Patient Sues UCLA over Patent on Cell Line

Lawyers representing a UCLA cancer patient have filed suit against the University of California which has patented a cell line derived from his spleen without obtaining his explicit consent. In what is believed to be an unprecedented case, the suit raises questions about an individual's rights of ownership to bodily tissues that have been turned over for biomedical research but are subsequently used commercially.

John Moore, a victim of a rare hairy-cell leukemia, has been treated at UCLA since 1976 when his spleen was removed surgically as part of his early treatment. From his spleen, which Moore turned over to the university when he signed a routine surgical consent form, scientists established a cell line that has proved useful to cancer research. Named Mo (for Moore), the cell line produces a number of biologically interesting substances including T-cell growth factor (interleukin-2) and immune interferon 2.

The university and researchers David Golde and Shirley Quan recently received a patent on the Mo cell line. Moore, who has continued to be seen by UCLA research physicians, argues in a suit filed in Los Angeles County Superior Court that the researchers misappropriated his "bodily substances," thereby violating his rights of ownership. Attorney Jonathan Zackey of the Los Angeles firm of Gage & Mazursky says that although Moore signed over rights to his spleen (and later in the course of therapy to samples of his blood) for research purposes, nothing was said about possible commercial use.

In addition to claiming that the university misappropriated his tissues, Moore's suit claims that Golde and Quan failed to obtain a valid informed consent because they did not formally tell him about the potential commercial applications of the cell line.

Although the potential commercial value of any products that may one day emerge from work with the Mo cell line is anybody's guess, Moore and his attorneys argue he has a right to some of the profits. In a statement prepared for the press, attorney Sanford Gage said "the value of our client's contribution is not capable of calculation at this time but the market potential for such products is believed to be in the billions of dollars." The suit, which the attorneys have accepted on a contingency basis, seeks unspecified damages.

The question of a person's ownership rights to bodily tissues is one whose time has come in this new era of the commercialization of biotechnology. In the past, the issue seldom, if ever, arose. However, should new laws or policies be set establishing such a right, the implications for biomedical research could be substantial. Several researchers contacted by *Science* see no reason why some sort of provision should not be made that would give patients rights in cases such as this. But other people find the idea of the suit disturbing.

Lawyers for the University of California, who first read about the suit in the press, have no official response to the issues as yet.

—**Barbara J. Culliton**

Computers and the Family: More Toys Than Teachers

A survey of computer-owning families in New York City and its suburbs indicates that children rarely use the instruments for purposes related to school. But once they start doing so, equity problems will arise with regard to students who do not have computers at home.

The preliminary survey of 20 families is part of a joint project by New York University (NYU) and Scholastic, Inc., billed as "the first in-depth study of the use of microcomputers in the home."

The investigation, headed by Joseph B. Giacquinta of NYU, found that after games, programming was by far the most popular activity. Word processing was next. Instructional software was only used in two families.

Various reasons for the lack of popularity of instructional software are advanced, including its inadequacy, unavailability, expense, and parental confusion about how to use it. "If these families are at all typical," says the report, "the educational software R&D effort currently under way may fall on deaf ears, so to speak."

Even if the use of educational software grows, the home-school relationship "may be in for some rough sledding," according to the report. It recounts instances of teachers forbidding children to do homework on their computers because other students do not have them. Clashes such as this "between two cherished American values: achievement and equality of opportunity" may become more pronounced once good software is developed and becomes widely used "by families who can afford it," says the report. —**Constance Holden**

Academy to Propose Social Science Research Priorities

An unprecedented exploration of the next decade of basic research in the social sciences is now under way at the National Research Council.

The project has been launched with $400,000 from the National Science Foundation following 18 months of determined effort by Otto Larsen of NSF's Biological, Behavioral and Social Sciences Directorate.

Larson says the chemists and the astrophysicists have done 10-year plans, and it's time for the social sciences to get into the business of priority-setting.

The NRC Committee on Basic Research in the Behavioral and Social Sciences, headed by Duncan Luce of Harvard and Neil J. Smelser of the University of California at Berkeley, has taken an unusual approach. Six months ago it sent letters to 2500 researchers asking them to describe research they thought was particularly important, exciting, or neglected.

The committee received about 500 replies which will be parceled out to two dozen working groups to fashion the "Decade Outlook."

"We're seeking nominations of hot opportunities," rather than convening "elders of the tribe" to deduce future research directions, says Larsen.

