Joint genome announcement

On June 26, Francis Collins, director of the international Human Genome Project (HGP) consortium finally announced that the HGP had completed a "rough assembly" of the human genome sequence. Joining Collins at the White House was Craig Venter, president of Celera Genomics (Rockville, MD), long seen as the rival of the HGP. Celera



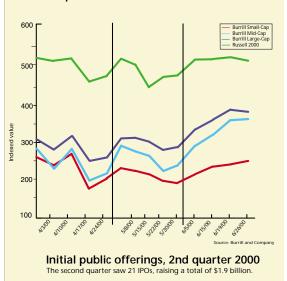
announced it too had "completed" its own assembly of the human genome, which it "finished" sequencing in April (*Nat. Biotechnol.*, **18**, 475, 2000). Both parties' work is expected to be published simultaneously later this year. Although the announcements were hyped by some scientists as being on par with the 1969 moon landing, most acknowledge that it will be years before scientists find all the genes that make up the sequence or before many of those genes yield useful therapeutics. Indeed, Celera's stock, and that of many other genomics companies, was down following the announcement, after much inflation the previous week when word of the joint briefing leaked out. By the close of the market on June 27, Celera stock had dropped almost 22% over two days, to \$99.50.

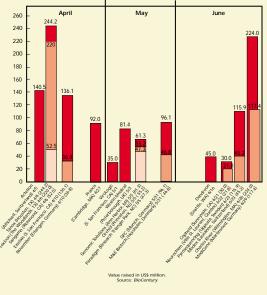
Meanwhile, the news spurred new talk of concerns over genetic privacy and discrimination. But just days after the joint announcement, the US Senate rejected a bill that would have afforded broad protections against genetic discrimination in the workplace and from insurance companies, saying it would have led to too many lawsuits. JG

Chimp genome project

Japan's Institute of Physical and Chemical Research (RIKEN; Saitama Prefecture) has announced the launch of an ambitious project to elucidate what makes us human. Based on the theory that intellectual ability—most notably language and logical thinking—distinguishes humans from nonhuman primates such as chimpanzees, the project will compare chimp and human genomes, focusing on genes expressed in the language center of the brain. RIKEN's Genomic Sciences Center (GSC) and its Brain Science Institute will carry out the project, which will start officially in April 2001. Yoshiyuki Sakaki, who leads Japan's human genome sequencing effort, will be director of the project, which will also compare cognitive genetic data from GSC's mouse genome database. It is expected that data from Kyoto University's Primate Research Institute (Inuyama City), which has long researched primate behavior, will also be used by RIKEN to study the genetic basis of behavioral patterns.

Biopharmaceutical sector performance, 2nd quarter 2000





Cloning opera

In September, audiences in Cambridge (UK) will be treated to a rare mix of music, theology, and genetics at the world premiere of "Parthenogenesis," a new musical theater work by British composer James MacMillan. The work was inspired by a story of a virgin birth (no, not that one) in Hanover, Germany, in 1944. A young woman caught by the blast of an Allied bomb gave birth nine months later to a daughter whose fingerprints, blood type, and other indicators were identical to those of her mother. Physicians suggested that the bomb blast could have jarred a somatic cell within the woman's womb, triggering parthenogenesis. A good story, yet Macmillan's grip on genetics is, perhaps understandably, a little tenuous. Sections of the score feature an actress speaking the part of the unborn parthenogenetic child. Her accompaniment, says MacMillan, is "material based on the genetic sequencing of Adenine-Cytosine-Thymine-Guanine, currently being mapped in the Human Genome Project, which is providing scientists with a supposed calculation of humanity." JH

NZ de facto GMO ban

The environmental agency in New Zealand, the Environmental Risk

Management Authority (ERMA), is imposing draconian strictures on researchers undertaking the most basic of manipulations of genetic material. ERMA makes no distinctions between experiments performed for release and those conducted in contained laboratories. Furthermore, ERMA requires centralized and costly relicensing of what, by international standards, would be judged the most routine experiments with the slightest of changes to protocols. The use of biological materials from international collaborators is, in effect, banned by the imposed necessity for New Zealand researchers to pay \$1400 per application to import GM organisms. IH