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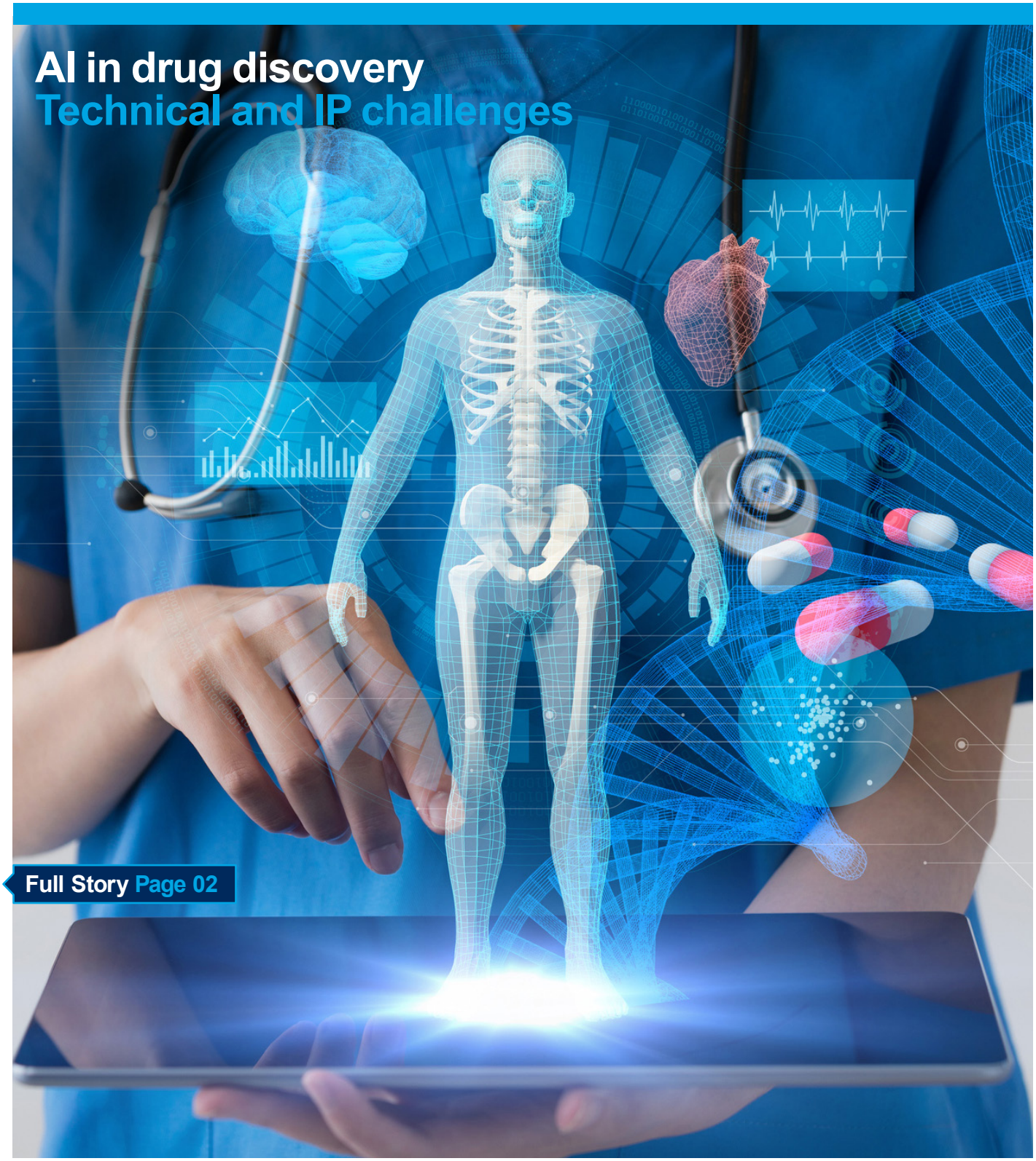

Editorial

Welcome to our latest newsletter. Like many of our clients and overseas counsel D Young & Co is slowly making the transition to working back in our offices in the UK and Germany. After so long it is great to be reconnecting in person with our teams. We look forward to forthcoming client visits and the chance to reconnect with you all in person. One of our articles this time explains the latest developments for the unitary patent and Unified Patent Court. We strongly recommend EPO applicants carefully consider their portfolios in the coming months and importantly the so called "Sunrise Period", as explained in our article. As always, your D Young & Co contact is available to advise.

Anthony Albutt, Editor

Webinars

European Biotech Patent Case Law
Webinar, on demand
Simon O'Brien and Antony Latham present our most recent round up of important and recent European biotech case law.

www.dyoung.com/webinars

Events

FICPI Virtual 20th Open Forum
Virtual event, 04 November 2021
Doug Ealey will be speaking at FICPI's global forum from 12.00-13.30 in the 'Best Practice for Drafting Quality Patents' session.

10th Annual Conference of the International Chemical Biology Society
Virtual event, 11 November 2021
Laura Jennings will be attending this virtual conference.

CIPA Life Sciences Conference 2021
London, 29 November 2021
Tamara Milton will be attending the CIPA Life Sciences Conference.

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Artificial intelligence / machine learning

AI in drug discovery
Technical and IP challenges

Artificial intelligence (AI) and machine learning (ML) are not new concepts – they have been the subject of academic investigation for decades. However, real-world applications have had to wait longer for the availability of the computing power and rich data sets necessary to successfully implement such approaches.

