Unified Patent Court
Einheitliches Patentgericht
Juridiction unifiée du brevet

Düsseldorf Local Division
UPC_CFI_505/2024

Decision
of the Court of First Instance of the Unified Patent Court
delivered on 13 May 2025
concerning EP 3 536 712 B1

Headnotes:

1. In the case of a second medical use claim, a substance or composition within the meaning of Art. 54(4) EPC is used for any specific use which is not comprised in the state of the art. Such a therapeutic use can be a new indication, e.g. a disease not yet treated by the claimed substance, or an indication for a new group of patients.

2. For a finding of infringement of a second medical use claim, the alleged infringer must offer or place the medical product on the market in such way that it leads or may lead to the claimed therapeutic use of which the alleged infringer knows or reasonably should have known that it does. The requirements of such behaviour cannot be defined in an abstract manner but require an analysis of all relevant facts and circumstances of the patent claim in question.

3. In order to benefit from the notional novelty afforded by Art. 54(5) EPC, second medical use claims must relate to a specific use in a method according to Art. 53(c) EPC. The sole reason why such claims can still be patented is the novelty (and inventiveness) of the new use.

4. In terms of inventive step, the subject matter of the claim may be obvious if the skilled person would have been motivated to implement it as the next step in the view of the problem. A motivation to implement may be absent or negated if the skilled person is faced with many uncertainties or expected difficulties. If there is no motivation at all or a negated motivation, the subject matter of the claim is not obvious and involves an inventive step.

5. Objections based on pleading ignorance are in principle disregarded. The Rules of Procedure of the Unified Patent Court do not acknowledge this type of pleading.

Keywords:

Second medical use claim; infringement; novelty; pleading ignorance; inventive step; obviousness

CLAIMANT:

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DEFENDANTS:

1. **Amgen Inc.,** represented by its CEO Robert Bradway, One Amgen Center Drive, Mail Stop 2-28-C, 91320 1799 Thousand Oaks, California, USA

2. **Amgen Europe B.V.,** represented by its managing directors Jan Arie Bouman, Paulus Johannes Dekkers and Daniëlle Christine IJkema, Minervum 7061, 4817 ZK Breda, The Netherlands

3. **Amgen N.V.,** represented by its Directors Gwenaël Caesens, Paraskevi Florou and Gabor Sztaniszlav, Telecomlaan 5-7 1831 Diegem, Belgium

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PATENT AT ISSUE:

European Patent No. EP 3 536 712 B1

PANEL/DIVISION:

Panel of the Local Division in Düsseldorf

DECIDING JUDGES:

The decision is issued by Presiding Judge Thomas, by the legally qualified judge Dr Thom acting as judge-rapporteur, the legally qualified judge Kupecz and the technically qualified judge Dorland-Galliot.

LANGUAGE OF THE PROCEEDINGS: English

SUBJECT: Infringement Action and counterclaim for revocation

DATE OF ORAL HEARING: 25 February 2025

SHORT SUMMARY OF FACTS:

1. The Claimant 2) is the sole proprietor of European patent EP 3 536 712 (Exhibit HE 1; in the following: patent in suit). The patent in suit derives from a divisional application which has been branched off from the European patent EP 2 756 004 (EP '004), which has been opted out. The EP '004 is subject to national proceedings before the national District Court in Düsseldorf. The patent in suit and EP'004 have an effective filing date of 12 September 2012 and claims the priorities of US 61/535,392 P (16 September 2011 = P1), US 61/559,162 P (14 November 2011 = P2) and US 61/641,321 P (2 May 2012 = P3). The date of publication and of the mention of the grant of the patent in suit is 31 May 2023. The patent in suit is in force in Belgium, France, Germany, Italy and the Netherlands. It relates to the field of therapeutic treatments of diseases and disorders which are associated with elevated levels of lipoproteins.

2. Opposition proceedings are pending before the EPO. The EPO issued its preliminary opinion on 12 August 2024 (Exhibit BP 81) and decided, after the oral hearing before the Düsseldorf Local Division Düsseldorf, that the patent in suit is valid.

3. Claim 1 of the patent in suit reads as follows:

> *"A pharmaceutical composition comprising a PCSK9 inhibitor for use in reducing lipoprotein(a) (Lp(a)) levels in a patient who exhibits a serum Lp(a) level greater than 30 mg/dL and who is diagnosed with or identified as being at risk of developing a cardiovascular disease or disorder prior to or at the time of administration of the composition, or who is diagnosed with or identified as being at risk of developing a thrombotic occlusive disease or disorder prior to or at the time of administration of the composition, wherein the PCSK9 inhibitor is an antibody or antigen-binding fragment thereof that specifically binds PCSK9, wherein the patient is not on a therapeutic statin regimen at the time of administration of the composition."*

   With regard to the wording of claims 2 to 5, reference is made to the patent in suit.

4. Claimant 1) is the exclusive licensee of the patent in suit.

5. Defendants are part of the Amgen group, which markets the PCSK9 inhibitor Repatha® with the active ingredient evolocumab (in the following the contested embodiment). The contested embodiment is offered and marketed in the relevant Member States in two administration forms in various package sizes, as pre-filled pens (140mg solution; packages with 2 or 6 pens) and mini-dosers (420 mg solution; package with 1 cartridge and automated mini doser or package with 3x1 cartridges and 3x1 automated mini-dosers). Defendant 1) controls the production of evolocumab and the marketing of the contested embodiment in Europe. Defendant 2) holds the marketing authorization for it in the EU and thus also in the member states of the UPCA. Defendants 3) to 7) each market the contested embodiment in one or more member states of the UPCA and distribute the product in these markets. Defendant 3) is also listed as a manufacturer responsible for batch release in the Summary of Product Characteristics ("SmPC") for the contested embodiment.

6. In the written proceedings, the Defendants raised a preliminary objection arguing that the UPC does not have international jurisdiction to decide on the alleged infringement of the patent in suit in Germany in the light of the pending national infringement proceedings. The Defendants withdraw this objection during the oral hearing to which the Claimant agreed.

REQUESTS OF THE PARTIES:

Infringement:

7. The Claimants request that Defendants to be ordered to

   I. cease and desist from offering, placing on the market or using, or importing or storing for those purposes

      in Belgium (BE), France (FR), Germany (DE), Italy (IT), and/or the Netherlands (NL),

      1. a pharmaceutical composition comprising a PCSK9 inhibitor [in particular evolocumab, presently marketed as Repatha®]

         for use in reducing lipoprotein(a) (Lp(a)) levels

         in a patient who exhibits a serum Lp(a) level greater than 30 mg/dL and who is diagnosed with or identified as being at risk of developing a cardiovascular disease or disorder prior to or at the time of administration of the composition, or who is diagnosed with or identified as being at risk of developing a thrombotic occlusive disease or disorder prior to or at the time of administration of the composition, wherein the PCSK9 inhibitor is an antibody or antigen-binding fragment thereof that specifically binds PCSK9, wherein the patient is not on a therapeutic statin regimen at the time of administration of the composition

         [claim 1],

      2. in particular if in the pharmaceutical composition for the use of item 1 the cardiovascular disease or disorder is selected from the group consisting of coronary artery disease, acute myocardial infarction, asymptomatic carotid

atherosclerosis, stroke, and peripheral artery occlusive disease

[claim 3],

3. and in particular if the cardiovascular disease or disorder is hypercholesterolemia

[claim 4],

4. and in particular if the hypercholesterolemia is heterozygous Familial Hypercholesterolemia (heFH), or the hypercholesterolemia is not Familial Hypercholesterolemia (nonFH);

[claim 5]

II. inform Claimants to what extent they have committed the acts designated above in Section I.1 since 31 May 2023, by providing a written list and a separate list in a computer-analyzable electronic form on

1. the origin and distribution channels of infringing products;

2. the quantities delivered, received or ordered, as well as the price obtained for infringing products;

3. the identity of any third person involved in the production or distribution of infringing products;

4. the individual deliveries, specified according to the delivery amounts, dates and prices including the product designations as well as the names and addresses of purchasers;

5. the individual offers, specified according to quantities, dates and prices offered including the product designations as well as the names and addresses of recipients of offers;

6. the advertising activities, specified according to advertising media, their distribution amount, period of distribution and territory of distribution; and

7. the production costs, specified according to individual cost factors, and the profits earned;

III. to confirm the information under II., the respective documents (i.e. invoices or, auxiliary, delivery notes) shall be provided to the Claimants,

whereby details that (i) require confidentiality and (ii) are not subject to Defendants' obligation to provide information may be redacted, provided that Defendants, at Claimants' request, make the complete data available to an auditor bound to secrecy vis-à-vis Claimants for the purpose of examining whether the redacted details meet conditions (i) and (ii) above;

IV. recall the products defined in item I above, which have been placed on the market, from the commercial customers with reference to the patent-infringing condition of the item found by the Court and with the binding promise to refund any

fees and to assume any necessary packaging and transport costs as well as customs and storage costs associated with the return and to take back the products and/or

definitively remove from the channels of commerce the products defined in item I above in that Defendants asks the third parties, which are commercial customers but not end customers to cancel all orders regarding the products defined in item I above with reference to the patent-infringing condition of the items found by the Court and provide the Court and the Claimant within the a period of 30 days from the delivery of the notification within the meaning of R. 118.8 RoP and, if necessary, the certified translation a written evidence of the measure that was carried out;

V. bear the costs of the proceedings,

and further

VI. declare that Defendants are obliged to pay to Claimant 1) damages appropriate to the harm actually suffered by Claimants as a result of the actions referred to under item I since 31 May 2023 above.

8. The Defendants request,

I. the infringement action is dismissed;

II. Claimants shall bear all legal costs and other expenses incurred by Defendants;

III. in the alternative: Any decision and order granted by the Court to Claimants is subject to the rendering of a security (whether by deposit or bank guarantee) by Claimants to Defendants in an amount of no less than EUR 100 million (R.352 RoP).

Counterclaim:

9. The Defendants request,

I. EP 3 536 712 is revoked in its entirety with effect for all contracting states of the UPCA in which the patent is or has been validated.

