CORPORATE CONFLICTS

AMGEN, GI HEADING FOR PATENT SHOWDOWN

NEW YORK—The battle between Amgen (Thousand Oaks, CA) and Genetics Institute (GI, Cambridge, MA) over patent rights relating to the invention and production of recombinant erythropoietin (EPO) is rapidly coming to a head—on multiple fronts. Trial dates are scheduled in both Massachusetts and California within the next few months to determine inventorship and possible infringements by each company of the other's patents. Interference proceedings also have been declared by the Patent and Trademark Office (PTO) over the patents and pending applications, and appeals may still be heard on previous rulings by courts and the International Trade Commission (ITC).

The stakes are high for both companies. Amgen especially, with Food and Drug Administration approval for EPO, expects significant revenues from product sales in the next year. GI, meanwhile, fell behind in clinical development of EPO. It has struggled to get into court with what is acknowledged to be a weaker position, and would gain credibility with a cross license.

Amgen was knocked out by the ITC in its bid to stop GI from import-

ing EPO—but for jurisdictional reasons. The judge deciding Amgen's motion in fact made favorable comments on the validity of its patent. Now, in Massachusetts, the issue of infringement has been put on a "fast track" for trial (due to start in August).

The California case, scheduled to start a month later in another federal court, touches on the same issues, with one added wrinkle—Amgen partner Ortho (Raritan, NJ) is a party. (Amgen has been attempting to terminate its contract with Ortho, claiming a breach by Ortho regarding agreed-upon contributions to non-EPO related research.) The judge in California, to preserve Ortho's rights, will not transfer or dismiss the case. The California trial likely will proceed before a decision in Massachusetts issues—not expected until the end of the year—duplicating judicial effort and increasing the litigation costs to both companies substantially.

Will the court cases affect the recently-declared PTO interference proceedings, designed to determine priority of invention? According to patent attorney Leslie Misrock of Pennie and Edmonds (New York, NY), "In all probability, much of the

evidence bearing on the questions involved in the interferences will be adduced and ruled upon at trial."

Denise Gilbert of Montgomery Securities (San Francisco, CA) thinks "the risk got a lot larger" with the recent filings. In a turnaround from statements supporting Amgen's desire to fight it out, she now advocates a cross license (without royalties).

But Phil Whitcome, president of Neurogen (Branford, CT) and former director of strategic planning at Amgen, understands his former company's reluctance to change its position. "Amgen won't roll over and play dead because someone is threatening it," he believes. "They filed first and did the pioneering work...If you saw what happened with the development of EPO over the past eight years, you'd understand the emotion and commitment."

Nonetheless, Misrock notes that "Parties can always reach a settlement, even after a trial has ended, up until the time an opinion is issued. Inevitably, with people as experienced as the executives of Amgen and Genetics Institute, one would think there are ongoing business discussions...It happens all the time in trial work."

—Mark Ratner

GENOME SEQUENCING

PROTEIN PATENT PROBLEM TO HINDER RESEARCH?

BERNE, Switzerland—Will the commercial development and patenting of useful pharmacologically active proteins cease, once substantial parts of the human genome have been sequenced? The question was raised by Norman Carey, director of scientific affairs at Celltech (Slough, U.K.), during a symposium titled "Human Genetic Information: Science, Law and Ethics," organized by the London-based Ciba Foundation. Carey pointed out that it would become increasingly likely that the sequences of new proteins—purified and characterized by traditional methods—will be found to be already present in the database. Being known in another context and lacking novelty, they could be unpatentable.

"There is, however, a more liberal approach. This would state that the information in the database is not informative in relation to the discovery. Indeed, it could be argued that it is no more informative than the original information residing in human cells—that it consists of a list of apparently random letters with nothing to highlight specific sequences of poten-

tial utility. The really important steps are taken in the discovery process surrounding the purification and characterization of a protein bearing a particular activity."

Unfortunately, Carey continued, there were two practical flaws in this argument. First, although some information would be "uninformative" because it was placed in the human genome database as a result of random screening of mapped fragments, a considerable amount would actually come from studies of protein activity, structure, and sequence—certainly informative knowledge of the kind which currently destroys novelty. Yet it would not be practical to have to distinguish between two classes of knowledge.

Second, the database itself will be used to predict the existence of potentially useful proteins. A sequence could be examined for open reading frames, intron splice sites, and promoters. Predicted protein sequences so obtained could be compared with known proteins, and could be used to generate antibodies, thus leading to studies elucidating the location of

particular proteins and their functions—hardly uninformative information.

"One might argue that a patent application should be made whenever a new protein sequence is discovered," Carey said. "But this would need to be done before the data went into the database—the moment at which it becomes publicly available. An application would also have to describe an industrial (probably pharmaceutical) use for the protein in question. But at the moment of discovery, it is most unlikely that its eventual utility will have been identified."

Whatever the outcome of this apparent conflict, Carey argued, it could not be seen as a reason for not pursuing research into the full sequence of the human genome. "We must rely on the good sense of those who interpret the [patent] laws to ensure that these two important enterprises, one based on sequencing the human genome and the other on discovering and exploiting new ways of controlling human disease, do not conflict."

—Bernard Dixon