hunting for different genes. Maps would only be as useful insofar as they were complete, and completeness depended on sharing data freely and rapidly. CEPH was formed in 1984 to forge an international collaboration for genetic linkage maps of human chromosomes[43]. The groups searching for various genes also formed international collaborations, intended to speed sharing of data and materials. This international ethic of sharing, however, had to contend with a growing set of commercial attachments that seemed likely to alter the rules governing collaboration within and across national borders.

Commercial Pursuits

Most of the initial efforts were funded by nonprofit groups hoping to further research. Beginning in 1992, however, a new wave of genome research centers began to take shape, only these were often supported by venture capital or private corporate funds. Existing genome research centers also developed ties to industry. In mid-1992, J. Craig Venter announced his intention to form The Institute for Genomic Research (TIGR). (His work formed the basis for the patent application for expressed sequence tags, which is discussed below.). This new institute was then the largest private investment, and its work was linked through agreements on intellectual property rights to a somewhat larger for-profit unit, Human Genome Sciences, Inc. Human Genome Sciences, Inc., in turn, announced an agreement in excess of $130 million with Smith-Kline-Beecham in May 1993, and William Haseltine was selected as Chief Executive Officer. Another company, InCyte, began a major program in genome research during 1992 and into 1993. Several private firms, including Mercator, Darwin Molecular, Genomyx, and others, pursued plans to develop instruments or pursue pharmaceutical development strategies that involved some mix of genome research.

Corporate funds were not attracted merely by hot science, but also by the prospects of diagnostic applications and more expeditious drug discovery. In every nation where the genome project was presented to its government, including the USSR, promoters pointed to the potential for genome research to create jobs and wealth through new technology. The true potential for