II. Claimants bear all legal costs and other expenses incurred by Defendants.

10. The Claimants request:

I. the Counterclaim for Revocation (“CC”) is dismissed and EP 3536712 B1 (hereinafter “the Patent in Suit”) be maintained as granted (Main Request; MR);

II. if the Court does not agree that the patent is valid, then Claimants request that the patent be maintained on the basis of any of Auxiliary Requests (ARs) 1-5, which are filed as part of the Application to amend;

III. Defendants be ordered to bear the costs of the proceedings with respect to the CC.

11. The Defendants request:

The application to amend EP 3 536 712 is dismissed and all Auxiliary Requests are rejected.

POINTS AT ISSUE:

A. Standing to sue

12. Claimants assert that they are entitled to sue as they enforce the patent together as patent proprietor and exclusive licensee.

13. An exclusive license can also be granted for the benefit of all members of a group of companies (so-called group license), with the consequence that the companies concerned are individually authorized to assert the claims arising therefrom. To exclude any doubts with respect to validity of the license agreement, Claimants provide a Second Confirmatory License Agreement (Exhibit HE 56).

14. Defendants dispute by pleading ignorance that the Praluent Cross-License and Commercialization Agreement (´PCLCA´, (Exhibit BP 73) has been (validly) entered into and rights are granted to Claimant 1) thereunder. They argue that putting forward the confirmatory license agreement (Exhibit HE 38) is not sufficient as evidence of any status of an exclusive licensee. In addition, the status of the license granted is uncertain and inconsistent because it is granted to a large number of group companies and the confirmatory license agreement is insufficient in terms of time.

15. Defendants dispute in terms of pleading ignorance that the submitted document in Exhibit HE 38 corresponds to the original, that the signing persons had signing authority and that the signatures were made by the alleged signatories, that submitted document in Exhibit BP 73 – which the Defendants have in possession due to the national German proceedings – is identical to the original. Also, Claimant 2) is only left with a formal shell and therefore has no special legitimate interest of their own.

16. As concerns the new CLA submitted as Exhibit HE 56, Defendants dispute by pleading ignorance that the submitted copy corresponds to the original in question as well as the signing authority of the signatories, their effective appointment to the position indicated and the fact that the signature was executed by the purported signatories and on the date specified.

B. Claim Construction

PCSK9 for use in reducing lipoprotein(a) (Lp(a)) levels (feature 1 and 2)

17. Claimants argue that the patent in suit does not require for use of the PKSK9 inhibitor that the reduction of Lp(a) must be dominant or the sole reason for its administration. Rather it confirms that the invention includes administering the antibody with the purpose of Lp(a) lowering in patients whose LDL-C level requires lowering as well.

18. Especially determining Lp(a) prior to administration of a PCSK9 inhibitor does not exclude that there are other criteria for prescribing a PCSK9 inhibitor, such as high LDL-C. All that is required is the intention to lower Lp(a), i.e. that treatment is carried out also to lower Lp(a) within the scope of the authorised indication for lowering LDL-C. So, the patent in suit does not require that Lp(a) lowering achieves a further clinical benefit.

19. The claimed use is not anticipated by the prior art only because an elevated Lp(a) level is automatically lowered when the PCSK9 inhibitor is administered for lowering a concomitantly elevated LDL-C level. Defendants' assertion that patients with elevated serum Lp(a) levels alone (i.e. without simultaneously elevated LDL-C) are the “exception” (SoD, margin 48(a)) is unsubstantiated. Defendants do not provide concrete facts or evidence in this respect. Nonetheless, the claims are not restricted to the treatment of patients with elevated Lp(a) levels but normal LDL-C levels (nor should they be) and therefore nothing should turn on this point. What matters is that the Lp(a) lowering effect had not been known and the teaching of the patent in suit allows the treatment of a new patient group, namely patients with an elevated Lp(a) level. The patent discloses and claims the treatment of these patients regardless of their LDL-C level. Even if the use of PCSK9 inhibitors for lowering Lp(a) in patients with high LDL-C levels was known in the prior art, the claim would not have to be narrowly construed as a result.

20. Defendants argue that according to the correct construction, the scope of protection of the patent in suit exclusively covers the targeted reduction of Lp(a) level in a patient having an elevated Lp(a) level. If the Claimants´ understanding is correct, the feature „for use in reducing Lp(a) levels“ will not provide a new technical teaching distinguishing the claim from the prior art.

Diagnosis with or risk of CVD or TOD (feature 4.1)

21. According to the Claimants, lowering of Lp(a) levels is a *bona fide* medical use in its own right, and there are no grounds for interpreting the definition of the patient group as requiring some further treatment of CVD or TOD. Instead, these features merely define the patients to be treated.

    Defendants argue that Claimant´s understanding does not confer novelty.

Lp(a) level above 30mg/dl (feature 4.3)

22. The Claimants are of the opinion that it is clear that the claimed PCSK9 inhibitor is intended to lower an elevated Lp(a) level, i.e. one that exceeds 30 mg/dL. This is not limited to any specific situation and the claim does not require that the Lp(a) level is measured by the prescribing physician for the patient and found to be above 30 mg/dL.

23. Defendants argue that this is no definition of a new patient group compared to the patients aready treated with PCSK9 inhibitory antibodies in the prior art. The threshold is not determinative for the decision to prescribe PCSK9 inhibitory antibodies. If the Claimants consider it sufficient for the claims to be infringed that the treated patient group includes patients with an Lp(a) level more than 30 mg/dL, this must also be the case for the assessment of novelty. Defendants state that Claimants´claim construction is inconsistent between their case for infringement and validity.

24. Moreover, the description of the patent in suit confirms the correct understanding that it is necessary that the physician knows the patient´s elevated Lp(a) levels and the physician´s purpose and intention of administering a PCSK9 inhibitor is the targeted lowering of the patient´s elevated Lp(a) level.

C. Infringement

25. The Claimants state that the contested embodiment infringes the claims.

26. For proving inducement, it can only be important that the prescriber is able to (i) take note of the relevant information in the SmPC, (ii) understand the claimed effect from such information in the SmPC and (iii) know that a not insignificant group can benefit from this effect.

27. Claimants mainly argue that Section 5.1 expressly points to the patented use. The addressed physician understands this description as the indication of a benefit of Repatha® which he/she will take into account when treating patients with high Lp(a) levels (feature 3). In this context, the summary of product characteristics (Exhibit HE 23, hereinafter SmPC) further states that the patients in whom this effect was observed suffered from hypercholesterolemia or mixed dyslipidemia (feature 4.1). In connection with the GAUSS-2 and MENDEL-2 studies, the SmPC explicitly points out that Repatha® reduces Lp(a) in patients who are not on a statin regimen (feature (4.2)). As Lp(a) is considered an independent risk factor, the physician will take the patient's Lp(a) level into account when deciding whether to administer a PCSK9 inhibitor. However, this is of relevance only for patients in whom the Lp(a) level is elevated, i.e. if it exceeds 30 mg/dL (feature 4.3). Only patients with a higher initial Lp(a) level are even considered for Lp(a) reduction.

28. The reference to Repatha®'s Lp(a)-lowering effect in Section 5.1 is explicit and self-explanatory. No further medical qualification is required to understand that Repatha® lowers Lp(a).

29. The Repatha® SmPC reports study results for 307 statin intolerant patients (GAUSS-2) and 614 cases of treatment in the absence of a statin (MENDEL-2) and concludes that Lp(a) is significantly reduced (also) in those patients. A significant portion of patients treated with Repatha® are not on a therapeutic statin regimen.

30. According to the patent in suit, the "therapeutic treatment", is the reduction of the Lp(a) value as an independent risk factor. The Repatha® SmPC mentions multiple times that "Repatha significantly reduces […] Lp(a)" also for patients not on statin therapy. A prescribing physician understands this to mean that there is a statistically significant effect on Lp(a) lowering, in the various patient/treatment groups studied on which the current marketing authorization is based. As the claim does not specify any requirement that the PCSK9 antibody must be prescribed for an approved indication of lowering elevated Lp(a), prescribing a PCSK9 inhibitor to a patient for the approved indication of an elevated LDL-C level where that patient also has an elevated Lp(a) level would clearly fall within the scope of the claim and this can be expected to happen in practice.

31. Irrespective of the question of how strong a reduction should ideally be, it is obvious from a medical point of view that it is desirable to reduce elevated Lp(a) levels. It is undisputed that Repatha® (like Praluent®) lowers the Lp(a) value by at least 25%. Even if this were only a moderate lowering effect, the physician would still want this reduction because he/she would expect that this reduces the overall risk. This is not different to excessive LDL cholesterol levels or high blood pressure: any reduction, even if it is less than desirable, reduces the risk. Defendants state that after lowering Lp(a) by way of apheresis – an invasive, expensive and time-consuming treatment carried out in the hospital – the Lp(a) level remained 40% below the initial value after a few weeks. A reduction of about 25% to 30% cannot be insignificant compared to this. Furthermore, the fact that apheresis, a burdensome and ex-

pensive procedure, is being used to lower elevated Lp(a) values confirms again the self-evident fact that Lp(a) lowering is considered beneficial among doctors.

32. The EMA rejected lowering Lp(a) levels to be an indication because it considered the clinical significance of lipid-lowering effects other than LDL-C lowering to be insufficiently proven by Defendants. The EMA however allowed Defendant 2) to "illustrate" the effect of Repatha® on Lp(a) in Section 5.1 of the SmPC. The Claimants state that information on a specific risk should be given in Section 4.4. of the SmPC which does not mention the development of diabetes. For the claimed Lp(a) levels there is no diabetes risk at hand. Infringing information can be removed from Section 5.1 unless relevant for safety. So, in the case at hand, removing infringing information is dictated by normal patent law principles.

33. Patients with an elevated Lp(a) level are on average prescribed a PCSK9 inhibitor at lower LDL-C levels than patients whose Lp(a) level is not elevated. The relationship between the Lp(a) value of a patient and the ASCDV risk is a linear one: The higher the Lp(a) level is, the higher the risk, and thus the higher the incentive for intervention.