In recent years there has been an explosion in the number of start-ups offering AI or ML based solutions that promise to improve the efficiency of the drug discovery process. There is undoubtedly much value to be added here. While the causes are the subject of much debate, it is clear that the time and financial costs of bringing a new drug to market continue to increase. Further, the development of new technologies such as high-throughput sequencing and "omics" that provide large volumes of rich data, together with the "publish or perish" culture of academic research mean that those working in drug discovery are faced with an ever growing mountain of complex data to navigate in their search for a lead.

We recently attended "Accelerating Drug Discovery through Digital and AI Innovations" organised by the UK Bioindustry Association and "Artificial Intelligence in Chemistry" organised by the Royal Society of Chemistry to learn more about this exciting area and to understand the challenges as well as value offered by using AI and ML in drug discovery.

Finding hidden connections

Machine learning algorithms can be particularly good at finding hidden connections within large, complex data sets that may go undiscovered by human eyes. Several start-ups are offering platforms that leverage data from multiple sources such as public and proprietary databases, academic and patent literature, patient and clinical data as well as expert input and curation. Such data can then be analysed using approaches such as natural language processing (NLP) to identify and catalogue entities and then search for "connections", such as biological pathways with potential for pharmacological intervention.

Other data sets being successfully mined are large databases of nucleic and amino acid sequences. The RSC event included a fascinating presentation by Alexander Pritzel of DeepMind discussing their highly publicised AlphaFold2 model which uses sequence information and known protein structures to predict protein structures with staggering results. With experimental routes to determining protein structures such as X-ray crystallography and cryo-EM being so time consuming and challenging, such AI approaches herald a step-change in the life sciences.

AI can also be used to identify new compounds or identify existing drugs that might be repurposed or further refined. Moreover, compounds might also be screened to predict how they might perform in the clinic, to concentrate on compounds with the most promising safety profiles, for example. Finally, AI or ML approaches are also being developed to provide new or improved synthesis methods.

The search for quality over quantity in drug discovery

Artificial intelligence and machine learning approaches offer the potential to examine a large number of aspects of the drug discovery pipeline at an early stage before compounds need to be taken into the laboratory. This may allow a smaller number of more promising compounds to be taken forward for development, leading to a focus on quality over quantity. In turn, the hope is that while more compounds may be expected to fail earlier, the pipeline should become more efficient as more resources can be dedicated to the most promising leads.

AstraZeneca, for example, has implemented its "5R framework" to improve R&D productivity. The framework focuses on five key determinants: the right target, right tissue, right safety, right patient, and right commercial potential, which in a number of aspects draw heavily on the use of technologies such as AI and ML to focus on the quality of hits entering the laboratory pipeline. Put simply, it is too

What are the challenges and value offered by AI and ML in drug discovery?

expensive to turn the handle ever faster, and AstraZeneca has moved to evaluating targets more extensively and earlier on, so that fewer, but higher quality, projects are taken forward. Since the implementation of the 5R framework, AstraZeneca reports that success rates from candidate drug nomination to phase III completion have improved from 4% in 2005–2010 to 19% in 2012–2016.[1]

Technical challenges

Artificial intelligence and machine learning is in many respects already mature. In applying these approaches to drug discovery, however, a significant challenge is the quality of data sets. While some published studies may be erroneous or not reproducible, there are also more mundane but still significant challenges around the standardisation of identifiers and data formats.

Patrick Walters of Relay Therapeutics gave a fascinating talk in which he discussed some of the challenges associated with representing molecules in AI models. For example, in light of the already significant complexity of these approaches, it is often necessary to represent compounds in two dimensions, but of course molecules are three dimensional, often with multiple conformers, and so this simplification can cause difficulties. Another challenge is how to remove nonsensical chemical structures from the model, whilst still identifying interesting new compounds for development.

Another challenge is that many data sets are proprietary. While it is widely agreed that collaboration is important to improve the application of AI and ML in drug discovery, complex issues of data sharing and ownership will need to be resolved. Finally, many current technologies have been validated retrospectively, that is, after a discovery programme has already started running, and the field currently lacks good examples of prospective leads from the outset.

Intellectual property challenges

While legal issues raised by the concept of an "AI inventor" have recently been the subject of debate, and are of great interest to legal practitioners, in drug discovery at least the focus is on when and how to protect AI and ML technologies as tools for automation and improvement of the drug discovery process.

Companies developing or using AI and ML-based technologies for drug discovery potentially have two distinct groups of property that they may wish to protect. Molecules derived from such programmes can of course be protected by patents subject to the applicable requirements of patentability. However, companies may also wish to protect their algorithms and associated technology. Two options that might be considered are patents and trade secrets.

At the European Patent Office, artificial intelligence and machine learning appear at first instance to fall within "mathematical methods" such that they would be excluded from patentability. Indeed, an invention relating solely to a fundamental advance in AI/ML intrinsically would not be patentable. However, AI and ML methods that provide a technical solution to a technical problem are generally considered patentable. Careful thought must therefore be given when drafting an application to ensure that the AI or ML method is suitably tied into the solution provided by the invention, for example the identification of a new drug. As this is a developing area, we would expect the EPO guidance to evolve further as new judgments from the Board of Appeal become available.

