

Mediawatch

Genome jumpers

Richard F. Harris

Every scientist's nightmare is betting everything on an experiment that will take unheard-of investment and well over a decade to complete — only to have a Johnny-come-lately stride in midway through the work and declare that he's going to beat you to the finish by years. The 'J.' in J. Craig Venter may not stand for 'Johnny', but the rest of the bad dream is happening to Francis Collins and the Human Genome Project, if you believe the news reports.

"A pioneer in genetic sequencing and a private company are joining forces with the aim of deciphering the entire DNA, or genome, of humans within three years, faster and cheaper than the federal government is planning," Nicholas Wade wrote in the 10 May edition of the *New York Times*. And indeed, the report suggested that Collins and his boss, NIH director Harold Varmus were throwing in the towel. "Both Dr Varmus and Dr Collins expressed confidence that they could persuade Congress to accept the need for [refocusing the \$3 billion NIH effort]... noting that the sequencing of mouse and other genomes has always been included as a necessary part of the human genome project."

In fact, Collins and Varmus were not about to give up on the project, even though Venter's plan does indeed present a formidable challenge. On 15 September, Collins announced that he is planning to match Venter's 2001 deadline for a rough map — and keep going from there, to make a more accurate and complete map by 2003.

This adventure makes for great story-telling. Here's a man with a million-dollar yacht and an ego to match — and an impressive intellect, to be sure. In the best American

tradition, he's the little guy taking on the government. And there's some bile, to boot, such as when Venter calls Collins a "Government bureaucrat whose job is to hand out money to help get the genome done," in a *New York Times Magazine* profile of the personality *du jour*. "[I]t was as if some aerospace executive had vowed in the mid-1960s to overtake NASA and be the first to put humans on the moon," the *Baltimore Sun* noted. *Time* magazine, among others, compared Venter with Bill Gates, saying that he "may someday control information about the human genome — which in effect is the operating system of humans."

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Just what Venter proposed to do was a bit more vague. Most news accounts quoted critics noting that Venter's map of the human genome would contain some gaps, and that his process was riskier than the one being put to use by the Human Genome Project. Accounts usually left the reader to guess what that meant, though *Science News*, for one, spelled it out nicely, explaining how Venter's shotgun approach involves "shattering an organism's DNA" and then trying to piece the fragments back together by comparing their ends. "People have felt that you might gather all that data and not be able to assemble it... it takes faith," Frederick Blattner of the University of Wisconsin-Madison told *Science News*. Writer John Travis went on to explain the more methodical approach of the NIH, so readers could understand the more widely quoted cautions voiced by Collins, Maynard Olson at the University of Washington and others.

By and large, the US press played this story as a race, involving egos as well as megabucks. (A surprising number of reports were in the

business pages.) Ventures into the broader social realms were fairly tepid, such as the *Washington Post* editorial that said Venter's plan "raises intriguing public questions" such as "public access to patented gene sequences... the ease with which these genes are patented... and the rights... of individuals whose specific genes turn out to form the basis for lucrative inventions."

Newspapers overseas were considerably less genteel. "A struggle of Darwinian proportions is taking place in the scientific community over a plan by an American company to rapidly sequence the human genome and patent some genes," wrote the *Canberra Times*. Europeans were debating the ethics of patenting genes when the story broke, so Venter's plan played right in. "If there is a gene for causing uproar," wrote Robin McKie of *The Observer*, "you can bet Craig Venter has it. More important, though, you can also be sure he is the man most likely to isolate it. In the predatory world of biotechnology, Venter... is now regarded as the deadliest member of a breed of research raptors who hunt down genes for cash."

McKie seemed a bit vague on just how Venter plans to cash in on these genes, referring to Venter's partner — instrument maker Perkin-Elmer — as a "pharmaceutical giant," but the article reflected a much higher index of suspicion than is evident in the US press. After all, to Americans who have grown up with Genentech, this is just another company out to cash in on gene discoveries. And if you believe the folks at Incyte Pharmaceuticals in Palo Alto California, they're going to sequence all the really juicy genes while J. Craig Venter is still deciding whether to set the Genoa or the spinnaker — which the *New York Times* says is adorned with a 20-foot picture of himself — on his dead run back from Bermuda.

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