34. Defendants state that Claimants cannot establish any act by Defendants constituting infringement by promoting or inducing physicians to prescribe the contested embodiment for use according to claim 1 of the patent in suit.

35. The contested embodiment also affects the non-targeted lipid. This means that, if Lp(a) were to be lowered, then LDL-C would inevitably also be lowered; if LDL-C is to be lowered, Lp(a) will also be lowered. However, the modest reduction of Lp(a) achievable by the contested embodiment is not therapeutically relevant, i.e., if the patient's Lp(a) value requires treatment, the contested embodiment is not suitable, which is why both drugs, the contested embodiment Repatha® and Claimants' product Praluent®, are not approved for the reduction of Lp(a).

36. The information on the Lp(a) lowering effect of the contested embodiment in Section 5.1 of the SmPC does not incentivize the physician to use the contested embodiment in a way that would infringe claim 1. The mentioning of the Lp(a) lowering effect in Section 5.1 of the SmPC of the contested embodiment was required for regulatory / legal reasons concerning patient safety, in particular as the contested embodiment was the first therapeutic drug approved anywhere in the world that inhibited PCSK9.

37. Information in the SmPC serves to provide scientific information that is related to the use of a medicinal product and is necessary for safe pharmaceutical therapy. The information provided by the SmPC has to convey both affirmative and negative data. Providing only selective information would have been tantamount to misinforming the prescribers and users of the product.

38. Defendants state that, according to the national laws of the relevant Contracting Member States in this case the deletion of relevant information from Section 5.1 of the SmPC solely on the basis of existing patent rights is very unlikely under pharmaceutical law as in most of the states this would lead to possibly liability for damages caused by medicinal products.

39. Furthermore, the reference to the Lp(a) lowering effect would not cause a physician to make a conscious decision in favour of using the contested embodiment for the claimed use of reducing Lp(a) because the state of medical knowledge is still insufficient today to establish

any clinical benefit of doing so. Lp(a) is a lipoprotein that was routinely monitored in clinical trials of the contested embodiment (but not in the daily practice of physicians), amongst the level of many other molecules in the body. These clinical trials (LAPLACE-2, Rutherford-2, GAUSS-2, MENDEL-2, etc., see Exhibit HE 23, pages 7 et seqq.) showed a moderate reduction of Lp(a) by the contested embodiment. In addition, the clinical studies showed that other blood lipid levels that were routinely monitored in these trials were also influenced, namely reduced or increased, by the administration of the contested embodiment.

40. Section 5.1 of the SmPC on the pharmacodynamic properties of the contested embodiment recites these effects in an objective way, not providing any guidance as to treatments. In that context, the Lp(a) lowering effect of the contested embodiment (even with only moderate lowering) is clearly relevant information for treating physicians to know, especially in the treatment of patients having a comorbidity and suffering from diabetes or having a predisposition for such.

41. It is irrelevant to the question at issue whether an elevated Lp(a) level is a risk factor and whether a PCSK9 inhibitor can lower the Lp(a) level. What is decisive is that it is not scientifically established whether a reduction of Lp(a) – much less the modest reductions of Lp(a) levels that are achievable with the contested embodiment (which reductions are even smaller in patients with elevated Lp(a) levels) – is at all useful from a medical point of view. Even today, a medical effect of lowering Lp(a) levels is not known. On the contrary, there is a debate in scientific circles as to whether Lp(a) levels that are too low might be associated with diabetes mellitus.

42. The mentioning of the Lp(a) lowering effect in Section 5.1 is not relevant to the decision to prescribe the contested embodiment. When deciding to prescribe the contested embodiment, the physician derives no motivation (let alone substantial motivation) from the reference to the Lp(a) lowering effect of the contested embodiment in Section 5.1 of the SmPC.

43. Section 4.1 lists the following therapeutic indications: hypercholesterolemia; mixed dyslipidemia and established atherosclerotic cardiovascular disease (i.e., heart attack, stroke, peripheral arterial disease) to reduce risk by lowering LDL-C levels. The first therapeutic indication relates to patients having “only” elevated LDL cholesterol levels (hypercholesterolemia). The second indication, mixed dyslipidemia, relates to patients with both, elevations in LDL cholesterol and triglyceride (TG) levels. Also, this condition is often accompanied by low levels of HDL cholesterol. Finally, the third indication directly relates to the lowering of LDL cholesterol levels (only) in established atherosclerotic cardiovascular disease. None of the authorized therapeutic indications involves a reduction in Lp(a), even implicitly. In recent publications experts even warn against off label us of PCSK9 inhibitors to lower Lp(a). The current consensus on means to be considered for reducing very high Lp(a) levels is apheresis.

44. The collection of a given patient’s serum Lp(a) level in the PEARL study, referred to by Claimants´ expert, was voluntary (Exhibit HE 21, mn. 23). It is furthermore telling that out of the 619 total patients, the participating physicians only recorded the Lp(a) levels for 248, i.e., in a mere 40%. This fact alone undermines the veracity of the allegation that the Lp(a) level would influence the physician’s prescribing practice and particularly any alleged use of a PCSK9 inhibitor for the targeted reduction of Lp(a). Moreover, the statements of Prof. Parhofer that, if he had the choice between a PCSK9 inhibitor that only lowers LDL-C and a PCSK9 inhibitor that lowers not only LDL-C but also Lp(a), he would choose the latter (Exhibit HE 21, mn. 31), is without any value, here. The prescribing physician does not have such choice at

all when it comes to any alleged impact on Lp(a) levels; any windfall gain is, and always has been, an inherent property, without any possible influence by the treating physician.

45. The circumstance that the prescription of the contested embodiment is controlled as to allow health authorities to verify that it was prescribed for an authorized indication before allowing reimbursement, strongly suggests that it is not prescribed "off-label". Rather, it stems from this regulatory framework that "off-label" uses are not "foreseeable" for Defendants (s. SoD, p. 143 – 151). Furthermore, approvals of drugs for targeted and more substantial Lp(a) lowering are expected in the near future.

46. The purported realization of feature 3.2 is unsubstantiated. Claimants fail to show that physicians use (prescribe) the contested embodiment in patients that are not concomitantly treated with statins. Also, they do not show that Defendants know or should know that the contested embodiment is used to lower Lp(a) levels in patients that do not receive statins in parallel. The opinion of Prof. Parhofer (Exhibit HE 21) does not contain any statement either that PCSK9 inhibitors are used to reduce the Lp(a) value in patients who have been measured with a serum Lp(a) level > 30 mg/dL. For the prescription practice of PCSK9 inhibitors – as Claimants´expert shows – it makes no relevant difference whether the measured Lp(a) level in the serum of the patients was below the Lp(a) serum value of 30 mg/dL required by the patent in suit or above it, for example between 30 and 60 mg/dL.

47. The Claimants confuse risk factors with treatment goals.

48. Defendants argue that Claimants base their infringement on an in-label use of the contested embodiment which is not sufficient to fulfil the patent claim. That argumentation and demonstrates that the patent claims only a bonus effect of the existing use and not a new therapeutic use.

49. Defendants further contend that the patent in suit is not infringed if the treatment purpose of use is just the first medical use. The physician must know that a patient´s Lp(a) level is greater than 30 mg/dL and must specifically aim at lowering the elevated Lp(a) level as the "distinct therapeutic target" when treating with a PCSK9 inhibitor, and the Defendants sell and/or offer their product for sale for use for this "distinct therapeutic target".

E. Validity

Priority

50. Defendants argue that the patent is not entitled to the claim the priority to P1 and P2 because those two applications do not disclose the same invention as claimed by the patent-in-suit. Defendants say that the prerequisite for a right to priority is that the priority application discloses the *same invention* as the invention claimed in the subsequent patent (Art. 87(1) EPC).

51 The combination of features in claim 1 of the patent in suit, originate from claims 4, 9, 11 and 27 of P1 and P2. All of those dependant claims depend only on claim 1 of P1 and P2 (US style claim dependencies). According to the Defendants, the consequence of this dependencies is that the claims 4, 9, 11 and 27 of P1 and P2 do not provide a direct and unambiguous disclosure of the combination of features in claim 1 of the patent in suit.

52. In respect of feature 4.3, Defendants consider also that the figure 30 mg/dL is an undisclosed selection from the list in para. [0012] of both P1 and P2.

53. Finally, P1 and P2 fail to disclose a combination of features 4.2 with the additional features that the patient has a Lp(a) level of at least 30 mg/dL (feature 4.3).

54. The Claimants defend the validity of priority P1 and P2. Claimants consider that Defendants erroneously assumed that only the claims of the priority documents are relevant for assessing the subject-matter that is entitled to priority. According to Claimants, the case law is clear that choosing a value from a list of nested values that are not independent from the feature in question is not an impermissible selection.

55. Additionally, Claimants argue that Defendants are also incorrect in suggesting that claim 27 is the only disclosure in P1 of patients who are not on statin therapy (feature 4.2). Indeed, Table 3B is about patients not on a statin therapy (the "diet only" patient group). Finally, Claimants argue that the issue about "US style claim dependencies" is not relevant in this case as claim 1 is not a mere combination the claims of P1.

Novelty

56. According to the Defendants, the patent in suit lacks novelty since the claim reads on the prior art use of PCSK9 inhibitors. At the priority date P1, documents US 2010/0166768 A1 (Exhibit BP 9, hereinafter Sleeman), WO 2010/077854 (Exhibit BP 10, hereinafter WO 854) and WO 2009/026558 A1 (Exhibit BP 8, hereinafter Jackson) disclose PCSK9 inhibitory antibodies, being useful for treating patients diagnosed with or identified as being at risk of developing CVD by reducing in particular LDL-C. These documents teach lowering Lp(a) as an inherent effect. The claimed characteristics of the treated patient group (risk of CVD, not on a therapeutic statin and exhibiting a serum level Lp(a) above 30 mg/dL) do not provide a distinction from patients group in the prior art as they define nothing but arbitrary characteristics.

