its license. When Promega declined, Roche sued. But Promega lawyers fought back with a countersuit claiming that the original Taq patent should be disallowed. They argued that Taq had been purified earlier by others, but Cetus scientists had misrepresented their data to convince the PTO that the enzyme they had purified was different.

Three years ago Judge Vaughn R. Walker ruled that Cetus had indeed misled the patent office in obtaining the native Taq patent. But in order to decide whether to void the patent, the judge needed to determine whether it had been done intentionally. Last week, Walker said the evidence was clear: In a 65-page ruling, the judge outlined instances in which former Cetus scientists David Gelfand and Susanne Stoffel misstated or omitted data that "afford no inference other than that they were made to deceive."

In a written statement to *Science*, Gelfand and Stoffel maintained that the Taq they purified was different from previous versions. "We feel that the judge's ruling was both wrong and unfair to us," they state. "This situation ... puts all scientists at risk of having their raw data and good faith interpretations of it be misrepresented in court."

The ruling invalidates the patent only for the native Taq enzyme, or n-Taq. Roche has since patented a recombinant enzyme produced in *Escherichia coli*, which is licensed widely and now dominates the Taq market. The pharma giant also has several patents on the PCR process itself. So the new ruling is not likely to affect Roche's existing business immediately. But Brenda Furlow, Promega's general counsel, argues that because these patents are related and involve some of the same researchers, the judge could wind up invalidating other Taq or PCR patents as well. "There is a real possibility that additional patents could fall," says Furlow.

Melinda Griffith, head counsel for Roche Molecular Systems—the U.S. subsidiary that handles Roche's PCR business—flatly disagrees. "The fact of the matter is that this relates only to the n-Taq patent," says Griffith. "This does not or should not affect any other patents." Kate Murashige, a biotechnology patent expert at the Washington, D.C., law firm of Morrison and Foerster, agrees, calling the invalidation of related patents "conceivable but unlikely." Wall Street, too, seemed unworried: The stock price for Roche Holdings, AG, Hoffmann-La Roche's parent, dipped only a couple of points in end-of-the-week trading.

Despite Promega's victory in this round, Roche officials haven't thrown in the towel. "This decision has not changed the fact that Promega is infringing our PCR patents and inducing others to do it as well," says Griffith. Because of that, Griffith says, Roche plans to press its original case against Promega. Furlow counters that Promega will seek reimbursement for court costs as well as for royalties the company paid on Taq from 1991 to 1995. Judge Walker will map out the future the case is expected to take when he meets with the combatants at the end of next month. **–ROBERT F. SERVICE**

LAB SAFETY

Licenses Suspended at 3 Toronto Hospitals

OTTAWA, CANADA—Citing violations of nuclear safety regulations, the government has blocked the use of radioisotopes for research at one of Canada's largest academic/medical hospital complexes. The action, taken on 2 December by the Atomic Energy Control Board (AECB), has halted all experiments involving radioactive compounds in 91 labs at the Toronto-based University Health Network (UHN). Although roughly 20 of the labs may be allowed to resume normal operations as early as this week, the AECB has said that patient care could be affected next spring if the network does not make the necessary improvements.

"They've been given a timeline," says AECB license assessment officer Richard Cawthorn. "If they don't meet that, they will have used [up] all of their get-out-of-jail-free cards." Although AECB's mandate covers only worker and public safety, Cawthorn says, it will have little choice but to take "further licensing action that will restrict the clinical areas" if the problems are not corrected by 1 April. UHN chief operating officer Michael Guerriere says he expects all 91 labs to be in compliance and operational within 3 to 4 weeks.

CREDIT: UNIVERSITY HEALTH NETWORK

Inhospitable. The government found numerous safety lapses in research labs at Princess Margaret and two other Toronto hospitals.

The suspension follows a routine investigation of safety practices at UHN, which has a license to conduct experiments with radioactive materials at five buildings housing cardiac, neurosciences, organ transplant, and oncology programs. The inquiry found many deficiencies, including excessive contamination levels and unreported losses of sealed radioactive materials—problems that Cawthorn says indicated that the hospitals were exerting little control over the radioactive materials being used. Some 55 instances of noncompliance were discovered during site visits at the three hospitals in November. The occupational safety program "was essentially nonfunctional," according to a report from a site visit in October.

Guerriere attributes the lapses in safety practices to confusion caused by a merger in January 1998 of Toronto General Hospital, Toronto Western Hospital, and Princess Margaret Hospital that created UHN. "We had separate radiation safety programs at each of the three sites that were managed differently," says Guerriere. "We've also had the entire lab group that used to be at the Wellesley Hospital [in Toronto] moved across into our labs, and we've restructured them quite significantly. A lot of labs have moved around, and we didn't pay sufficient attention to these training issues during that process."

One bench scientist says that the shutdown has thus far been little more than a temporary inconvenience. "We're just going to go with the flow, follow the plan, and get recertified," says physician Michael Tymianski, whose research includes work on radiochemicals such as calcium-45. "The whole thing has been quite gentlemanly. Everybody has gotten reassessed and reevaluated, and our plan is to put things back together again."

The AECB has laid down nine directives that UHN must follow, including creation of a comprehensive radiation safety program covering all operations and facilities and adequate training of employees. "They basically have to build a program that has organization—a proper management structure, an oversight hazard control function, [and the ability] to control doses of radioactive materials," says Cawthorn. Guerriere says the UHN is already on the road to recovery by filling its vacant position of corporate radiation safety officer and reaching agreement with the control board on a "remedial training program."

Although no one on staff is known to have received an excessive dose of radiation, the board has ordered UHN to perform a thyroid bioassay on one worker. Cawthorn says he's unaware of any instances in which patients were exposed to excessive radiation, either, but adds that patient care is "not within the AECB mandate."

–WAYNE KONDRO

Wayne Kondro writes from Ottawa.