In some cases, companies working in the AI or ML drug discovery space may choose to rely on trade secret or know-how provisions to protect their methods and reserve patent applications for the hits discovered by their use. Indeed, a trade-off of patenting is that your invention is put into the public domain once the patent application is published. Keeping a technology as a trade secret may indeed be a viable option if it is hard to reverse engineer and can be kept confidential for a long period of time. However, there is of course no protection against a competitor independently developing the same technology, which may be a particular risk in a fast moving field.

Clients working in this area should talk to an IP professional early on to discuss how best to protect their innovation. A cross-disciplinary approach involving professionals working in both the pharma and information technology sectors is likely to be most effective. For further information please contact Catherine Keetch or your usual D Young and Co representative.

Notes

1. *Morgan, P., Brown, D., Lennard, S. et al. Impact of a five-dimensional framework on R&D productivity at AstraZeneca. Nat Rev Drug Discov 17, 167–181 (2018). https://doi.org/10.1038/nrd.2017.244*

Authors
Catherine Keetch & Leon Harrington

UP & UPC
Are you ready for the Unified Patent Court and unitary patent?

UP & UPC resources
Our UP & UPC guidance is kept up to date online at: www.dyoung.com/upandupc

Following countless number of false starts over the last few years, the Unified Patent Court (UPC) and unitary patent (UP) may have dropped to the bottom of many patent owners' "to do" lists. September and October 2021 have seen, however, a flurry of activity and as a result, both the UPC and UP may actually become a reality between mid-2022 and early 2023.

- On 27 September 2021, Germany ratified the Protocol on the Provisional Application (PPA) of the UPC Agreement. This followed the German President's signature of the UPC Agreement and Protocol on 07 August 2021, and means that **Germany is in a position to ratify the UPC Agreement**.
- On 15 October 2021 the Government of Slovenia ratified the Protocol on the Provisional Application (PPA) of the UPC Agreement and the UPC Agreement.
- Austria also submitted a draft law in July 2021 to its national parliament for the ratification of the PPA.

Action/event	Comments	Earliest expected dates (approximate)
Two further member states ratify the Protocol on the Provisional Application Period (for example, Slovenia and one other).	**End of which the PAP Protocol enters into force.**	Q4 2021
PAP preparations to include: - Governing bodies of the UPC assemble adopt secondary legislation. - UPC budget finalised. - IT systems finalised. - Recruitment of judges of the court finalised.	Expected six-ten month period.	Q4 2021 to Q2/Q3 2022
Germany deposits last instrument of ratification of the UPC Agreement (UPCA).	When work has progressed enough, Germany will deposit the last instrument of ratification of the UPCA. **This is a four-month alert to the start of UPC and UP.**	**Q2/Q3 2022**
Opt-outs can be filed in "sunrise period"	Three-month window before the start of the UPC. Patent owners are able to file opt-outs for existing EP patents.	**Q2 2022**
UPCA enters into force, UPs are available along with the UPC.		Q2/Q3 2022

UPC provisional application period

Once the ratification of one other participating Member State is completed, the provisional application period of the UPC should start. This will allow for completion of preparatory work establishing the UPC, including stress testing of the electronic case management system and the appointment of judges. The provisional application period is expected to last from six to ten months, most likely eight months, and could commence as early as Q4 2021.

With the provisional application period in effect, Germany can deposit its ratification of the UPC Agreement. Once German ratification is deposited, the new court and pan-European patent system will commence on the first day of the fourth month after the month in which that deposit occurs. Germany will not trigger this timetable until all preparatory work is complete.

The UPC Preparatory Committee have indicated that: "When it is clear that the UPC will be operational upon the entry into force of the UPCA the final ratification of the Agreement by Germany can take place serving as a "gatekeeper" for Member States to ensure a proper process".

> Consequently, the UPC and UP could start between mid-2022 and early 2023.

Sunrise period

Ratification by Germany will also determine the beginning of the "sunrise period" – a three-month window before the UPC becomes fully operational when patent owners are able to file "opt-outs" for existing European patents validated in one or more countries taking part in the UPC. The list of countries is available here: http://dycip.com/upc-countries.

Opting-out in the sunrise period is important for patent owners wanting to avoid the jurisdiction of the UPC. If an opt-out is not filed in the sunrise period and an action started in the UPC when it becomes fully operational, it is not possible to then "opt-out"

These steps are summarised in the table above.

This timetable is provisional at this stage and there are still some details to be clarified. One is the location of a UPC central division following the UK's withdrawal from the UPC. Nevertheless, we would suggest re-visiting the UP and UPC with particular focus on whether to "opt out" existing EP Patents from the UPC. Transactional matters such as agreements and licences should also be reviewed. If you need any assistance or advice, please do contact your usual D Young & Co representative or email us at mail@dyoung.com.

Key points to note about the UPC, UP and opt-out

- A UP must be litigated in the UPC.
- All European patents must be litigated in the UPC for member states of the UPC, unless the patent owner opts out of the UPC.

- A validly filed opt-out is effective for the life of the patent.
- The opt out will be available from the beginning of the sunrise period until the end of the transition period (at least seven years from the start of the UPC).
- If proceedings are commenced in the UPC before an opt out is filed, the patent owner is restricted to the jurisdiction of the UPC.
- The UK's withdrawal from the UPC means that a European patent designating the UK can only be enforced in the UK courts. A similar situation will arise for other Member States of the EPC which are not members of the UP/UPC, for example Spain, Poland, Switzerland and Norway.
- The UP and UPC do not impact the EPO Opposition and Appeal procedure.

A UP is obtained by filing a European patent application and selecting the UP at grant. Both our UK and Germany based European Patent Attorneys will be able to obtain UPs at the European Patent Office, exactly as we currently do for European patents. We will also be able to prepare and file opt-outs.

