The Rhineland Biopatent Gazette

brought to you by Michalski Huettermann & Partner Patent Attorneys - Issue 1/2012

Duesseldorf/Munich, **11 January 2012** The times they are a'changing – particularly in the Biopatent discipline. Biopatent professionals live in a quickly developing world, which is sometimes hard to keep pace with. Michalski · Huettermann & Partner Patent Attorneys have decided to provide relief to this situation, and are proud to present a new information service related to Patent issues in Biotechnology. This newsletter issues on an irregular basis in order to provide information with respect to actual events, as well as in-depth-analyses of long-term developments. Patent Attorneys from our firm explain the meaning of actual decisions issued by European Patent authorities for the Biopatent community, and provide expert insight into what's going on behind the scenes. In this issue, MH Partner Dr. Ulrich Storz will report on two first instance decisions related to claim interpretation of therapeutic antibodies patents. Both decisions have somehow stirred up our understanding of the scope of protection of patents protecting antibodies and antibody enabling technologies.

US Court construes anti CD-20 claim as epitope-restricted for prosecution history

In an earlier version of the Rhineland Biopatent Gazette (Issue 3/2010), we reported about the ongoing patent battle between Genentech an GlaxoSmithKline (GSK). With Bexxar (Tositumomab) and Arzerra (Ofatumumab), which was developed by Genmab, GSK is introducing two anti CD20-antibodies to the market which compete with Genentech's Blockbuster Rituxan (Rituximab).

On March 24, 2010, Genentech and Biogen sued GSK and Genmab for infringement of US Patent US7682612 (assigned to Biogen and protecting Rituxan) by GSK's Arzerra at the California Southern District Court (case no 3:2010cv00608). Although both Arzerra and Rituxan target CD20, Arzerra binds a different epitope of the latter than Rituxan, and with a different affinity.

Genentech, who is the licensee of US7682612, advocated that Arzerra infringes the patent because it's claim language is not *per se* restricted to a particular epitope of CD20. Claim 1 of the patent reads as follows:

> 1. A method of treating chronic lymphocytic leukemia in a human patient, comprising administering an anti-CD20 antibody to the patient in an amount effective to treat the chronic lymphocytic leukemia, wherein the method does not include treatment with a radiolabelled anti-CD20 antibody.

However, in order to overcome an office objection related to lack of enablement, Biogen has, during the patent prosecution, stated that the term "anti-CD20 antibody shall" mean "antibodies having similar affinity and specifity as rituximab".

Based on this prosecution history, the court construed the patent claims of as being

Phage display patents not merely screening patents, UK Court says

According to a common rule of thumb, the scope of patents protecting a screening method does not extend to compounds found with said screening method. This is mainly due to the fact that a screening method is not considered to be a method of production in the above sense, or, in other words, the compounds found with such method are not considered to be a product of the protected method – because they have existed before, and were simply found by said method.

In contrast screening patents, the protection provided by a method of production patent extends to compounds actually produced with said method, at least in the United States and Europe (see 35 U.S.C. §271(g), Art. 64 (2) EPC or Section 60(1)(c) of the UK Patents Act).

The mere importation of an Antibody which has been obtained with a protected screening method (or, rather, the import of it's DNA or AA sequence information) will thus, at least in the U.S., be considered as a mere "import of information" only (see decision Bayer vs. Housey by the CAFC, 2003), and does as such not qualify as a patent infringement.

The UK High Court of Justice has now modified this concept in decision Medimmune vs. Novartis (case no HC09 C04770 [2011] EWHC 1669 (Pat) which issued July 5, 2011.

In said case, Medimmune, an Astra Zeneca unit who is the exclusive licensee of the McCafferty family of phage display patents, sued Novartis for infringement of claims 5-8 of Patent EP0774511, and claim 1 of Patent EP2055777, by producing and selling

+ from our firm +

5th Rhineland Biopatent Forum will take place May 31, 2012

MH Patent announces that the 5th Rhineland Biopatent Forum will take place May 31, 2012, in our firm's premises in Duesseldorf.

This year, two major topics will stand at center stage, namely (i) the increasingly raising inventive step bar which the EPO applies for patents protecting monoclonal antibodies, and (ii) the patentability of plant breeding methods and plants.

We are honored to announce that, again, we could attract highly expertised speakers.

Lindsey Kent and Mark Stewart, patent counsels at Lilly UK, will present their thesis that the inventive step bar which the EPO applies for patents protecting monoclonal antibodies is not only rising, but, furthermore, way more demanding than what is established granting practice for small molecular pharmaceutics. Interestingly, this new attitude seems not only to apply to functionally defined antibodies, but also to structurally defined antibodies, and to antibody mimetics and other

restricted to anti-CD20 antibodies having similar affinity and specifity as Rituxan. The Court thus concluded that Arzerra does not fall under the scope of said patent.

