Monoclonal patent

Hybritech versus Abbott

Washington

HYBRITECH Inc., a subsidiary of Eli Lilly, is suing yet another company for using monoclonal antibody assays in its diagnostic kits. Hybritech has now decided to sue Abbott Laboratories on the grounds that some of Abbott's diagnostic tests may violate its patent for 'sandwich assays'.

The patented Hybritech process uses two monoclonals, each specific to a different site on the same antigen, to make an antibody–antigen–antibody 'sandwich'. This detects small quantities of antigen, allowing early diagnosis of disease.

The interest of the new suit is that Hybritech is asking not only for damages and a permanent injunction against Abbott, but for a preliminary injunction that would prevent Abbott from selling its materials even before the case has come to trial. To persuade a judge, Hybritech will have to prove that continued violation of the patent would cause it "irreparable damage". Patent attorney Jorge Goldstein, of Seidman, Sterne, Kessler and Goldstein, says the chance of winning such an injunction, previously not high, is greater in the present pro-patent legal climate.

The disputed products include Abbott's pregnancy tests and some of its hepatitis and cancer tests, which are sold only to physicians or hospitals and comprise 7 per cent of Abbott's sales of diagnostics. Chuck Weber, a spokesman for Abbott, says that their test for the AIDS (acquired immune deficiency syndrome) virus, which uses polyclonal, not monoclonal, antibodies, is not affected by the suit.

If Hybritech wins this case it could also go after other companies using the sandwich assay technology. Syncor, in Sylmar, California, and Ventrex, of Portland, Maine, both have tests for human chorionic gonadotropin that use Hybritech's sandwich assay process to test for pregnancy. And Centocor, of Malvern, Pennsylvania, has just received US Food and Drug Administration approval for its CA 125 ovarian cancer blood test using the technique.

Hybritech's new suit may have arisen from the latest turn in its earlier suit against Monoclonal Antibodies, Inc. In 1984, Hybritech's suit failed and the patent was ruled invalid due to obviousness, but that decision was overturned, on Hybritech's appeal, last September. This decision returns the case to the federal district court in San Francisco, to determine if Monoclonal Antibodies' products infringe the patent for sandwich assays.

But David Brezner, chief counsel for Monoclonal Antibodies, intends to petition the Supreme Court over the decision upholding Hybritech's patent. There is some possibility that the justices may hear the case, as similar suits will certainly arise over other biotechnology patents in future. Brezner said the Abbott case "will not have a major impact" on his company's litigation with Hybritech.

However the Hybritech cases are settled, their handling by the courts will influence future biotechnology patent cases. Jorge Goldstein predicts a high volume of cases for the coming years. But ultimately, he believes, when several patents have been upheld, fewer companies will be tempted to infringe existing patents.

Carol Ezzell

AIDS research queried

Skulduggery at the lab bench

Washington

"DISTRUST and dislike" between AIDS (acquired immune deficiency syndrome) researchers is the probable explanation for incidents of tampering at the federal Centers for Disease Control (CDC) AIDS programme laboratory in Atlanta, Georgia, according to a special independent assessment by the Institute of Medicine. The assessment concludes that a "lack of strong scientific leadership" at the laboratory has led to dissatisfaction and low morale among researchers.

The assessment, requested after allegations in the press of data suppression and tampering, says the committee could not rule out minor tampering with equipment. Reports received "suggest that some unusual incidents did in fact occur".

The committee, chaired by Dr Julius Krevans of the University of California at San Francisco, found the AIDS laboratory only "moderately productive" and recommended that CDC make institutional changes to separate basic and applied research. It also says that the director of CDC, Dr James Mason, should "take a substantial and visible role in the implementation of the new arrangements", and called for a review of authorship policy for AIDS research, a "locus of discord". Some individuals said their contributions were not recognized, and others felt that individuals not involved were credited. Some changes have already been made.

Another allegation made in the *Atlanta Journal* and *Atlanta Constitution* that research data were suppressed was not confirmed. The data in question were from experiments investigating the efficacy *in vitro* of Nonoxynol-9, a spermicide, in killing the AIDS virus. Early drafts of a manuscript published in *The Lancet* in December 1985 (Hicks *et al.* **ii**, 1422–23) had been submitted for internal review at CDC in January 1985, but the final version was not submitted until November.

Krevans' committee concludes, however, that although it is understandable that critics wanted to avoid unwarranted extrapolation of the results, "it is not clear why the revision required six months and clearance seven weeks".

Tim Beardsley

New hepatitis-B vaccine launched

Brussels

COMPETITION in the potentially lucrative market for vaccines against hepatitis-B virus is hotting up. Following close on the plans of a Korean company to produce a dollar-a-shot plasma-derived vaccine (*Nature* 324, 399, 1986), SmithKline Biologicals last week received official approval (in Belgium) for its new recombinant DNA vaccine. Already extensively tested on volunteers, the SmithKline vaccine will compete directly with a similar recombinant DNA vaccine produced by Merck.

The recombinant vaccines are composed of the coat protein ('surface antigen') of the hepatitis-B virus, made in and purified from yeast. The plasma-derived vaccines are made from particles containing surface antigen that are present in the blood of chronic carriers of the virus. As far as SmithKline has tested it (15,000 doses on 6,000 volunteers), the new vaccine appears to be equally effective and can provide a boost to people immunized with the plasma vaccine. Immunity takes about 4 doses and probably lasts about ten years.

Another antigen that may be important in hepatitis-B virus infection is known as Pre-S; some reports say that antibodies to this antigen prevent the virus attaching to the target cell, others that they predispose a patient to become a carrier. Because of this uncertainty, Pre-S was not included in the current vaccine, but according to Dr Alain Goudeau, who has been conducting clinical trials for the company, they have plans to make and test a vaccine that does contain it.

A course of vaccination with the plasma vaccine at present costs around £90 and SmithKline intends to keep the price levels about the same for the time being; the vaccine has been on sale in Singapore for some months at about 20 per cent less than the plasma-derived vaccine. As the sales increase, it is expected that the price will drop; the company has already invested in a new 1.5 m^3 fermenter to increase volume. SmithKline is confident that it can compete with Merck on price and availability, but the competition with the Korean vaccine on price will probably be the deciding factor.

Rebecca Ward