57. Claimants defend the patent in suit against the novelty attack by arguing that especially the choice of the patient sub-group with a serum level Lp(a) level of greater than 30 mg/dL is not arbitrary because as it is a clear and measurable physiological parameter which is functionally related to the pathological status of a patient. There is a link between Lp(a) levels above 30 mg/dL and the risk of CVD. The cited documents do not disclose any effect of the anti-PCSK9 antibody on Lp(a) levels.

Inventive Step

58. Defendants state that the claim is not inventive in view of the article „Lipoprotein(a): Medical Treatment Options for an Elusive Molecule" by Prof. Parhofer (Exhibit BP 19, hereinafter Parhofer I), the article „But Lp(a) is too high, what can be done?" (Exhibit BP 33, 33a; hereinafter Parhofer II) and the so called Swergold poster (Exhibit BP 96; hereinafter Swergold). Any of these three documents would lead the skilled person to the invention in an obvious way, alone or in combination.

59. The Claimants argue that the claim is inventive because the aforementioned attacks require an inadmissible use of hindsight in order to be successful.

Added matter

60. Defendants argue that the patent in suit does not respect article 123(2) EPC. They consider

that there is no basis for the Lp(a) threshold value of 30 mg/dL (feature 4.3) in combination with the feature that the patient is not on a therapeutic statin regimen (feature 4.2). This is a selection of two independent lists.

61. In conclusion, Defendants consider that the combination of the two above features leads to a new group of patients (patients having an Lp(a) level specifically above 30 mg/dL **and** the patients are not on a statin regimen) and that this patient group is not disclosed in the application as filed. Defendants consider therefore that this combination, present in claim 1 of patent-in-suit, cannot be seen by the skilled person as directly and unambiguously derivable from the content as a whole of the application as filed.

62. Claimants defend the fulfilment of article 123(2) EPC with the same arguments raised to defend the validity of priority P1 and P2. Claimants argue that all the features of claim 1 of patent in suit can be found in:

- paragraphs [0004], [0005], [0012] - [0014], Table 3B of P1 and application as filed,
- Claims 11 and 27 of P1,
- and aspects of the invention 11 and 27 of the application as filed (cf. page 32-34).

63. Therefore, Claimants consider that claim 1 directly and unambiguously derives from the application as filed for the same reasons as set out above in relation to priority entitlement.

Insufficiency

64. According to the Defendants, the subject-matter of claim 1 of the patent in suit does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Art. 83) EPC). Defendants point out the fact that the patent in suit fails to sufficiently disclose a reduction of Lp(a) (feature 3) in patients that are not on statins (feature 4.2). According to the Defendants, the claims also do not specify how this reduction should be calculated. Defendants assert that the Examples in Table 3B of the patent show an absolute increase (rather than a reduction) in Lp(a) levels in patients who were not on a statin regimen.

65. The Claimants defend the patent in suit against this insufficiency attack by arguing that the relevant technical effect to be considered for sufficiency is the one that is recited in claim 1, *i.e.* the reduction of Lp(a) levels in a patient who exhibits a serum Lp(a) level above 30 mg/dL (feature 4.3). Claimants point out that the way to measure a decrease in the Lp(a) value is by comparison of a placebo before and after the administration of the drug, which leads that Table 6 of the patent shows a clear decrease of the Lp(a) levels for patient treated with a PCSK9 inhibitor and statin.

66. With regard to all other arguments put forward by the parties, reference is made to the written submissions and annexes, as well as to the recording of the oral hearing.

GROUNDS FOR THE DECISION:

67. The counterclaim for revocation is admissible but unfounded. The infringement action is admissible and unfounded as well.

A. International Jurisdiction

68. As the preliminary objection has been withdrawn, there is no need for a decision on it. The Düsseldorf Local Division has international jurisdiction on the basis of Article Art. 7(2) in conjunction with Art. 71b(1) of the Brussels I recast Regulation as the challenged embodiments are (also) offered and distributed within Germany. The Court has international jurisdiction for the counterclaim for revocation on the basis of Art. 24(4) in conjunction with Article 71b(1) and 71a.2 sub a of the Brussels recast Regulation. The Düsseldorf Local Division is furthermore competent according to Art. 31, 32(1) (a), (e), 33(1)(a), UPCA.

B. Standing to sue

69. Both Claimants are entitled to sue.

I. Claimant 2)

70. Claimant 2) is the proprietor of the patent in suit and therefore entitled to bring an action before the Court (Art. 47(1) UPCA). The law does not require a particular legitimate interest on the part of the patent proprietor. Art. 47(4) UPCA shows that this also applies in cases where the proprietor and the licensee sue jointly. There is no reason why the proprietor who joins the action of a license holder after the latter has commenced the action should be treated differently from the proprietor who joins the action from the outset.

II. Claimant 1)

71. According to Art. 47(2) UPCA, unless the licensing agreement provides otherwise, the holder of an exclusive licence in respect of a patent shall be entitled to bring actions before the Court under the same circumstances as the patent proprietor, provided that the patent proprietor is given prior notice. Art 47(4) UPCA states that in actions brought by a licence holder, the patent proprietor shall be entitled to join the action before the Court.

72. Claimant 1) is a holder of an exclusive license of the patent in suit. This has been reasonably shown at least by two Confirmatory License Agreements (`CLA`, Exhibits HE 38, HE 56). In the second CLA the parties agreed particularly to the following articles:

ARTICLE 1

CONFIRMATION AND LICENSE GRANT

1.1 Confirmation. Regeneron hereby confirms that it has granted Sanofi under the PCLCA and the conditions therein an exclusive, royalty-bearing, sublicensable, transferable right and license *inter alia* under EP'712 for the Territory. The exclusive license is in force for the benefit of Sanofi and its affiliates and has not been terminated.

1.2 Approval. Regeneron and Sanofi each individually consent to, and approve of, the First CLA and the declarations of intent that were made for its conclusion on their behalf with effect as of December 20, 2023.

1.3 Regeneron License Grant. In case and to the extent that Regeneron has not already granted an exclusive right and license under EP'712 to Sanofi under the PCLCA and/or under the First CLA, Regeneron hereby grants to Sanofi an exclusive, royalty-bearing, sublicensable, transferable right and license under EP'712 to make, offer, put on the market, use, have in its possession and import for such purpose in the Territory any product falling under EP'712.

1.3 Sanofi's Acceptance. Sanofi hereby accepts the grant of the right and license under Article 1.3 by Regeneron.

ARTICLE 2

TRANSFER OF RIGHTS

2.1 Regeneron Transfer of Rights. In case and to the extent that Regeneron has not already transferred all rights against any third party for infringement of EP'712 in the Territory that took place before the Execution Date or thereafter ("Patent Infringement") to Sanofi in the PCLCA and/or under the First CLA, Regeneron hereby transfers all rights against any third party for Patent Infringement to Sanofi.

2.2 Sanofi's Acceptance. Sanofi hereby accepts the transfer of rights under Article 2.1 by Regeneron.

ARTICLE 3

PATENT ENFORCEMENT

3.1 Sanofi's right to sue. Sanofi shall have the right, at Sanofi's costs and expenses, to bring in its own name and control any action or proceeding (including any settlement) with respect to any patent infringement or unauthorized use, as applicable, of EP'712 by a third party's activities in the Territory. For the avoidance of doubt, nothing in the PCLCA or in this Agreement shall prevent the Parties from jointly enforcing EP'712 in the Territory.

3.2 Recovery. The amount of any recovery from any such patent infringement action shall be retained solely by Sanofi, including any damages, unjust enrichment, costs and expenses and other compensation a third party is ordered to pay and any costs or amounts paid to settle.

73. The Court has no doubt that Claimant 2) is in full agreement with Claimant 1) to sue jointly. In facing Defendants' disputing every detail of the PCLA and the first CLA, Claimants have repeatedly reaffirmed and, in the event of ineffectiveness, renewed their licence agreement and confirmed that they both believe that both claimants have the right to sue. Thus, even if the PCLA and the first CLA were invalid, of which the Defendants have not convinced the Court, the second confirmatory agreement is certainly not as Defendants do not put forward any realistic reasons for its invalidity.

74. Defendants´s objections based on pleading ignorance are in principle disregarded. The legal basis for this conclusion is R 171.2 RoP, because when a party pleads ignorance, the fact is not specifically contested as required by that rule. Defendants apparently derive this objection from German procedural law, ignoring that the Rules of Procedure contain no corresponding provision.

C. Scope of Protection

75. To answer the questions of infringement and validity, the claim has to be interpreted by the skilled person at the priority date in order to define its scope of protection.

I. Skilled person

76. The skilled person is a clinical lipidologist with experience in treating patients with lipid disorders and other related conditions and with experience in setting up and interpreting the results of clinical trials in the relevant medical field, who is working to identify new lipid lowering therapeutics. The definition is undisputed and the Court sees no reason to define the skilled person otherwise.

II. Prior Art and Claim Construction

77. The patent in suit relates to the field of therapeutic treatments of diseases and disorders which are associated with elevated levels of lipoproteins. More specifically, the invention relates to the administration of PCSK9 inhibitors to reduce the levels of serum Lp(a) in a patient (par. [0001]; paragraphs without reference are part of the patent in suit). Lipoprotein(a) (Lp(a)) is a low-density lipoprotein-like particle formed by the association of apolipoprotein(a) (Apo(a)) with apoplipoprotein B100 (ApoB100). The Apo(a) component is covalently linked to the ApoB100 component in the assembled Lp(a) particle via a disulfide bond. Elevated serum Lp(a) has been shown in several studies to correlate with a variety of atherosclerotic and thrombotic disorders. Thus, therapeutic reduction of serum Lp(a) levels has been suggested as a means for treating or reducing the risk of cardiovascular disorders (par. [0002]).