Furthermore, D Young & Co's experienced European patent attorneys, UK and German qualified patent attorneys as well as solicitors and Rechtsanwälte have the rights of representation before the UKIPO, the DPMA, the EPO and the UPC and can advise and support you when enforcing or defending actions for patent infringement and revocation/nullity actions. We will therefore be able to advise on a strategy for choosing the most appropriate route for patent protection utilising both the options of the unitary patent and national patent rights to match budget with respect to our client's business strategy.

We will keep a close eye on developments and we will be providing further advice and guidance over the next few months. We have an area on our website (www.dyoung.com/upandupc) dedicated to the UP and the UPC.

Author:
Rachel Bateman

FibroGen Ltd v Akebia Therapeutics

When are structurally- and functionally-defined claims excessively broad?

The Court of Appeal recently clarified the steps for assessing whether claims defined both structurally and functionally are insufficient due to excessive claim breadth, under the UK Patents Act 1977. The case involved two FibroGen patent families relating to a class of compounds for use in treating two forms of anaemia. Structurally, the compounds were broad classes of known heterocyclic carboxamides; functionally, the compounds were hypoxia inducible factor prolyl hydroxylase (HIF-PH) inhibitors that increase endogenous erythropoietin.

Akebia and Otsuka (Akebia) have a HIF-PH inhibitor called vadadustat, which is in Phase III clinical trials for anaemia. In an attempt to clear the way for UK launch, they sought revocation of FibroGen's EP(UK) HIF-PH inhibitor patents.

First instance

In assessing whether the claims were excessively broad (meaning the invention cannot be performed across the breadth of the claim without undue burden), Arnold LJ reviewed relevant case law, and concluded that a two stage test needed to be carried out:

1. Does the disclosure of the patent make it **plausible** that the invention will work across the scope of the claims?

2. If the first answer is yes, could the invention be performed across the scope of the claims **without undue burden?**

Arnold LJ also found that case law precluded the court from taking functional limitations into account, when determining the scope of the claims; and the skilled person would need to identify substantially all compounds covered by the claim without undue burden, to answer yes in the second stage. For those reasons, he found that the patents implicitly promised substantially all compounds having the structural limitations (~10^{183} compounds!) have the claimed therapeutic efficacy. However, the patents only demonstrated five compounds having the claimed therapeutic effect, and no structure-activity relationships (SAR) had been disclosed.

Therefore, Arnold LJ found that the claims were insufficient (and "AgrEvo obvious" [see note 1 overleaf] for the same reasons), because it was implausible that all compounds having the structural features would have the functional features or therapeutic efficacy.

In case he was wrong, Arnold LJ also considered whether the skilled person could identify substantially all compounds covered by claim without undue burden. However, he asserted that a substantial research project would be required to identify more than a tiny fraction of additional compounds that work, with no guarantee of success. Therefore, the claims were found to be invalid again.

Appeal

FibroGen appealed against this decision of insufficiency.

In relation to plausibility, it argued that functional features are limiting; and it was plausible that compounds with the structural and functional features have the claimed therapeutic effect. Also, the patents do not imply that all compounds with the structural features work, because the technical contribution was not the known compounds in themselves. Instead, it was that certain classes are HIF-PH inhibitors, and may be used in treating anaemia by increasing endogenous EPO.

In relation to undue burden, FibroGen argued that identifying substantially all compounds is the wrong test, and inevitably causes an undue burden. FibroGen also argued that SAR analysis and lead optimisation are merely routine and iterative.

Plausibility

Regarding plausibility, the Court of Appeal acknowledged that defining an invention using general terms is permissible, if it is plausible the invention will work across the scope of the claims.

[continued on page 06]

...Continued from page 05

FibroGen Ltd v Akebia Therapeutics When are structurally- and functionally-defined claims excessively broad?

Also, a patent can be granted for a class of compounds, when a generally applicable effect has only been demonstrated for a few individual compounds; unlike when no general application has been demonstrated (following the House of Lords' 1997 decision in Biogen v Medeva).

On that basis, the Court of Appeal reasoned that it must be possible to reasonably predict the invention will work with substantially everything in the scope of the claim. Therefore, the Court of Appeal decided to apply a three step test:

1. What falls within the scope of the claimed class?
2. What does "working the invention" actually mean?
3. On that basis, can the skilled person make a **reasonable prediction** that the invention will work with substantially everything falling within the scope of the claim?

In applying step 1, the Court of Appeal decided that the claims did cover compounds having the structural and functional features specified; and the functional requirements could be determined by tests that were well described in the patent.

In applying step 2, it was clear that "working the invention" meant treating the claimed form of anaemia.

Therefore, the appropriate question to ask in step 3 was whether the skilled person could **reasonably predict** that compounds satisfying the structural limitations, and the functional limitations (determined by tests described in the patent), are useful in treating the claimed forms of anaemia. On the evidence, the Court of Appeal found that a reasonable prediction could be made. Therefore, the first instance conclusion of implausibility was incorrect.

Undue burden

In relation to undue burden, the Court of Appeal acknowledged that claims may be defined by functional limitations, if the invention cannot otherwise be defined more precisely without unduly restricting the scope of the invention. However, Arnold LJ's conclusion that the skilled person has to identify substantially all compounds covered by the claim was questionable.

