

James Watson announced that the NIH program would include a budget set-aside for such research when he was announced as associate director for human genome research in September 1988. Other programs throughout the world, except the UK program, followed suit. (In the UK, such discussion was generally delegated to the private Nuffield Council, established to mediate a national debate on matters of bioethics.) This development deserves a separate treatment, but one particular aspect of this program deserves special mention here — a renewed commitment to technology transfer.

Ensuring that the fruits of genome research were quickly translated into useful applications (and thence into jobs and wealth) became a second process goal for the human genome project. Even as the various government programs noted above began to take shape, private interests also began to mount genome research programs, some of them more significant than publicly funded programs in their nations. In the United States, the Howard Hughes Medical Institute focused on issues not drawing sufficient attention from government, concentrating on databases and helping support the initiation of the Human Genome Organization to coordinate international efforts. In the UK, the Imperial Cancer Research Fund was an equal partner with the government Medical Research Council early on, and the private Wellcome Trust made even larger investments in new genome research and informatics centers in 1992 and 1993. In France, the most vigorous genome research effort was supported by the Centre d'Etude du Polymorphisme Humain (CEPH), which formed a partnership with the private French Muscular Dystrophy Association to establish the Genethon, a highly automated genome research facility outside Paris. This effort was started quickly, and dwarfed the government genome research program. In Japan, the Saitama Research Center, the Chiba prefectural government, and other private groups began genome research efforts separate from the various government-sponsored programs.

The international efforts were united in a desire to share map and DNA sequence data widely. The idea behind gene maps was to use them as tools to speed research, and to reduce the need for multiple laboratories throughout the world to develop maps of the same regions when