78. Proprotein convertase subtilisin/kexin type 9 (PCSK9) is a proprotein convertase belonging to the proteinase K subfamily of the secretory subtilase family. The use of PCSK9 inhibitors (anti-PCSK9 antibodies) to reduce serum total cholesterol, LDL cholesterol and serum triglycerides was described in the prior art (par. [0003]). According to the background section of the Patent, WO 2011/028938 describes the use of PCSK9 inhibitors to decrease LDL, ApoB or total cholesterol.

79. According to paragraph [0002] of the patent in suit, no currently available treatments provide adequate and practical therapy for elevated Lp(a). According to par. [0003], PCSK9 inhibitors have not been shown to lower Lp(a) levels in patients. Nordestgaard et al. (2010) European Heart Journal 31(23):2844 describes the association between elevated Lp(a) levels and increased cardiovascular risk. Parhofer (2011) Current Pharmaceutical Design 17: 817-876 (Exhibit BP 19) indicates that the effect of anti-PSCK9 antibodies on Lp(a) is unknown.

80. Against this background, the patent in suit has as its underlying technical problem to address a need in the art for therapeutic methods of lowering serum Lp(a) levels.

81. Claim 1 can be structured by means of the following features:

    1. A pharmaceutical composition comprising a PCSK9 inhibitor,

2. the PCSK9 inhibitor is an antibody or antigen-binding fragment thereof that specifically binds PCSK9,

3. for use in reducing lipoprotein(a) (Lp(a)) levels

4. in a patient who

4.1. is diagnosed with or identified as being at risk of developing a cardiovascular disease or disorder or a thrombotic occlusive disease or disorder prior to or at the time of administration of the composition,

4.2. is not on a therapeutic statin regimen at the time of administration of the composition, and

4.3. exhibits a serum Lp(a) level above 30 mg/dL.

III. Basic legal framework for claim interpretation

82. The interpretation of the claims is governed by Art. 69 EPC and the Protocol on the Interpretation of Art. 69 EPC in conjunction with Art. 24(1)c) UPCA. The same approach to claim construction is to be used when assessing infringement and validity; thus, Art. 69 EPC must be the governing principle in claim interpretation also in the context of validity. The understanding of a claim by the skilled person must be consistent for all purposes of the evaluation of infringement and validity (UPC_CoA_335/2023, Order of 26 February 2024, Headnote 2 – NanoString v 10x Genomics).

83. Art. 69(1) EPC stipulates that the description shall be used to interpret the claims. The Protocol on the Interpretation of Art. 69 EPC, in its Art. 1, sets the general principles for claim interpretation. One of these principles of the Protocol is that Art. 69 EPC should not be taken to mean that the claims serve only as a guideline and that the actual protection conferred may extend to what, from a consideration of the description and drawings by a person skilled in the art, the patent proprietor has contemplated. The Protocol, in using the term "extend," clearly intends to prevent a claim interpretation which extends the subject-matter beyond what is actually claimed, i.e. exceeds the boundaries of the claim. The underlying legal principle is legal certainty.

84. Art. 69 EPC and its Protocol require that the terms used in the claims must govern claim construction, on their own or in their claimed combination. They are not just the "starting point" for claim construction but the authoritative basis for determining the scope of protection. The description and the drawings are nevertheless always to be considered, even with seemingly clear claims; thus, a patent may be used as its "own lexicon" (UPC_CoA_335/2023, Order of 26 February 2024, Headnote 2 – NanoString v 10x Genomics; UPC_CFI_14/2024 (CD Munich), Decision of 16 July 2024, Headnote 1 – Regeneron v Amgen).

85. The features of a claim have to be read in combination, as they must always be interpreted in the light of the claims as a whole (UPC_CoA_1/2024, Order of 13 May 2024, mn 29 – VusionGroup v Hanshow). Nothing else must apply to a combination of features resulting from combining a dependent claim with the features of the claims it depends from.

86. Art. 69 EPC and its Protocol therefore establish a primacy of the claims.

IV. Medical use claims

87. In the field of pharmaceuticals medical use claims are an exception to the traditional categories of product and process claims. Art. 54 (4) EPC and Art. 54 (5) EPC establish them as „purpose limited product claims".

88. The purpose is defined broadly for a first medical use claim in Art. 54 (4) EPC:

> "*Paragraphs 2 and 3 shall not exclude the patentability of any substance or composition, comprised in the state of the art, for use in a method referred to in Article 53(c), provided that its use for any such method is not comprised in the state of the art*."

89. The law establishes that the use of a substance for methods listed in Art. 53 (c) EPC – methods for treatment of the human or animal body by surgery or therapy and diagnostic methods practised on the human or animal body – can be novel and as such subject of patent claim.

90. The purpose of the second medical use claim is defined narrowly in Art. 54 (5) EPC:

> "*Paragraphs 2 and 3 shall also not exclude the patentability of any substance or composition referred to in paragraph 4 for any specific use in a method referred to in Article 53(c), provided that such use is not comprised in the state of the art*."

91. A substance or composition X for any "specific use" in a method for treatment of the human body can be patentable, provided the specific use is novel.

92. Medical use claims constitute an exception to the "normal" rules on novelty and provide a "notional novelty" by virtue of a legal fiction for substances or compositions for a specific (new) use that were already part of the prior art. Absent these provisions, a prior art disclosure of a substance would in principle be novelty destroying for a claim relating to said substance for a new use. The term "for use in", as such, in a patent claim would normally be interpreted as the claimed product being "suitable for" the claimed use, but the scope of that claim would not be limited to said use. For (second) medical use claims, the novelty is not derived from the claimed substance or composition as such but from the claimed therapeutic use.

93. In the case of a second medical use, a substance or composition within the meaning of Art. 54(4) EPC (for a use in a treating method = first medical use) is used for any specific use which is not comprised in the state of the art. Such a new therapeutic use can be a new indication, e.g. a disease not yet treated by the claimed substance, or an indication for a new group of patients.

V. For use in reducing Lp(a) levels (feature 3)

94. In claim 1 of the patent in suit, the "product" (composition) is characterised by feature 1 and 2 and its medical use (the "purpose") is specified in features 3 and 4: reducing lipoprotein(a) (Lp(a)) levels in a patient defined in feature group 4.

95. PCSK9 inhibitory antibodies (and fragments thereof) were known and the therapeutic use of (a pharmaceutical composition comprising) PCSK9 inhibitory antibodies for lowering LDL-C levels to treat patients diagnosed with or at risk of developing CVD was also commonly known (see par. [0003]). Whereas the examples make use of one specific anti-PCSK9 monoclonal antibody, called mAb316P, the claims of the patent in suit are not limited to the use

of that specific antibody.

96. In relation to feature 3, the Defendants have argued that the mere reduction of Lp(a) does not represent a therapeutic method (such as a treatment of a disease). According to the Defendants, claim 1 has been cast so as to encompass PCSK9 inhibitors for use in reducing Lp(a), for any purpose, in individuals satisfying the other features of the claim (e.g., serum Lp(a) level greater than 30 mg/dL and identified as being at risk of developing a cardiovascular disease; SoD, cf. 110). The claim therefore, still according to the Defendants, extends to non-therapeutic and known uses of PCSK9 inhibitors.

97. The Court cannot agree to Defendants´ understanding of feature 3. The already mentioned principles of interpretation of the claim also apply to (second) medical use claims. The relevant point in time for interpreting a patent claim for the assessment of validity is the filing (or priority) date of the application that led to the patent in suit. The skilled person understands the use in reducing Lp(a) levels as a specific use of a method for treatment of the human body by therapeutic methods. Treatment in the sense of Article 53(c) EPC need not entail a (complete) cure of a pathological condition but includes the mitigation or prevention thereof.

98. The claim is directed to the therapeutic reduction of serum Lp(a) levels as a mean for treating or reducing the risk of cardiovascular disorders (par. [0002]). The description explains that elevated serum Lp(a) levels have been shown in several studies to correlate with a variety of atherosclerotic and thrombotic disorders (par. [0002]). This information corresponds to the common general knowledge of the skilled person at the relevant date.

99. According to the Defendants' expert Dr. Hegele, studies in the mid to late 2000 provided results that suggested that elevated Lp(a) levels are certainly a risk factor for ASCVD (see Exhibit BP 12, 4.2 – 4.6). The Claimant also presented facts that, by September 2011, the risk of CVD conferred by elevated Lp(a) levels had been shown to be independent of the risk conferred by elevated LDL-C levels. Claimants` expert Prof. Di Angelantonio refers to two publications summarizing data from studies of Lp(a) in CVD (Exhibit HE 15 (Bennet) and Exhibit HE 16 (Emerging Risk Factors Collaboration, Lipoprotein(a) Concentration and the Risk of Coronary Heart Disease, Strok, and Nonvascular Mortality, 2009)) which established Lp(a) as an independent, causal risk factor for CVD (Exhibit HE 97, p. 9, para. 31)). According to him, the first study (Bennet) established that there are continuous and specific associations between Lp(a) levels and risk of future coronary heart disease (CHD) in a broad range of individuals, and that these associations are independent of other factors such as low density lipoprotein cholesterol (LDL-C) levels. In the second study (Emerging Risk Factors Collaboration), associations of Lp(a) concentration with the risk of CHD were only slightly reduced after adjustment for long-term average levels of lipids and other established risk factors, indicating that Lp(a) is an independent risk factor for CHD.

100. This is also confirmed by the prior art cited by the patent in suit (Exhibit HE 12, Nordestgaard, et. al). Nordestgaard is a review article co-authored by a global consensus panel of international experts commenting on the independent association between Lp(a) levels and cardiovascular risk. According to this article, the robust and specific association between elevated Lp(a) levels and increased cardiovascular disease (CVD)/coronary heart disease (CHD) risk, together with recent genetic findings, indicates that elevated Lp(a), like elevated LDL-cholesterol, is causally related to premature CVD/CHD. The association is continuous without a threshold or dependence on LDL- or non-HDL-cholesterol levels (Exhibit HE 12, Abstract under "Methods and results").

101. Moreover, sufficient facts are presented to the Court contributing the common knowledge Lp(a) being thought to be atherogenic starting at levels above 25 - 30 mg/dL (see Exhibit HE 69, p.2 left column; Exhibit HE 18 (Bermudez), p.265, left column).