Having reviewed case law, the Court of Appeal recognised that it is admissible to recite a group of substances in generalised form (for example, functionally), even if some substances are unsuitable for the purpose, provided the skilled person can easily determine their suitability by experiments. Also, it does not matter if some compounds within the generalised class have not been discovered yet, provided using them makes use of the invention. As functional language inherently covers undiscovered compounds, the skilled person cannot be required to identify substantially all compounds covered by the claim.

Ultimately, the Court of Appeal came to the conclusion that if compounds are defined by functional features, the reader must be able to (without undue burden):

1. Identify further compounds that satisfy the relevant test; and
2. Work substantially anywhere within the claim.

Applying these to the FibroGen patents, the Court of Appeal concluded that it was possible to identify other compounds that work. Although it would require a lot of effort, SAR analysis and lead optimisation are routine and iterative, and performing the tests in the patents is not unduly difficult. Therefore, the skilled person could identify further effective compounds without undue burden.

The Court of Appeal also decided that the skilled person would be able to work substantially anywhere in the scope of the claims, because there was no evidence that particular regions of the claim scope cannot be tested for the functional features (consistent with the Supreme Court decision of 2020 regarding Regeneron Pharmaceuticals v Kymab decision).

Therefore, the Court of Appeal concluded that the claims were not insufficient for excessive claim breadth.

Comment

In summary, this decision confirms that functional features can be limiting on the scope of a claim. However, the skilled person must be able to **reasonably predict** that the invention will work with substantially everything falling within the scope of the claim; and the reader must be able to identify further compounds that satisfy the relevant test, and work substantially anywhere within the claim, **without undue burden**.

This is a clear reminder when drafting that we should include sufficient information about tests for functional features, as well as information about general applicability of beneficial effects. However, we should be careful to avoid overly broad claims covering regions that cannot be tested.

The case related to a class of compounds for use in treating two forms of anaemia

Notes

1. AgrEvo obviousness arises when claims lack a technical contribution (based on T 939/92). If an alleged technical effect is not credibly achieved for substantially everything falling within the scope of a claim, the effect cannot be used to formulate the technical problem for the assessment of obviousness. However, it is not inventive to merely provide new compounds with no beneficial properties.

Author:
Laura Jennings

Germany simplifies and modernises industrial property laws
What's new at the DPMA?

Germany offers an outstanding system for IP protection – its patent and trade mark office (the DPMA) is the largest national IP office in Europe and the fifth largest national patent office in the world. It is however over ten years since the last major reform of industrial property protection through the Act on the Simplification and Modernization of Patent Act of 31th July 2009. The Second Act on the Simplification and Modernization of Patent Act of 10 August 2021 has further simplified and modernised the Patent Act and other laws in the field of industrial property protection.

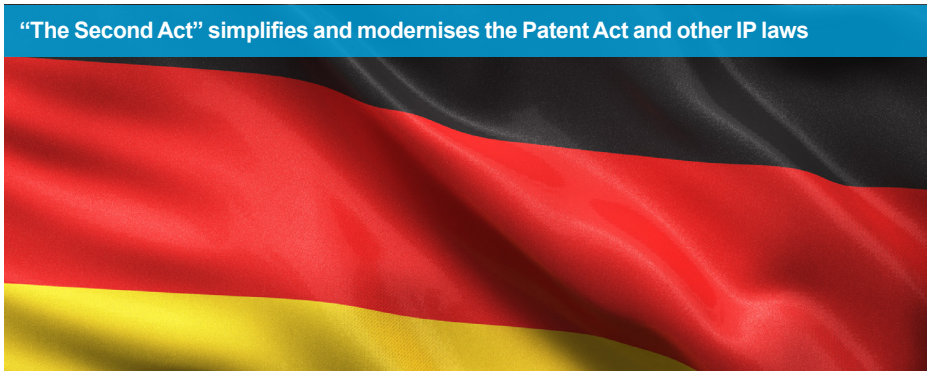
The Second Act comprises a variety of different measures improving both acquisition and enforcement of patent and related rights at the German Patent and Trade Mark Office (Deutsches Patent- und Markenamt - DPMA) and courts, perhaps most importantly: the 31-month period for national phase entry before the GDPMA, video conferencing in DPMA procedures, injunctive relief in patent law and proportionality principle, more synchronised invalidity and infringement proceedings, and protection of trade secrets in patent litigation.

31-month period for national phase entry before the DPMA

The period for international applications (PCT applications) to enter the national phase before the DPMA as designated office or elected office will be extended to 31 months. This will allow applicants to make full use of the period for entry into the national phase and harmonise national phase entry with other jurisdictions. The amendment will enter into force on 01 May 2022.

Video conferencing (ViCo) in DPMA procedures

In procedures of suitable cases before the DPMA, parties will be able to participate in proceedings and hearings, and give evidence using image and sound transmission (video conferencing), potentially saving costs and time and accelerating the procedures. However, it will still be possible to participate in person. The amendment will also enter into force on 01 May 2022.



"The Second Act" simplifies and modernises the Patent Act and other IP laws

Injunctive relief in patent law and proportionality principle

Amendments of section 139 paragraph 1 Patent Act (PatG) and section 24 paragraph 1 Utility Model Act (GebrMG) now expressly standardise the possibility of excluding the right to cease and desist if this leads to unjustified hardship for the infringer themselves or for a third party. In case the exclusion takes effect, the infringer has to pay appropriate compensation for the future in addition to any backward-looking damages. An explicit reference to the principle of good faith indicated that the test for the unjustifiable hardship precluding injunctive relief requires an assessment of all facts and circumstances of the case, especially including the proprietor's legitimate interests.

