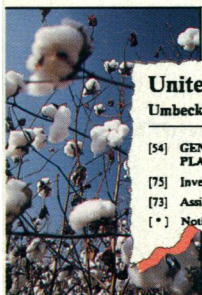


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United States Patent [19]

Umbeck

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[54] GENETIC ENGINEERING OF COTTON PLANTS AND LINES

[75] Inventor: Paul F. Umbeck, Madison, Wis.

[73] Assignee: Agracetus, Middleton, Wis.

[*] Notice: The portion of the

recalcitrance in sugar beet," *In Vitro*, vol. 21, No. 3, Part II (Mar. 1985).

Everett, N. P., et al. "Genetic Engineering of Sunflower" *Abstracts*

Hot commodity. The patent office will reexamine a patent that grants broad rights to transgenic cotton.

Transgenic Cotton Patent Under Fire

The firm Agracetus struck gold on 27 October 1992, when it won a patent granting it broad rights to any product derived from a genetically engineered species—in this case, cotton. But now the firm's ownership of this gold mine is being challenged: Earlier this month, the U.S. Patent and Trademark Office granted a request to reexamine the basis for awarding the patent.

The patent had already come under fire informally. For example, U.S. Department of Agriculture (USDA) scientists have expressed concerns to Agracetus and to the press that the patent was so broad it might deter cotton research. "Everybody I've talked to is bewildered" over the patent's breadth, says USDA geneticist William Merideth.

Agracetus, based in Middleton, Wisconsin, has sought to placate critics by offering to issue research licenses free of charge to academic and USDA researchers. In addition, it struck agreements last year with two competitors in the transgenic field, Calgene and Monsanto.

But apparently not everyone has, well, cottoned to the patent. On 4 January, the Alexandria, Virginia-based law firm Breneman & Georges filed reexamination requests for two Agracetus patents. The requests, filed for an undisclosed client, argue, among other things, that the Agracetus patentee "conspicuously omitted citation" of relevant information on transgenic cotton that appeared in a European patent application filed earlier by a third party.

Agracetus has until 1 June to respond. But its troubles may not end there: A USDA lawyer says his agency plans to soon file its own reexam request that will be "broader in scope" than the current requests.

Wanted: Low-Down Breast-Cancer Gene

The gene that makes some women susceptible to breast cancer—known as BRCA1—has been declared Public Enemy Number One by the National Institutes of Health (NIH). In a move reminiscent of the Old West, NIH plans to award a bounty—\$2 million—to the research group that comes up with

the best plan to clone and sequence this rogue piece of DNA.

The offer is being made as a request for applications announced on 8 April by the National Cancer Institute (NCI). It would give 2 years support starting in August "to foster and stimulate collaborations" among researchers, leading to the gene's capture and sequencing. Several groups have tracked BRCA1 to a 400-kilobase stretch of DNA on chromosome 17. But so far nobody has flushed it out, despite predictions since 1992 that its discovery was only 6 months away.

As a bounty usually means the sheriff is having trouble tracking down the villain, the NIH's \$2-million offer implies that U.S. researchers "are not as close" to identifying the gene as they have often claimed, says geneticist Bruce Ponder of Cambridge University. Ponder is a leader in the hunt for BRCA1, along with his collaborator Ray White of the University of Utah. Perhaps the best known BRCA1 researcher, Berkeley's Mary Claire King, also says she supports the effort.

NIH director Harold Varmus says he views the reward as providing "additional security that we will get that gene very quickly." He adds that sequencing this stretch of the genome is a good idea in any case—a "worthwhile use" of NCI's breast cancer funds and of "my own discretionary funds," he says.

CERN Members Endorse New Collider

After mourning the loss last fall of the Superconducting Super Collider, the world's high-energy physicists finally have cause to celebrate: The member governments of CERN—the European Laboratory for Particle Physics in Geneva—now seem sure to approve a rival megaproject, the Large Hadron Collider (LHC), in a vote scheduled for June.

Meeting in Geneva last Friday, delegates from CERN's 19 member states overwhelmingly backed the lab's LHC plans. "It was everything I could have hoped for," says CERN director-general Christopher Llewellyn Smith. "I think the major pitfalls are out of the way."

The biggest worry had been Germany, which was reluctant to pay for a new accelerator shortly after completing its own collider in Hamburg (*Science*, 17 December 1993, p. 1808). But last week, German officials indicated they would endorse the LHC if France and Switzerland—which benefit most from employment generated by CERN—were to contribute beyond their basic CERN fees. The Swiss have indicated they will do so, and CERN sources believe France will follow suit.

That leaves Spain—the only country to abstain from endorsing a pro-LHC statement released last week—as a potential stumbling block. Spain has withheld some \$100 million in dues, complaining that CERN's fees are too high. But insiders expect this dispute to be resolved soon: CERN has offered Spain a 5-year, \$50-million discount. Although Spanish officials have asked for more, CERN sources say they are zeroing in on a compromise.

But even if the LHC gets the nod from CERN's member states in June, Llewellyn Smith still must coax construction funds from the United States and other CERN nonmembers. Indeed, if he fails to raise around \$340 million from such sources, the LHC will not start doing science until 2005—2 years later than planned.

French Scientists Decry Research Blueprint

Angered by their government's effort to chart a new research course, 1200 French scientists and several university presidents are now challenging fundamental shifts in funding patterns and staffing policies that the government appears ready to embrace.

Last February, Higher Education and Research Minister François Fillon began a series of meetings with scientists, research administrators, and industrial leaders to discuss a "pre-report" on science policy changes that the government has prepared. The exercise, an effort by France's 1-year-old conservative government to examine policies inherited from the previous administration, concluded with a meeting in Paris on 18 April.

But many scientists took issue with key proposals. "The pre-report was a veritable provocation," bristles chemist Henri-Edouard Audier, director of the Labo-

ratory of Reaction Mechanisms at the Ecole Polytechnique outside Paris. Audier and others say the pre-report suggests a shift toward applied research at the expense of basic research. Another bone of contention was the implication that an undetermined number of academic researchers would be shifted to full-time teaching to ease severe overcrowding in many university labs. "We got the impression that there was not a real dialogue at the meetings," says Audier, who rallied scientists to sign a statement airing their concerns.

In a speech at the Paris meeting, Prime Minister Edouard Balladur told scientists that the French government is taking their concerns seriously. Nevertheless, Audier and the other top scientists have requested a meeting with Fillon before the government submits its report in June to the French Parliament.