102. The description of the patent in suit mentions that, in the prior art, several treatments had been tested and/or proposed for lowering serum Lp(a), including administration of acetylsalicylic acid, L-carnitine, niacin or anacetrapib, or LDL apheresis (par. [0002]).

103. The reduction of Lp(a) levels would thus be understood by the skilled person as a therapeutic intervention of its own right (albeit with the ultimate or overarching goal of treating or reducing the risk of cardiovascular disorders).

104. In addition, the skilled person will not interpret feature 3 in isolation, but rather in the context of the claim as a whole, against the background of the description, the drawings and the underlying technical problem that the patent in suit aims to solve. As such, the skilled person realises that the Lp(a) levels are to be reduced in a patient having the characteristics of feature 4, in particular 4.1 and 4.3, namely

    - who is diagnosed with or identified as being at risk of developing a cardiovascular disease or disorder, or a thrombotic occlusive disease or disorder prior to or at the time of administration of the composition and

    - who exhibits a serum Lp(a) level above 30 mg/dL.

105. Even though feature 4.1 will be interpreted broadly by the skilled person (there are no clear definitions in the claim or the description what "being at risk of" means, "cardiovascular disease or disorder, or a thrombotic occlusive disease or disorder" cover a wide range of diseases and the temporal feature "prior to or at the time of administration of the composition" is also broad), the skilled person will understand, in accordance with the description, that this is to distinguish from patients who are otherwise healthy except for exhibiting elevated serum Lp(a), cf. par. [0013]. Feature 4.1 thus limits the group of patients to be treated to patients who are at risk.

106. This is confirmed and further defined by feature 4.3 which limits the patient to be treated to a patient exhibiting a serum Lp(a) level above 30 mg/dL. Such a patient falls under the definition of patients having an "elevated serum Lp(a)" as provided in par. [0012] of the description. The skilled person understands that patients exhibiting an Lp(a) level above 30 mg/dL are at increased risk of CVD and that for those patients a reduction of Lp(a) levels can be beneficial. Feature 4.2 further limits the patient to be treated by specifying that the patient is not on a therapeutic statin regimen at the time of administration of the composition. Statins were known to the skilled person as a conventional treatment for lowering LDL-C levels. Patients who are not on statins can be intolerant of, non-responsive to, or inadequately responsive to conventional statin therapy and may be selected on that basis (par. [0015]), but this is not required by the claim. Beside the fact that the patent in suit itself does not indicate any other non-therapeutic use, the Defendants also did not give any concrete examples of non-therapeutic uses (for instance a cosmetic use) of lowering Lp(a) levels.

107. The skilled person will be aware that the use of PCSK9 antibodies for the lowering of LDL cholesterol in humans was known. The description highlights in various places, e.g. in par. [0083] and [0102] as cited by the Claimants, that the patent in suit demonstrates that "*inhibition of PCSK9, besides effectively lowering LDL cholesterol in human patients, surprisingly*

reduced Lp(a) levels as well." This therapeutic effect underlies the use claimed in feature 3. The skilled person will interpret the claim as to exclude the use of PCSK9 antibodies solely for the known purpose of lowering LDL cholesterol. However, different from the Defendants' position, the claim does not exclude the use of PCSK9 antibodies for other treatments, including the (known) lowering of LDL-C, as long as the PCSK9 inhibitor is also used to achieve the claimed therapeutic effect of reducing (elevated) Lp(a) levels.

VI. Patient exhibiting a serum Lp(a) level above 30 mg/dl (feature 4.3)

108. Defendants have furthermore argued that the claim, in particular features 3 and 4.3, upon a proper interpretation, means that the physician must (i) know that a patient's Lp(a) level is greater than 30 mg/dL (i.e. the elevated Lp(a) level must have been determined) and must (ii) specifically aim at lowering the elevated Lp(a) level as the "distinct therapeutic target" when treating with a PCSK9 inhibitor. Claimant has stated that the claim requires that the Lp(a) level is reduced by a pharmacologic intervention if it exceeds a certain threshold (feature 4.3: 30 mg/dL). Feature 4 does not state or imply a specific therapeutic endpoint beyond that. The claim does not require that the reduction of Lp(a) must be the dominant, let alone sole reason for the administration of a PCSK9 inhibitor, nor can such a limitation be inferred from the description.

109. In this respect, it is first of all noted that the claim requires that the patient being treated *exhibits* a serum Lp(a) level above 30 mg/dL. The claim does not explicitly include a step of measuring or determining the Lp(a) level, let alone a reference to a specific method for measuring the Lp(a) level of a patient to be treated. This is consistent with the description, which in par. [0012] gives an exemplary method for measuring serum Lp(a) (rate immune-nephelometry) but also states that "*any clinically acceptable diagnostic method can be used*". On the other hand, as already discussed above, the claim is limited to the use of anti-PCSK9 antibody (fragments) in a patient having an elevated Lp(a) level. Par. [0012] states that "*a patient may be considered to exhibit elevated serum Lp(a) if the level of serum Lp(a) measured in the patient is greater than about 15 mg/dL, 20 mg/dL, 25 mg/dL, 30 mg/dL, 35 mg/dL, 40 mg/dL, 45 mg/dL, 50 mg/dL, 60 mg/dL, 70 mg/dL, 80 mg/dL, 90 mg/dL, 100 mg/dL, 120 mg/dL, 140 mg/dL, 160 mg/dL, 180 mg/dL, or 200 mg/dL.*". The claim thus presupposes that, without specifying exactly *when* this has to be done, *how* and by *whom*, a patient´s serum Lp(a) is measured some time before the treatment is started. Rather than a subjective knowledge of a physician, feature implies that, objectively, the patient has an elevated Lp(a) level above 30 mg/dL. The claimed use is limited to patients exhibiting said level.

D. Counterclaim for revocation

110. The counterclaim is unfounded.

I. Priority

1. General principles

111. In accordance with Article 87 EPC, any person who has duly filed an application for a patent, a utility model or a utility certificate, or his successor in title, shall enjoy, for the purpose of filing a European patent application in respect of the same invention, a right of priority during

a period of twelve months from the date of filing of the first application. This right can be claimed in accordance with Article 88 EPC. The effect of a right of priority is that the priority date counts as the filing date of the European patent application for determining the state of the art (Article 89 in connection with 54(2) and (3) EPC). In accordance with Article 87 EPC, a claimed invention is to be considered the "same invention" as the invention in a previous application if the skilled person can derive the subject-matter of the claim directly and unambiguously, using common general knowledge, from the previous application as a whole (cf. UPC_CFI_1/2023 (CD Munich), Decision of 16 July 2024 – Sanofi v Amgen; UPC_CFI_355/2023 (LD Düsseldorf), Decision of 28 January 2025 – Fujifilm v Kodak).

2. Case at hand

112. The priority of P1 and P2 is validly claimed.

113. Concerning claim 1 of the patent in suit, it is not contested between the parties that all of the technical features are disclosed in P1 (and P2):

- for technical features 1 and 3 : claim 1 and paragraph [0004] of both P1 and P2,
- for technical feature 2 : claim 1 and paragraph [0005] of both P1 and P2,
- for technical feature 4.1: claims 4 and 9 and paragraphs [0004] and [0013] of both P1 and P2,
- for technical feature 4.2: claims 27 of both P1 and P2,
- for technical feature 4.3: paragraph [0012] of both P1 and P2.

114. In the view of the Court, also the combination of features as claimed in claim 1 of the patent in suit is directly and unambiguously disclosed to the skilled person in the earliest priority document P1 taken as a whole.

115. Indeed, claim 1 of P1 claims a method for reducing Lp(a) levels comprising selecting a patient who exhibits elevated serum Lp(a) and administering to the patient a pharmaceutical composition comprising a PCSK9 inhibitor. Paragraph [0004] discloses the same. Table 3B, and the below paragraphs explaining the results presented in this table, disclose to the skilled person the actual use of a PCSK9 inhibitor (mAb316P) in reducing serum Lp(a) in subjects who are not on statins ("no atorvastatin treatment"). This information corresponds to claim 27 of P1, which relates to the treatment of such patients. Paragraph [0012] of P1 defines what is meant by "elevated serum Lp(a)" and mentions, inter alia, an Lp(a) level greater than (about) 30 mg/dL. Narrowing down to this value in order to define the claimed patients, does, according to the Court, not result in an undisclosed combination of features compared to P1, but is rather a matter of restricting the patient group to a group of patients which is directly and unambiguously disclosed in P1. Taken together, this information discloses to the skilled person the subject matter claimed in the patent in suit.

116. For the sake of completeness, the Court notes that there is no information in P1 or P2 from which it follows for the skilled person that the claimed technical features should not be combined together in one embodiment (especially the embodiment corresponding to claim 1 of patent in suit).

117. In conclusion, the combination of all the features of claim 1 of the patent in suit derives directly and unambiguously from P1 (and P2).

II. Novelty

1. General principles

118. A technical teaching is new if it differs in at least one of its features from what is known in the art. For lack of novelty to be found, each and every feature of the claimed subject-matter must be derivable directly and unambiguously from one single prior art document (UPC_CFI_252/2023 (CD Munich), Decision of 17 October 2024 – NanoString v Harvard College, Headnote 3; UPC_CFI_315/2023 (CD Paris), Decision of 5 November 2024, mn. 9.1 – NJOY v Juul Labs). Knowledge that a person skilled in the art only acquires as a result of further deliberation or by consulting further documents or by further use does not constitute the state of the art (see UPC_CFI_16/2024 (LD Düsseldorf), decision of 14 January 2025 – Orthovox v Mammut; UPC_CFI_7/2024 (LD Düsseldorf), decision of 3 July 2024 – Kaldewei v Bette).

119. The question of novelty must be answered from the vantage point of the notional skilled person, taking into account this person´s common general knowledge at the relevant date (here of P1, see below). In order to benefit from the notional novelty afforded by Art. 54(5) EPC, second medical claims must relate to a specific use in a method according to Art. 53(c) EPC.

