

High-profile departure ends genome institute's charmed run

The personal divorce was final two years ago. The professional one dragged on until April, when Claire Fraser-Liggett left the organization headed by her ex-husband, genome scientist J. Craig Venter, to hoist her own flag over a new institute at the University of Maryland in Baltimore.

As she left, the organization she shepherded to star status in the scientific world melted behind her: on 11 April, The Institute for Genomic Research (TIGR), over which Fraser-Liggett had presided since 1998, was absorbed into the J. Craig Venter Institute (JCVI) and ceased to exist.

Fraser-Liggett says her departure was spurred by the decision in October to make TIGR a division of the JCVI. "It was just unclear to me what my role in the new organization would be," she says. "[But] I want to emphasize that I am not looking to escape a bad situation."

Venter, who is president and chair of the 500-employee JCVI, insists that little has changed. Genome sequencing, he said in a press release, will remain a "cornerstone" of the institute's activities, as will the microbial and plant sequencing that were TIGR's province.

TIGR's dissolution completes a process that was set in motion six months earlier, says Bob Strausberg, JCVI's deputy director. "It's all been driven by scientific opportunity," he says.

In November, Fraser-Liggett's second husband, Steven Liggett, director of the cardiopulmonary genomics program at the University of Maryland, bumped into Bruce Jarrell, the medical school's vice dean for research. Liggett then told Jarrell "that the time might be right to entice me away from TIGR," says Fraser-Liggett.

Jarrell called Fraser-Liggett soon after and by late March her new job was finalized. "This opportunity at Maryland was the right opportunity at the right time," she says. She plans to begin work in early May as head of the university's nascent Institute of Genome Sciences, with an eventual staff of 150 and a research budget of up to \$40 million.

Some number of TIGR's 18 faculty scientists are expected to follow her, but she declines to specify how many. "There have been some who have suggested that I'm somehow raiding the organization," she says. "Let's just say there are several offers outstanding."

One scientist who has worked with both Venter and Fraser-Liggett says the new institute will offer TIGR scientists the chance to continue independent research under Fraser-Liggett's hands-off style, rather than taking direction from Venter. "It will be very telling how many go and how many stay," he says. "It's basically a Craig versus Claire choice."

Venter founded TIGR in 1992, but after decoding *Hemophilus influenzae*, the first microbial genome, he decamped in 1998 to found Celera Genomics and sequence the human genome. Fraser-Liggett, then still Venter's wife, remained as president of TIGR. During her nine-year tenure as president, she estimates, TIGR scientists sequenced more than 200 genomes. At its height, the institute doubled its staff to more than 300 and nearly tripled its



Ron Sachs/CNP

Split: Claire Fraser-Liggett has ended her decade-long stint at ex-husband J. Craig Venter's genome institute.

yearly research budget to \$60 million. TIGR became the undisputed leader in microbial genomics and Fraser-Liggett the world's most highly-cited microbiologist.

Under Fraser-Liggett, "TIGR evolved in profound ways," says W. Richard McCombie, a molecular biologist at the Cold Spring Harbor Laboratory in New York. "The science became different and better, I have to say, so there's concern about a return to what it was like before," he says. "And there's some real concern about the future of the place."

The move makes Fraser-Liggett, who in style if not substance has long been overshadowed by Venter, at long last the undisputed queen of her own castle. It's also a coup for the University of Maryland. "They're not on the map in genomics," says McCombie. "Bringing her in instantly puts them in a very high-profile position."

Meredith Wadman, Washington DC

Will there be an HIV vaccine in the next ten years?

Survey says...



It is too early to tell. If the current adenovirus-based trials show some degree of protection or control of viral load, then we have a substantial beachhead from which to work.

Barton Haynes
director
Center for HIV-AIDS
Vaccine Immunology



I think we will have something that modulates infection soon. [But] will we have something in a vial that's being distributed in the developing world? Highly unlikely.

Bruce Walker
professor of medicine
Harvard University

US tosses out patents on three Wisconsin stem cell lines

The US government in March moved to revoke three key patents on human embryonic stem cell lines developed by James Thomson, a University of Wisconsin researcher widely considered to be the first to isolate and culture such cells.

If the preliminary ruling is upheld, it could ease scientists' access to the lines for research purposes, consumer advocates say.

"These patents are undeserved and they're causing substantial harm by requiring people to acquire licenses before doing research," says Dan Ravicher, executive director of the Public Patent Foundation, the New York City-based organization that requested the reexamination.

Since the US Patent and Trademark Office granted the first of the patents in 1998, critics have argued that they are too broad and impede research. The Wisconsin Alumni Research Foundation (WARF) holds the three patents under review.

Under the patents, the foundation claims rights to both the method for cultivating primate ES cells and to the cells themselves. WARF has thus far collected \$3.5 million in licensing fees and will receive royalties for any product developed using the cells—although none have as yet been developed.

Some biotechnology companies say the pricey licensing fees—which can cost hundreds of thousands of dollars—have forced them to take their stem cell research overseas, where the patents don't apply.

But toward academic researchers, "WARF has been recently rather generous," says Christopher Scott, head of Stanford University's Program on Stem Cells and Society.

In January, in response to protests from

academia, WARF waived licensing fees for human ES cell research at universities. Academic researchers pay \$500 per batch of cells. "Currently, the impact of these patents on academic research is negligible," says Scott.

Still, the patents have a "chilling" effect on research by forcing private companies to invest in research abroad, says Ravicher.

Last July, the Public Patent Foundation and the Foundation for Taxpayer and Consumer Rights, both consumer advocate organizations, challenged the patents' validity, arguing that Thomson's work on isolating the cell lines was obvious, given previous research, and therefore didn't deserve a patent. The Patent Office has now agreed with that assertion.

WARF officials are confident that ultimately the patents won't be revoked. "There's a long road ahead," says spokesman Andrew Cohn.

But the preliminary ruling makes it likely that the patents will at least be amended to restrict WARF's control over the process and the cells, says Ravicher. "This is a quite successful and quite strong rejection and it will be difficult for WARF to overcome it."

WARF has 60 days to file its response, after which the patent office will make its decision. WARF can also apply to the Board of Patent Appeals and Interferences and, if necessary, go to federal court. The patents remain active until a final decision is made, which could take up to three years.

For the moment, stem cell researchers face more formidable hurdles, such as launching state programs, says Marc Lalande, who heads the University of Connecticut's Stem Cell Working Group.

But in the long term, the patents could have a big impact if ES cell therapies are developed. For instance, California-based Geron has exclusive rights to heart, nerve and pancreatic cell lines and is developing a human ES cell-based spinal cord injury treatment.

"Worry about the patents being so broad extends deeply into commercial and economic realms," says Scott. "People in the stem cell business are concerned that all roads will lead through WARF and all secondary roads will lead through Geron."

Alisa Opar, New York



Free cells: Revoking patents on three of the University of Wisconsin's stem cell lines is expected to boost research.



I give it about a 50/50 chance. I wouldn't rule it out. But a one-time therapeutic vaccine is not going to happen.

Gary Nabel
director
National Institutes of Health's Vaccine Research Center



I think that the chances of a partially effective vaccine being licensed for use in humans is low. Hopefully one will be in the pipeline.

Julie Overbaugh
Fred Hutchinson Cancer Research Center



A traditional vaccine like smallpox or polio, I very much doubt it. But something that delays progression to AIDS, there's a reasonable chance of that.

Dennis Burton
professor
The Scripps Research Institute