He says many people have voiced skepticism about the possibility of gaining consensus about the sprawling social science endeavor. But, according to sociologist James L. McCartney of the University of Missouri, "the Reagan Administration's

assault on social science research has transformed" the politics of the field. The argument that social science will help solve pressing social problems does not cut much ice nowadays, he says. Instead, a case must be made that fundamental research in the social sciences, as in the hard sciences, is a wise and ultimately useful investment.—CONSTANCE HOLDEN

U.S.S.R. Faces Tough Decisions on Energy

The Soviet Union has such an overwhelming proportion of the world's energy reserves that its status as an energy exporter is secure for years hence. It has 40 percent of world coal and gas reserves and is the world's largest producer of oil.

Nonetheless, as exploration has probed ever deeper in the remote and frigid reaches of Siberia, high costs of production have led to stagnation in both the coal and oil industries, according to a recent report from the Brookings Institution. The one bright spot is natural gas, some of which will start flowing next year through the new pipeline to Northern Europe.

Author Ed A. Hewett notes that in 1977 the Central Intelligence Agency predicted that the Soviet Union would become an oil importer by the mid-1980's. He says the report's reasoning was sound, and that it may have contributed to the country's decision to put massive new investments in Siberian oil development in the late 1970's. The current slowdown is part of the price of rapid development—for example, the use of water injection techniques which allow for fast but inefficient recovery, and neglect of exploratory drilling.

Hewett says the 7-year decline in energy growth rates suggests that energy exports will have to be adjusted accordingly. He sees three possible courses for the Soviet leadership. One would be to restore the growth rates, a policy that would involve sucking additional capital from the rest of the economy. Another would be to cut exports for hard currency. This would be painful as 70 percent of the country's hard currency—other than that from military sales—comes from energy exports. Alternatively, subsidized energy shipments to Eastern Europe could be reduced, but this could aggravate political instability. A third course would be to slow down production and invest in conservation.

The dramatic increase in energy production costs is taking its toll on the rest of the economy, says the report. One third of the country's investment goes to energy production—or 40 percent if transportation costs are included. The emphasis on energy investment in an economy whose progress is otherwise glacial is taking its toll in the manufacturing sector as well as on housing and public works.

Hewett further notes that "Soviet energy consumption is extraordinarily high by world standards." In proportion to the country's gross national product, consumption is 2.5 times that in Europe. Much of this has to do with the prevalence of outmoded plants and equipment, and the heavy use of energy-intensive materials.

The upshot of the matter seems to be that the Soviets have skimmed the cream off their stunning wealth of energy resources, and that a new strategy will be required for efficient exploitation of the reserves. Hewett writes: "for the Soviet economy, and particularly for its energy sector, the future will be far more difficult than the past."—CONSTANCE HOLDEN

DuPont Stakes Out Turf for Life Sciences Research

Wilmington, Del. DuPont dedicated an $85-million biological research facility on 14 September, culminating several days of scientific meetings and celebrations centering around the company's recently enlarged interests in basic biology. The events left little doubt that the giant Delaware-based chemical company is dedicating considerable resources to, and staking part of its future on, health and agricultural research.

In fact, DuPont has just opened two new research facilities at its campus-like experimental station. The larger is the health sciences complex, which adds 250,000 square feet of new lab and office space, and the other is a plant sciences facility, which adds 100,000 square feet of space to an existing facility. Although there are still unfilled slots, the company has been rapidly adding biologists to its research staff during the past 3 years, according to director of central research Richard Quisenberry. There are now about 220 Ph.D. scientists doing research in life sciences at the experimental station, he says, making it the largest group within central research. It is expected eventually to include about 300 scientists, he adds.

DuPont's budget for biological research also has grown. Across the entire corporation, which includes subsidiaries such as New England Nuclear (acquired in 1981), biological research and development work accounts for $250 million in 1984. Much of that sum is absorbed by the expensive development and safety testing costs associated with pharmaceutical products. However, a substantial fraction of the budget—$45 million next year—will go for basic research in the life sciences in programs at the experimental station, Quisenberry says. DuPont also supports a modest amount of "extramural" biological research at universities, most notably Philip Leder's program in genetics at Harvard Medical School. The company is "contemplating" other, similar commitments.

DuPont's leaders say this move into biology is a risky but carefully considered strategy. The alternative route, of buying up a well-established pharmaceutical company as a way of entering the biological age, was rejected. "We don't know if we'll be successful with this approach," Quisenberry told *Science*. "But the bet is we'll bring in something different."

Besides committing itself to an ambitious research program in basic and applied biology, DuPont is also beginning to prod Washington on the ticklish matter of properly regulating biotechnology. DuPont chairman Edward Jefferson used part of the dedication ceremonies to argue that biotechnology matters should be taken out of "regulatory limbo." He urged the federal government to move more quickly on biotechnology, to set up a consistent effort to deal with questions of jurisdiction, to establish a special counselor to the President on biotechnology, and to move authority out of the National Institutes of Health's advisory committee only after proper alternatives are put in place.

—JEFFREY L. FOX