2. Case at hand

120. Applying these principles, the Court finds the patent in suit novel. There is no prior art document which directly and unambiguously discloses the use of an anti PCSK9 antibody for lowering Lp(a) levels, let alone in patients meeting the requirements of feature group 4.

a) Stein 2012

121. As the priority of P1 is sucesscully claimed, the relevant priority date is 16 September 2011. As Stein 12 (Exhibits BP 34, BP 34a) was published later, it does not form part of the prior art.

b) No lack of novelty as claim 1 encompasses a therapeutic use

122. As set out above under claim construction, reducing Lp(a) levels (in a patient with elevated Lp(a) levels who is at risk of CVD) is considered as a therapeutic intervention of its own right. The reduction of elevated Lp(a) levels relates to the reduction of a specific risk factor which contributes independently to the risk of cardiovascular conditions. A PCSK9 inhibitory antibody (fragment) for use in reducing Lp(a) levels is furthermore claimed in the context of a specific patient group exhibiting serum level Lp(a) above 30 mg/dl (feature 4.3) and who is at risk in accordance with feature 4.1 and who is not on a therapeutic statin regimen at the time of administration in accordance with feature.

123. The Defendants´ argument, that the known use of PCSK9 inhibitors to lower LDL-C levels inherently encompasses the use of PCSK9 inhibitors to lower Lp(a) levels because this result occurs as an “automatic and inevitable effect”, is legally flawed. This view ignores the notional novelty of second medical use claims as afforded by Art. 54(5) EPC. The relevant question for assessing the novelty of second medical use claims is whether the therapeutic use as claimed is directly and unambiguously disclosed in the prior art. That this is not the case here is essentially not in dispute between the parties. See (122 R, RtD CC), “[…] Exhibits BP 8, BP 9 and BP 10 do not explicitly disclose that the PCSK9 inhibitors are used for reducing Lp(a) levels specifically”. These documents disclose the use of PCSK9 inhibitors for treating the risk

of cardiovascular disease (CVD) by lowering LDL-C levels. Indeed, the known medical use of PCSK9 inhibitors for the treatment of CVD by lowering LDL-C does not take away the novelty of the claimed use of PCSK9 inhibitory antibodies to reduce Lp(a) levels in the patients defined in the claim.

c) Sleeman (Exhibit BP 9)

124. Sleeman discloses the PCSK9 antibody and therapeutic methods to use it (Exhibit BP 9, para. [0002]). It states in para [0044] that patients with primary hypercholesterolemia (i.e., patients at risk of developing a CVD) that are statin intolerant (i.e., not on a statin regimen) can be treated (feature 1, 2, 4.1 and 4.2).

125. Sleeman does not disclose the ability of PCSK9 to lower Lp(a) (feature 3). An overlap or inseparable link between LDL-C and Lp(a) and their impact over CVDs is not shown in the document. Additionally, feature 4.3 is not disclosed. Although Claimant´s expert Parhofer stated that, due to their hypercholesterolemia, patients often have Lp(a) levels above 30 mg/dL, this does not support the conclusion that patients exhibiting Lp(a) serum levels above 30 mg/dL are clearly and unambiguously disclosed. Finally, feature 4.3 is also not arbitrary. The literature presented demonstrates that there is a link between Lp(a) levels above 30mg/dL and the risk of CVD (Exhibit BP 42 (Berthold), p. 685 left column; Exhibit HE 18 (Bermudez), p. 265 left column).

d) WO 854 (Exhibit BP 10) and Jackson (Exhibit BP 11)

126. WO 854 and Jackson also disclose an anti-PCSK9 antibody and therapeutic methods to use it but they do not clearly and unambiguously disclose features 3 (reducing Lp(a) levels) and 4.3 (patient group with serum level above 30 mg/dL). The same reasons given in relation to Sleeman apply here.

III. Inventive Step

1. General principles

127. LD Düsseldorf agrees to CD Munich´s legal assessment to inventive step (see CD Munich, UPC_CFI_1/2023, Decision of 16 July 2024, cf. 8.2 -8.10) saying basically the following:

128. According to Article 56 EPC, an invention shall be considered as involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art.

129. Whether inventive step is acknowledged is always to be assessed in each individual case and requires a legal evaluation of all relevant facts and circumstances. As held by the Court of Appeal in NanoString/10x Genomics (p. 30, fourth par.) the burden of presentation and proof with regard to the facts from which the lack of validity of the patent is derived and other circumstances favourable to the invalidity or revocation lies with the Defendants in the counterclaim (Art. 54 and 65(1) UPCA, Rules 44(e)-(g), 25.1(b)-(d) RoP). Even though proof of certain facts, if contested, may thus be required, the ultimate assessment of the relevant facts and circumstances is a question of law which does not lend itself to the taking of evidence. An objective approach must be taken to the assessment of inventive step. The subjective ideas of the applicant or inventor are irrelevant. In principle, it is also irrelevant whether the invention is the result of serendipity or of systematic work involving (potentially costly and

laborious) experimentation. It is only relevant what the claimed invention actually contributes to the prior art.

130. Inventive step is to be assessed from the point of view of the skilled person on the basis of the state of the art as a whole including the skilled person´s common general knowledge. The skilled person is assumed to have had access to the entire publicly available art on the relevant date. The decisive factor is whether the claimed subject matter follows from the prior art in such a way that the skilled person would have found it on the basis of its knowledge and skills, for example by obvious modifications of what was already known.

131. In order to assess whether or not a claimed invention was obvious to a skilled person, it is first necessary to determine a starting point in the state of the art. There has to be a justification as to why the skilled person would consider a particular part of the state of the art as a realistic starting point. A starting point is realistic if its teaching would have been of interest to a skilled person who, at the priority date of the patent at issue, was seeking to develop a similar product or method to that disclosed in the prior art which thus has a similar underlying problem as the claimed invention (cf. Court of Appeal Nanostring/10x Genomics, p. 34 under "cc" in the German original version, "Für eine Fachperson, die sich zum Prioritätszeitpunkt des Verfügungspatents vor die Aufgabe gestellt sah war […] D6 von Interesse"). There can be several realistic starting points. It is not necessary to identify the "most promising" starting point.

132. Comparing the claimed subject matter, after interpretation following the guidelines provided above under "claim interpretation", and the prior art, the subsequent question is whether it would be obvious for the skilled person to, starting from a realistic prior art disclosure, in view of the underlying problem, arrive at the claimed solution. If it was not obvious to arrive there, the claimed subject matter meets the requirements of Article 56 EPC.

133. In general, a claimed solution is obvious if, starting from the prior art, the skilled person would be motivated (i.e. have an incentive or in German: "Veranlassung", see the CoA in NanoString/10x Genomics, p. 34) to consider the claimed solution and to implement it as a next step ("nächster Schritt", CoA in NanoString/10x Genomics, p. 35, second par.) in developing the prior art.

134. On the other hand, it may be relevant whether the skilled person would have expected any particular difficulties in taking any next step(s). Depending on the facts and circumstances of the case, it may be allowed to combine prior art disclosures.

135. A technical effect or advantage achieved by the claimed subject matter compared to the prior art may be an indication for inventive step. A feature that is selected in an arbitrary way out of several possibilities cannot generally contribute to inventive step. Hindsight needs to be avoided. The question of inventive step should not be answered by searching retrospectively, with knowledge of the patented subject matter or solution, for any (combination) prior art disclosures from which that solution could be deduced.

136. Speaking of serendipity, the element of surprise contained in that term can only come into play if the state of the art and the capabilities of the skilled person skilled would not necessarily have led to the result claimed as inventive.

2. Case at hand

137. Accordingly, the Defendants' arguments are not sufficient to substantially undermine inventive step.

138. Only made as preliminary remarks, it can be stated that the skilled person already knows parts of the claimed subject matter based on its common knowledge which can be seen, i.e. in the compilation of the documents Sleeman (Exhibit BP 9), Exhibit BP 42 (Berthold), Exhibit HE 60 (Lippi) and Exhibit HE 18 (Bermudez, 2010). The skilled person knows the following technical information:

- the existence of an anti-PCSK9-antibody (fragment) (i.e. PCSK9 inhibitor [which is] an antibody or antigen-binding fragment thereof that specifically binds PCSK9];
- its use in treating patients with diagnosed or being at risk of CVD or OCD;
- the use in treating patients not on a therapeutic statin;
- being a link between Lp(a) levels above 30mg/dL in a patient and the risk of CVD.

139. The use of an anti-PCSK9 antibody (fragment) in order to reduce Lp(a) levels (feature 3 of the claim) is the key issue for inventive step, as it had not been disclosed before. For assessing inventive step, it is crucial to decide whether this feature follows nevertheless from the prior art in such a way that the skilled person would have found it on the basis of its knowledge and skills. A realistic prior art disclosure as a starting point needs to be identified which is done below. Starting from that, the use of an anti-PCSK9 antibody can be obvious if the skilled person had been motivated to implement the PCSK9 antibody in the view of the problem to provide a method to lower serum Lp(a) level in an individual as the next step. A motivation only to consider is not enough, the skilled person needs to be motivated to implement it. A motivation to implement can be absent or can be negated if the skilled person faces many uncertainties or expected difficulties in using the PCSK9 antibody as an Lp(a) lowering method. If there is no motivation at all or a negated motivation in using the PCSK9 antibody, the subject matter of the claim is not obvious and involves an inventive step.

b) Parhofer I (Exhibit BP 19)

140. That being said, Parhofer I is a realistic starting point for the skilled person in view of the technical problem to find a treatment for lowering serum Lp(a) levels.

Parhofer I deals with an evaluation of treatment modalities to decrease elevated Lp(a) levels. The paper discloses in its abstract, that amongst niacin and other drugs, some medications in development namely „mimopersen, […], Proprotein convertase subtilisin/kexin type 9 (PCSK9-) inhibitors, […] can decrease elevated Lp(a) concentrations" (Exhibit BP 19).

