there are 20,000 biomedical journals."

The report lists the wide range of methods unscrupulous authors are now using to get papers published. According to Philip

Fulford, editor of the *Journal of Bone and Joint Surgery*, computer technology is a common culprit. He describes in the report the case of a paper on the grafting of knee ligaments in experimental animals, which had intrigued his journal's reviewers. A month after publication, a researcher wrote to the editors saying that one of the illustrations had been pirated from his own work. When challenged, the author said that the picture had been submitted in error and sent a replacement for publication as an erratum. The picture was published and again challenged by the same researcher, who went on to indicate in great detail how the picture was a composite of two images, one belonging to the author and one to him. The author offered no explanation, and the case is now subject to legal investigation. "Graphics programs on a PC can be used to produce very convincing x-ray images," writes Fulford.

The COPE report also finds that very often alarm bells about suspect research are sounded by sheer luck, suggesting that many frauds may go undetected. A paper sent to the *BMJ* about the use of a nonlicensed drug was, by chance, reviewed by a scientist who knew that the group of researchers reporting the work had not been supplied with that drug since 1992, which the manufacturer confirmed.

Even when the research is sound, it is sometimes done without evidence of ethical or protocol review, COPE found. It describes a paper submitted to the *BMJ* from a physician who screened 350 patients' blood cholesterol levels and persuaded 33 with high levels to agree to take a drug he wished to compare with conventional drugs. The report says there was no evidence that the local ethics committee, which oversees research proposals involving patients, had consented to the research. "Indeed, I don't see how he could have got consent for such a study," wrote Smith. "The patients clearly agreed to take the tablets, but I worry that they were misled over the scientific value of the study."

It is still too easy for researchers to plead ignorance about proper research practice, says Marshall: "We want to change that." The GMC has set up its own committee, chaired by George Alberti, president of the Royal College of Physicians, to develop guidelines on good research practice and decide what to do when fraud is suspected. "Less than half the medical schools have clear guidelines on this," he says.

Both Alberti and Smith are not yet clear about the most effective structure for such a national body. "Our suggestion is to have a confidential flying squad which can quickly investigate claims to establish whether there is a case to answer," says Alberti. "It will also help to protect people from malicious accusations."

–Nigel Williams

U.S. SCIENCE POLICY

Warm Words for Basic Research

Talking about federal support for basic research seems to be a popular pastime these days. Last week, several science-minded senators put the finishing touches on draft legislation to double civilian R&D funding over the next 12 years, while a panel of industrialists and university presidents issued a report that said the federal approach to basic research requires some tweaking but no dramatic changes. Meanwhile, the chair of a House study on science policy that is nearing completion praised the economic payoff from basic research, but warned that the government should be wary of funding applied research.

The bill to double civilian R&D spending would supersede a proposal, S. 1305, with a 10-year timetable introduced last fall by Senator Phil Gramm (R–TX) and others and backed by dozens of scientific societies. That bill, predicts Senator Jay Rockefeller (D–WV), co-sponsor of the new legislation along with Senator Bill Frist (R–TN), "will never pass," because it is unrealistic in calling for increased spending without discussing specific goals or ways to measure progress in reaching them. "You have to make sure ... efficiencies as well as priorities are there" to win Senate support, he adds. The new bill, according to congressional sources, is expected to ask the National Academy of Sciences for a plan to help researchers set priorities as well as measurable outcomes.

Meanwhile, Representative Ver Ehlers (R–MI) is wrapping up work o a yearlong study for the House Scien Committee that he says will call for continued strong government support of basic research. Last week the former university physicist told fusion scientists that by "putting more money into basic research you get more out." He also warned of a growing disconnect between government-funded basic and industry-supported applied research. At the same time, he's also wary of government efforts such as the Commerce Department's Advanced Technology Program, which supports industrial consortia pursuing research expected to lead to commercial products.

RICK KOZAK

More than money. Senator Frist wants to tie spending boost to greater accountability.

A new report* by a group of high-tech industry executives and university leaders shares that skepticism. A panel chaired by e Conrades, executive vice presi- of GTE, and organized by the New rk–based Committee for Economic evelopment, concludes that the gov- nment "should not be in the business of directly funding the development and commercialization of technologies." It makes an exception for R&D in support of clear government missions such as defense. Rockefeller, however, took issue with that view in a speech at the report's release. "I remain convinced that these programs fulfill a very clear void that industry would not fill," he said.

The report does not call for sweeping changes in the way basic research is funded, organized, and conducted, preferring to nibble at the edges. "They broke no new ground," says one congressional aide, "but at least they took sides." Among its recommendations are more long-term grant opportunities and fewer administrative burdens for individual investigators, less costly Ph.D. programs, and a more liberal U.S. immigration policy for foreign-born scientists and engineers. It also warned universities to avoid compromising their missions while working with industry.

Echoing findings made more than 3 years ago by a blue-ribbon panel led by former Motorola CEO John Galvin, the report also calls for a revamping of the missions, science, management, and oversight of the national laboratories run for the Department of Energy. DOE officials say they are working on research road maps that will better define what the labs do.

–Andrew Lawler

* "America's Basic Research: Prosperity Through Discovery" is available from the Committee for Economic Development at (212)688-2063.