Genome effort 'still in need of support'

[WASHINGTON] The leaders of the publicly funded Human Genome Project took a firm stance last week to challenge any suggestion that the announcement of a parallel, privately funded initiative made their efforts redundant.

The challenge has come from a plan by the genome researcher J. Craig Venter, president of The Institute for Genomic Research in Rockville, Maryland, and the company Perkin-Elmer to launch a new venture.

This will be based around a novel analyser that the company has developed, and Venter's alternative 'shot-gun' sequencing strategy, to carry out an independent sequencing of the complete human genome (see *Nature* **393,** 101; 1998).

The announcement has stimulated widespread speculation that the Human Genome Project, to which the US government has promised $3 billion over 15 years, starting in 1990, may no longer be necessary.

But in a letter to *The New York Times*, written in response to a suggestion that the project might be redirected, Harold Varmus, the director of the US National Institutes of Health, sharply disputed any such conclusion. "This is not the case," he wrote.

"The ambitious milestones set by the Human Genome Project since it began have thus far been reached." Varmus pointed out that data produced by the project have made the private effort possible and have already reduced the time needed to isolate disease-related genes from decades to often just days.

Much of the scepticism about whether a major federal project is still needed has come from within the biotechnology community. Messages — usually anonymous — appearing on industry web-sites have contained suggestions that, for example, "it would be a much better use of taxpayers' money not to go to government-supported human genome sequencing".

But, within the academic research community, the feeling remains strong that, whatever sequence emerges from the new initiative, it cannot match the completeness — and hence full potential value — of the efforts being funded by the US and other governments, as well as Britain's Wellcome Trust (see right).

"What the new company is proposing to do is an incomplete job," says John Sulston, director of the Sanger Centre, outside Cambridge, England. "We know that the sequence it plans to produce will have gaps in it; they may be deferring some of the costs involved in obtaining a complete sequence, but the result is that what they will produce has less power of interpretation."

Sulston and others also say that they are not convinced that the conditions under which Venter has promised to make his data publicly available to other researchers will be sufficient to meet their needs.

Varmus: genome project is on target.

Such arguments are already being strongly deployed by those seeking to ensure that the US Congress maintains its commitment to funding the genome project, to which it has agreed to allocate $170 million in the current fiscal year, out of a total allocation to the National Human Genome Research Institute of $217 million.

So far, the message seems to be getting through. "I don't think that there are many people in Congress who are looking at this and saying, 'Gee, this is great. The private sector is going to do all the work on unlocking the genetic code. Let's move on'," says Dave Kohn, a spokesman for John Porter (Republican, Illinois), the chairman of the Labor/Health and Human Services/Education subcommittee of the House of Representatives Appropriations Committee.

The subcommittee writes the spending bill that funds the National Institutes of Health. Kohn says that, in his disucssions with Porter and other subcommittee members, support for the Human Genome Project remains "very, very strong. There continues to be a great deal of interest in having federally supported research in this area."

Even some industry executives remain confident that the government's efforts will remain predominant. "My bet would be that [the Human Genome Project] would be the ultimate provider of the polished, sequenced human genome," says Roy Whitfield, chief executive officer of Incyte Pharmaceuticals of Palo Alto, California.

Incyte is itself deeply involved in sequencing efforts. Whitfield says: "I would hope that [publicly funded researchers] would continue with their efforts, or even redouble them."

David Dickson & Meredith Wadman

British funding boost is Wellcome news

[LONDON] When Michael Morgan, programme director of genetics at Britain's Wellcome Trust, addressed a genomics meeting at Cold Spring Harbor, New York, last Friday (15 May) on the trust's plans for supporting human sequencing efforts, he received almost a standing ovation from the researchers present.

Morgan explained a decision by the trust the previous weekend to more than double its commitment to the Human Genome Project, bringing its total investment to £205 million (US$340 million).

The extra money will allow the Sanger Centre near Cambridge, England, which is jointly run with the UK Medical Research Council, to undertake the sequencing of one-third of the complete genome; the trust had previously been committed to financing one-sixth.

But the trust has indicated that it is prepared to go even further. Morgan said it intends to open discussions with existing members of the project – most of whom are based in the United States – under which up to half of the genome could be sequenced in Britain.

Although Wellcome's decision to increase funding was taken independently of a privately funded sequencing initiative by J. Craig Venter and Perkin-Elmer (see above), its announcement is said to have been brought forward to provide a riposte to some of the claims being made by the latter.

Even more than the vote of confidence in the genome project that the trust's decision represents, it was Morgan's statement of the firm position the trust is taking on the question of access to sequencing data that brought the researchers to their feet.

"What Wellcome has done is fabulous," says Richard Gibbs of the Baylor University College of Medicine, a co-organizer of the Cold Spring Harbor meeting. "The warm reaction to Morgan's presentation reflected the impassioned feeling among those present that the data needs to be freely and publicly available."

Most of those at the meeting are involved in publicly funded sequencing efforts. Surveys have revealed deep-rooted concern in this community about the impact of the encroachment of patent claims on genetic sequences (see *Nature* **392,** 325; 1998). So their support for Wellcome's position came as little surprise.

This support extended to Morgan's announcement that the trust is not only conducting an urgent review of the credibility and scope of patents based solely on DNA sequences but is also prepared, where appropriate, to challenge such patents.

Wellcome's initiative appears to have helped to restore confidence in the public sequencing effort at a critical time. Morgan admits that this has been part of his goal, pointing to a similar catalytic effect which he claims the trust was able to exercise on European-wide efforts to sequence the yeast genome.

D.D.