More synchronised invalidity and infringement proceedings

In patent litigation, invalidity (revocation) cases are heard by the Federal Patent Court (Bundespatentgericht) and infringement cases are heard by specialised civil courts of general jurisdiction (bifurcation). In case the Federal Patent Court rules on validity of a patent after a first instance infringement judgment, the infamous "injunction gap" occurs. Amendments of sections 82 and 83 Patent Act now codify that the Federal Patent Court shall immediately (without undue delay) serve the revocation action on the defendant (patentee), and that the term for the patentee to substantiate their objection is only two to a maximum of three months. Within six months of the revocation action being served, the Federal Patent Court shall issue a qualified preliminary opinion on the validity of the patent.

Protection of trade secrets in patent litigation

New section 145a Patent Act and section 26a Utility Model Act, both referring to sections 16 to 20 Act on the Protection of Trade Secrets (GeschGehG) of 18 April 2019, allow courts to take measures to preserve business and trade secrets in patent infringement proceedings. The courts can restrict the right to inspect files, exclude the public from court hearings or restrict access to certain documents to a certain number of reliable persons, for example.

The Second Act also addresses the Trade Mark Act, Semiconductor Protection Act, Design Act and industrial property related ordinances as well as fees including renewal fees of supplementary protection certificates, taking effect on 01 May 2022.

Further, the "Act on Further Duties of the German Patent and Trade Mark Office and to Revise the Patent Costs Act" of 30 August 2021 expands the responsibilities of the DPMA to act as a central point of contact for European, international and other national office, and fees including renewal fees for patent applications and patents. The Act, taking effect on 01 July 2022, aims to reduce the inflation-related decline of fee levels, and also adjusts the renewal fees of patent applications and patents.

Author:
Hanns-Juergen Grosse

Database management and information retrieval systems
Has their time finally come?

The realm of computer-implemented inventions is a challenging one, with traps and pitfalls for the unaware and unwary. The guidance provided by the European Patent Office (EPO) to its examiners for assessing the patentability of computer-implemented inventions provides valuable insight into how to navigate this troublesome area.

As we reported earlier in the year, the EPO Guidelines for Examination were updated in March 2021, bringing about a number of changes in how computer-implemented inventions are handled. In particular, these updated Guidelines introduced for the first time a section relating to database management systems and information retrieval (G-II, 3.6.4), which provides some welcome clarification as to how to obtain a patent in this area.

Database management systems - technical systems and technical considerations

In this new section, the EPO has made it clear that it considers database management systems to be technical systems that perform the technical task of storing and retrieving data in an efficient manner. As such, the EPO is likely to find a method performed in a database management system as not being excluded from patentability.

The EPO has further clarified that features of a claim that specify the internal functioning of a database management system are based on technical considerations and thus contribute to the technical character of the claim. Accordingly, these features may support the presence of an inventive step.

That being said, not all features implemented in a database management system are necessarily technical in character by virtue of their implementation in this technical system. For example, a feature of a database management system for accounting costs related to the use of the system by different users would not impart a technical contribution.

Database management systems - query execution and data structures

The EPO has further clarified its position on the execution of structured queries: "optimising the execution of such structured queries with respect to the computer resources needed (such as CPU, main memory or hard disk) contributes to the technical character of the invention" as it involves the efficient exploitation of the computer system.

Updated Guidelines include a section for database management and information retrieval

Additionally, data structures used in database management systems, for example indexes, hash tables, or query trees, may also contribute to the technical character of the invention if the data structure controls operation of the database management system to facilitate access to data or for the execution of structure queries. However, if the data structure is based on cognitive data rather than functional data, then such a data structure would not be considered technical.

Information retrieval

The EPO has provided further guidance in relation to systems for information retrieval. Such systems may comprise searching for information in a document, searching for documents themselves, or searching for metadata that describes data such as texts, images or sounds. If a search is based on finding relevant or similar documents and the method of estimating the relevance or similarity is based solely on non-technical considerations, such as cognitive context, purely linguistic rules or other subjective criteria, then the method does not make a technical contribution.

In addition, the new section states that the translation of linguistic considerations into a mathematical model with the aim of enabling linguistic analysis to be done by a computer involves technical considerations. However, it is stressed that this in itself is not enough to guarantee technical character of the mathematical model – the internal functioning of the computer on which it is to be run must also be a consideration.

As an example, a mathematical model for calculating the probability that a given term is similar in meaning to another term by analysing the co-occurrence frequency of two terms in a collection of documents would not bring about a technical contribution in itself as it is based on purely linguistic considerations. Indeed, in the context of this example, a "better search" would be subjective.

Conclusion

While obtaining protection for computer-implemented inventions remains challenging, it would appear that the EPO has had a step-change in its approach, such that applications for computer-implemented inventions in the field of database management systems and information retrieval have a substantially improved prospect of achieving grant.

If you have any questions on this subject or would like any assistance with protecting a computer-implemented invention, please contact your usual D Young and Co representative.

Authors:
Anton Baker & William Smith

Too much time for "live" - Facebook v Voxer IP Struggles with equivalence in a post-Actavis world

In this recent case, Facebook's live broadcast feature was found not to infringe Voxer's patent related to exchanging messages in "live" and "time-shifted" communication modes. Specifically, it was deemed that a minimum 10-second delay between content being captured by one user and being viewed by another user was "just too big" to fall under the interpretation of "live" communication in claim 1 of Voxer's patent. Although not ultimate decisive to the case, some interesting Actavis equivalence issues were also considered.