Further, and without recoursing to prosecution history again, the court also construed the terms "does not include treatment with a radiolabeled anti-CD20 antibody" and "radiation is not used" as to exclude the use of a radiolabeled anti-CD20 antibody or the administration of a separate radiolabeled anti-CD20 antibody.

Thereby, the court has signalized that the combination use of Arzerra with a radiolabeled antibody, like GSK's Bexxar or Spectrum's Zevalin, which are both radiolabeled anti-CD20 antibodies, does not qualify as an infringement of the patent either. The same is applicable for the use of Bexxar alone, which is a combination treatment of Tositumomab and radiolabelled I^{131} Tositumomab.

The decision is noteworthy in different aspects. First, it makes again clear how dangerous it can be to make conceding statements during patent prosecution. Such statements can strike back eventually because a US court may use them for a restrictive claim construction, in particular if advised thereof by a competitor.

Further, the decision again illustrates an important option that can be used for the protection of 2nd generation antibodies, i.e., antibodies against targets which are already addressed by existing antibodies.

In such case, applicants may want to use claims in which the 2nd generation antibody is specified as binding a given epitope of said target. Such epitopes can, e.g., be defined by reference to an existing antibody, by disclosure of the respective sequences or by other suitable technical approaches.

Genentech and Biogen have appealed the decision to the CAFC. For the time being, the full text of the 1st instance decision can be downloaded here.

Lucentis, an Anti-VEGF antibody fragment (Fab-fragment) used for treatment of age related macular degeneration (AMD). Medimmune claimed that Lucentis, which has been developed by Genentech and is sold by Novartis under a Roche license, was produced by a process which falls within the scope of the claims, i.e., is a product obtained directly by means of any of the claimed processes.

The court dismissed Medimmunes claims, because it was convinced that Lucentis was not produced by a process falling within either claims 5-8 of 511 or claim 1 of 777.

As regards claim 1 of EP2055777, Genentech did not use *a gene III protein* to which the antibody fragments were fused for phage display, but a C-terminal domain fragment instead.

As regards claim 5 of EP0774511, Genentech did not produce *a population of particles having a range of binding specificities*, since it already started with an antibody specific to the VEGF. The court found that the subsequent phage display steps undertaken by Genentech to improve the affinity of the humanised antibody did not satisfy this requirement. Further, Genentech did not produce particles which contained a *phagemid genome*.

What makes this decision so interesting is, the point that the court made a remarkable obiter dictum, by stating that, if Lucentis was actually produced by a process falling within claim 8 of 511 and claim 1 of 777, then it was a product obtained directly by means of those claims and, on that hypothesis, Novartis would have infringed both Patents if valid. The decision thus overturns current thinking that phage display patents do not protect the actual products developed therewith it.

However, both claims have been drafted in such way that they recite a step of producing a library of bacteriophages displaying at their surface a population of antibodies. The claims are thus not restricted to a mere screening steps, but also comprise veritable production steps – which in the eyes of the Court qualifies them for providing product protection under Section 60(1)(c) of the UK Patents Act.

Apart from that, the decision is already worth reading because it contains a detailed technical background section which would make a student textbook on its own. The full text of the decision can be found here.

Astra Zeneca has announced to appeal the decision, but it rmains unclear whether they have already done so. We will keep you updated.

biopharmaceutics, too.

We are proud that the EPO has confirmed to detach a speaker, too, who will present the EPO's position on this issue.

As another highlight, Dr. Petra Jorasch from the German Plant Breeders Association (BDP) has confirmed that she will present her association's position on the recent decisions G 2/07 ("Broccoli case") and G 1/08 ("Tomato case"), and the new referral to the Enlarged Board of Appeal in the Broccoli case.

Mrs. Jorasch will specifically refer to the Product by Process Claims still prosecuted in the Broccoli case, and her Association's position thereto.

As a good tradition, we have also invited one of our US colleagues to give us an update on selected topics of US Biopatent law.

We are confident that these speakers will make the 5th Rhineland Biopatent Forum a true worthwhile event for IP professionals from small and large Biotech enterprises.

The finalized program will be available soon. In case you would like to attend, or contribute, please inquire here.

Feedback please !

What do you think about this newsletter ? Let us have your comments here.

Archive

In the future, you may find prior issues of the Rhineland Biopatent Gazette here.

Michalski Huettermann & Partner are getting personal... Today: Dr. Ralf Malessa

Dr. Ralf Malessa studied Chemistry at Dortmund University and the University College of London and specialized in Biophysical

Chemistry. He received his Diploma in 1995 and his PhD in 1998 for studies in the area of structural characterization of Biopolymers in aqueous solutions. For the next 13 years he worked in R&D for different companies in the food, cosmetic and medical device sector. The linking element was the technical concept development for B2B- and retail customers utilizing biological macromolecules. Before joining Michalski Hüttermann & Partner in 2011, he was the head of R&D in a bioplolymer company.

Ralf Malessa started his IP-training at Michalski Hüttermann & Partner in 2011. He speaks German and English. You can contact Ralf under rm@mhpatent.de.

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