Facebook's alleged infringement

Facebook's live broadcast feature allows a user to capture content using a device's camera and microphone. The content is broadcast to viewers over the internet as it is captured (for example, via the user's Facebook or Instagram page).

Voxer's patent and non-infringement

In a nutshell, claim 1 of Voxer's patent defined a method in which messages (comprising voice and video media) are exchanged over a communication network in either a "live" or "time-shifted" communication mode. Various features which enable this to happen, including encoding, storing, and transmitting steps were defined in claim 1. Claim 1 also defined that each message is stored and transmitted "at each hop" along a path over a communication network. Equivalence was discussed, in particular, for this latter feature.

If there's no storage, there's no "hop"

Under a "normal" (that is, purposive) interpretation of the claims, LJ Birss determined the claimed storage and transmission of messages "at each hop" meant a given message must be stored at each server in the network with persistent storage capability. It was determined this was not always the case with Facebook's network, which included servers which had the capability to persistently store content but did not do so. Facebook therefore did not have this claimed feature.

What about equivalents?

When reviewed in light of Actavis, however, it was determined that Facebook's use of multiple servers geographically distributed around the world mean that each "relevant" server is able to access the content it needs to. LJ Birss deemed this to deliver substantially the same result in substantially the same way as storing messages at each hop (as claimed) in a way would have been obvious to the skilled person (satisfying Actavis questions 1 and 2). It was also determined the skilled reader would not have thought the patentee intended strict compliance with the wording "at each hop" (satisfying Actavis question 3). Facebook therefore did have this claimed feature by way of Actavis equivalence.

Is this reasonable?

A finding of infringement for the feature "at each hop" is potentially controversial. Claim 1 had previously been amended to change the broader "at least one hop" to the narrower "at each hop" to overcome an added matter issue. Facebook therefore argued, perhaps understandably, that this implied strict compliance with the claim wording "at each hop" had been intended by the patentee. Actavis question 3 should therefore be answered in the positive and no infringement by equivalence found.

LJ Birss disagreed. He concluded that, although narrowing a claim to distinguish it from the prior art could have a bearing on equivalence (for example, if the patentee argued that "introduced wording should not be strictly complied with in order to cover the very thing it was introduced to exclude from the claim"), added matter is a "different kind of objection" to which such considerations were less likely to apply.

Some may find this conclusion surprising. As LJ Birss himself put it, added matter is a "legal principle … to protect third parties by holding the patentee to their disclosure". Is the patentee truly held to their disclosure if, via Actavis, they are able to show infringement through a broader of interpretation of a claimed feature they previously narrowed specifically because they did not disclose that feature at the level of generality required for that broader interpretation? Is this not giving the patentee more protection than they are entitled to by their disclosure?

Conclusion

Although they weren't decisive in this case, this decision demonstrates the ongoing issues that can arise when considering infringement in the UK post Actavis. In particular, it highlights the challenges the UK courts face in balancing the arguably broader rights of the patentee under Actavis with the need for legal certainty for third parties. The apparent distinction between prior art- and added matter-related amendments potentially adds a further layer of complexity to this.

Author:
Arun Roy

The case concerns the exchange of messages over communication networks

T 1197/18
Clarification of the video conferencing order issued on G 1/21

T 1197/18 provides some clarity on the scope of the term "impairing" in the order concerning video conferencing (ViCo) issued on G1/21 by the Enlarged Board of Appeal.

Background

New Article 15a RPBA, which came into force on 01 April 2021, allows a European Patent Office (EPO) Board of Appeal to hold oral proceedings pursuant to Article 116 EPC by video conference if the Board of Appeal considers it appropriate to do so, either upon request of a party or of its own motion. This article was introduced in light of the Covid-19 pandemic and the associated travel restrictions.

In the much-discussed case G 1/21, the Enlarged Board of Appeal issued the order in which it ruled that: "During a general emergency impairing the parties' possibilities to attend in-person oral proceedings at the EPO premises, the conduct of oral proceedings before the boards of appeal in the form of a video conference is compatible with the EPC even if not all of the parties to the proceedings have given their consent to the conduct of oral proceedings in the form of a video conference."

Notably, the order limited the referred question and it did not address the issue whether oral proceedings by video conference may be held without the consent of the parties in the absence of a period of general emergency. In addition, the order did not address the issue whether oral proceedings by video conference may be held without the consent of the parties in examination or opposition proceedings before the EPO's departments of first instance.

At the time of writing this article, we are still waiting for the reasons behind the decision to be issued. In the meantime, recent decision T 1197/18 helps to provide some clarity on what the term "impairing" in this order means.

T 1197/18

Most of the stringent travel restrictions in Europe had been lifted at the time of this decision (26 July 2021). For this reason, the Board of Appeal considered whether the order of the Enlarged Board of Appeal could still apply; the oral proceedings in G1/21 had taken place about two months earlier at the end of May 2021.

In this case, the respondent-proprietor requested oral proceedings be held by videoconferencing and the appellant-opponent disagreed. The Board of Appeal informed the parties that oral proceedings would be held by video conference on 26 July 2021.

At oral proceedings, the appellant-opponent argued that there was no impediment to in-person oral proceedings as evidenced by the presence of the respondent-proprietor's representative at oral proceedings in Munich on 22 July 2021. They argued that by using the term "impairing" the Enlarged Board of Appeal was aiming at a degree of impairment such that the party could not participate in the oral proceedings without undue effort such as in situations where travel to the EPO was practically impossible or subject to quarantine.

The respondent-proprietor replied arguing that the trip to Munich the previous week was very complicated and the situation was changing daily.

Findings of the Board of Appeal

The Board of Appeal noted that the Enlarged Board of Appeal chose to use the term "impairing" in the order and considered that the term referred to a degradation of conditions rather than an impossibility. The Board of Appeal held that the term "impairing" should considered as "compromising" and not "preventing".

The Board of Appeal held that it was irrelevant that the respondent-proprietor's representative was present during oral proceedings before another Board of Appeal in Munich a few days before this case. It went on to point out that it is not possible for the Boards of Appeal to follow in detail the regional health situation in all the member states and the evolution of air traffic from day to day and to continually adapt the form of the oral procedures which had already been fixed. What mattered was the respondent-proprietor had faced difficulties in attending and the appellant-opponent had not shown these difficulties were not real.

The Board of Appeal concluded that the Covid-19 pandemic constitutes a case of a general state of emergency which is likely to compromise the possibility of participating in the oral proceedings in person on the premises of the EPO because of degraded travel conditions. In these circumstances, and in accordance with decision G 1/21, the holding of the oral proceedings before the board by video conference is compatible with the EPC, even if one party has not given consent. Consequently, the decision to hold the oral proceedings face-to-face or by video conference is left to the discretion of the Board of Appeal.

The Board of Appeal noted that there are cases which would be impossible to deal with in a video conference - such as when it is necessary to inspect objects during oral proceedings - but this case was not one.

The Board of Appeal dismissed the appellant-opponent's request for adjournment of the oral proceedings until they can take place in person.

Related information and articles

T 1197/18:
https://dycip.com/t119718

New Article 15a RPBA:
https://dycip.com/newart15a

EPO Communication of 16 July 2021 on Board of Appeal referral G 1/21:
https://dycip.com/g121-epo-communication

EPO G1/21 communication – oral proceedings by video conference "during times of emergency", Catherine Keetch, 16 July 2021:
https://dycip.com/g121-decision

Take home messages

- Despite an easing of travel restrictions, the order in G1/21 continues to apply at the time of writing.
- The decision to hold oral proceedings face to face or by video conference remains at the discretion of the Board of Appeal.
- Videoconferencing may be used for oral proceedings when travel is practically impossible or subject to quarantine during a general emergency (such as the Covid-19 pandemic).
- Videoconferencing may also be used for oral proceedings when the ability to travel is compromised during a general emergency (such as the Covid-19 pandemic).
- If it is necessary to inspect objects during oral proceedings then in-person oral proceedings should be held.

If you prefer oral proceedings to be held by videoconferencing, it remains useful to write to the Board of Appeal explaining your travel difficulties due to the pandemic and file any appropriate evidence.

If you consider it necessary to have face-to-face oral proceedings, for example, the inspection of an object is required during proceedings, you may file such a request explaining the reasoning together with any supporting evidence. You may even wish to request a postponement.

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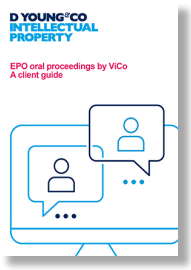
Stephanie Wroe

Guide to ViCo at the EPO

Read our client guide to EPO oral proceedings, which includes our client "Checklist for ViCo": **www.dyoung.com/vico-guide**



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Legal 500 UK - top tier patent and trade mark attorneys 2022

We are delighted to celebrate the news that our patent and trade mark attorney teams have again been ranked as top tier by Legal 500.

We are grateful to our clients and colleagues in the IP-world who participated in the Legal 500's research.

The Legal 500 writes:
"D Young & Co LLP demonstrates particular strength in EPO patent prosecution, further increasing the number of filed EPO patent applications and remaining very active in opposition and appeal proceedings. The number of filed PCT applications also increased, while UKIPO patent work remained steady.

The practice's wide technical range makes it an excellent choice for cross-disciplinary matters, for example in the fields of AI or medical device technology, where clients benefit from the combined experience of the electronics, engineering and IT team and the biotechnology, chemistry and pharmaceuticals team."

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"The team members are highly responsive, very professional, very knowledgeable while being nice and fun people to work with. They know their clients and their preferences and manage to provide tailored advice every time around."

To read the full commentary about the firm please visit the Legal 500 website: http://dycip.com/legal500-2022.

And finally...

D Young & Co book announcement

EPO Board of Appeal Decisions
Third edition ebook

The third edition of our book of decisions from the European Patent Office (EPO) Boards of Appeal is now available as an ebook download.

The selected Board of Appeal decisions have been chosen on the basis of many years of experience in arguing cases before the EPO. In general, they represent some of the most useful and frequently cited decisions used by D Young & Co's patent group during both our defence of and opposition to European patents.

In this third edition we have included a number of additional cases and an updated section on the Rules of Procedure of the Boards of Appeal of the European Patent Office. We have also included a new section on oral proceedings being held by video conference (ViCo).

Contributors

The book was written and co-edited by members of our biotechnology, chemistry and pharmaceuticals patent group - Charles Harding, Antony Latham, Matthew Gallon and Rachel Bateman.

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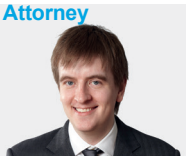

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