141. The parties argue whether the skilled person gets enough information out of the following table 3 and excerpt (see Exhibit BP 19, p. 874) to be motivated to think about the use of the claimed PKSK9-inhibitor to reduce Lp (a) levels.

Compound	Mechanism	Main Lipid Effect	Effect on Lp(a)
Mipomersen	apoB antisense oligo-nucleotide	LDL ↓	↓ (-30%)
Lomitapide	MTP-inhibitor	LDL ↓; TG ↓	unknown
Eprotirome	Thyroid-mimetic	LDL ↓	↓ (-30%)
PCSK-9 inhibitor	PCSK-9 antibody	LDL ↓	unknown
Anacetrapib	CETP-inhibitor	HDL ↑ LDL ↓	↓ (-30%)
Dalcetrapib	CETP-inhibitor	HDL ↑; LDL ↓	unknown

MTP: microsomal triglyceride transfer protein; PCSK-9: proprotein convertase subtilisin/kexin type 9; CETP : cholesterol ester transfer protein.

[75,76]. Whether inhibitors of microsomal triglyceride transfer protein (MTP-inhibitors), which decrease triglyceride and LDL-cholesterol concentrations can also decrease lipoprotein(a) plasma concentrations is unknown. However, since they modulate the secretion of apoB containing lipoproteins from the liver it is highly likely that lipoprotein(a) concentrations are decreased [77]. This of course will not hold true for intestine specific MTP inhibitors, currently being developed to treat diet induced obesity [78]. Eprotirome a selective thyreo-mimetic drug decreases LDL and lipoprotein(a) to a similar extent if given on a statin background [37]. This is somewhat surprising since it is believed that thyreo-mimetics primarily act by up-regulating LDL-receptor activity [38,39]. Other approaches that result in an increased LDL-catabolism usually do not alter lipoprotein(a) concentrations. This indicates that eprotirome also modulates lipoprotein(a) production and/or secretion. Finally, it is conceivable that PCSK-9 inhibitors, which are currently developed for the treatment of hyperlipidemia may also decrease lipopotein(a) concentration. Anacetrapib, a new CETP-inhibitor, which primarily increases HDL-cholesterol, also decreases LDL-cholesterol and lipoprotein(a) significantly [79]. Whether this holds also true for Dalcetrapib another CETP-inhibitor in development is unknown.

142. Looking at Table 3 of Parhofer I, the skilled person would note that a number of compounds have been found to lower Lp(a), such as mipomersen and eprotirome. Table 3 shows that the effect of PCSK9-inhibitor on Lp(a) is unknown. Although other compounds are highlighted to test to lower Lp(a), such as MTP-inhibitors and eprotirome, Parhofer I also states that it is conceivable that PCSK9-inhibitors which are currently developed for the treatment of hyperlipedimia may also dicrease Lp(a) concentration. Moreover, it is stated in mn. 75 and 76, that eprotirome also modulates lipoprotein production and/or secretion.

143. The skilled person will take from the disclosure of Parhofer I as a whole, that PCSK9 inhibtors may be considered as a therapy to reduce Lp(a) levels. Therefore, the Court would not per se deny a motivation for the skilled person to consider the PCSK9 inhibitor because the Lp(a) lowering effect of PCSK9 inhibitor was still unknown, but nevertheless conceivable. Prof Parhofer´s additional explanations do not alter the Court´s conviction at this point. He points out that he explained actually the general thought that for an agent to lower Lp(a) levels, it would need to act on Lp(a) production or secretion from cells (Exhibit HE 92, cf. 11 + 12). The subjective ideas of the author of prior art must not be decisive but the objective explanatory value of the statement even if it was subjectively meant otherwise.

144. Taking the teaching of Parhofer I as a starting point including the motivation to consider using a PCSK9 inhibitor to reduce Lp(a) levels at the priority date, the Court finds nevertheless that an inventive step is not lacking in the present case. The question is whether the skilled person would have implemented the claimed solution as a next step. In view of the facts and circumstances of this case, the Court comes to the conclusion that this has not been shown by the Defendants.

145. The motivation of the skilled person to actually use a PCSK9 inhibitor as a next step is negated for other technical reasons.

146. First, the prevailing hypothesis at that point in time was that plasma levels of Lp(a) were driven by the rate of its synthesis rather than the rate of its catabolism (Exhibit HE 12 (Nordestaad), p. 2849). This is actually also reflected in Parhofer I, see e.g. the penultimate paragraph of the introduction, where it is stated that “as a general rule it seems that changes in lipoprotein production affect lipoprotein(a) concentration stronger than changes in lipoprotein catabolism.”

147. Even the Defendants’ expert Prof Hegele does not contradict this in stating Lp(a) levels were thought to be chiefly determined by the rate of synthesis of Lp(a) molecules but this was by no means conclusively established in the field by 2011 (Exhibit BP 79 (Hegele), cif. 2.2). He rather agrees that the predominant view in September 2011 was that Lp(a) synthesis was primarily responsible for determining Lp(a) plasma levels in humans but there was not a clear understanding of the relative contribution of Lp(a) clearance. It is Prof Hegele´s view then, that the skilled person in September 2011 would appreciate this and be cognizant that a substantial amount of further research was required to fully understand the mechanistic role of Lp(a) catabolism in the context of lipoprotein physiology, but certainly would not have dismissed pursuing a modality that functioned by increasing the rate of Lp(a) catabolism (see Exhibit BP 79, cif. 2.3).

148. This statement confirms that the skilled person at the priority date thought that rate of the synthesis of Lp(a) levels was primarily responsible for Lp(a) plasma levels and that a substantial amount of further research was required to learn more about the role of catabolism. Given that knowledge, the skilled person – faced with the underlying problem of finding a therapy to reduce Lp(a) levels would not as a next step use a PCSK9 inhibitor. Rather, out of all the compounds discussed in Parhofer I, the skilled person would opt for a compound that was known to interfere with Lp(a) synthesis, for example, eprotirome.

149. In addition to the foregoing, the Claimants have credibly argued that at the priority date, Lp(a) was not thought to be cleared via the LDL receptor (LDLR), which is the target of PCSK9 inhibitors (see Exhibits HE 70 (Hobbs), HE 71 (Rader), HE 18 (Bermudez)). It is clear from the cited documents that the skilled person did not consider LDLR as a pathway for Lp(a) clearance (see Exhibit HE 70, p. 228 "in man, LDL-R appears to play only a minor role, if any, in the clearance of intact Lp(a)") and Figure 2 "the LDL receptor does not appear to be involved [in Lp(a) clearance]". This view of the skilled person is supported by the statement in Rader's abstract (Exhibit HE 71) that "in summary, the absence of a functional LDL receptor does not result in delayed catabolism of Lp(a), indicating that the LDL receptor is not a physiologically important route of Lp(a) catabolism in humans". Bermudez shares this view, stating, "[…] the LDL receptor does not appear to play a critical role in Lp(a) metabolism. This statement is based on the fact that statin administration (which causes LDL receptor upregulation) does not significantly affect Lp(a) plasma concentrations[…]" (Exhibit HE 18 (Bermudez), page 264, right column).

150. In this respect, according to Rule 9.2 RoP, the Court does not take into account the Defendants´ citations in the oral hearing referring to single passages in the attachments of Prof Hegele´s second declaration included in Exhibit BP 79 which counts 198 pages. Detailed technical information and explanations to substantiate technical arguments must be provided at the latest in the written or interim procedure. On the one hand, a mere reference without detailed explanation of main arguments in the briefs are not sufficient. On the

other hand, the detailed explanation must be concise. Another approach is neither compatible with the front-loaded procedure nor with the time limits within which the Court has to prepare the case, which is why the Court has to concentrate on the issues relevant to the decision.

151. Finally, the Claimants have pointed at genetic evidence showing that Lp(a) levels are the same in patients with an inactivated PCSK9 gene and in patients with normal levels of PCSK9 (Exhibit BP 39 (Chen); Exhibit HE 86 (Cohen)). According to Cohen (Exhibit HE 86) mutations which inactivate one allele of PCSK9 lead to a 50% reduction in PCSK9 activity relative to normal patients had no effect on the Lp(a) level. Patients with a nonsense mutation in PCSK9 (i.eg. a mutation that inactivates PCSK9 altogether) also had an indishinguishable Lp(a) level from normal patients. This would also have discouraged the skilled person to use a PCSK9-inhibitor as a next step starting from Parhofer I.

152. The Court finds that the skilled person would not overcome all these reasons leading away from the motivation to use a PCSK9 inhibitor for reducing Lp(a) levels.

c) Parhofer II (Exhibits BP 33, 33a)

153. Starting from Parhofer II the claimed subject matter was also not obvious for the skilled person.

154. In Parhofer II, there is effectively no more information disclosed than in Parhofer II. The author of BP 19 states while answering the question regarding a special patient´s therapy, that several of the new lipid-lowering drugs in development (mipomersen, eprotirome, PCSK9 inhibitors, CETP inhibitors, etc.) can lower lipoprotein(a) levels. There is neither a discussion nor scientific evidence nor a reference cited for this statement in this document. Besides that, PCSK9 inhibitors is only one of several lipid-lowering proteins named. Moreover, directly following this statement the author continues that it is unclear if and when these drugs will be approved. It is also unclear whether treatment with these drugs provides any clinical benefit. The greatest reduction in lipoprotein (a) levels can be achieved by regular lipid apheresis (-70%). Therefore, even if Parhofer II is taken as a starting point, the Court is not convinced, on the basis of the technical information in that document, that the person skilled in the art would, as a next step, use a PCSK9 inhibitor as a therapy for reducing Lp(a) levels, let alone from among other lipid-lowering agents mentioned there, given the view prevailing at the priority date as discussed above for Parhofer I and the genetic information about the role of PCSK9 in determining Lp(a) levels. In fact, the only concrete therapy that is suggested by Parhofer II is regular lipid apharesis which leads the skilled person away from using a PCSK9 inhibitor to treat Lp(a) levels.

155. To the extent Defendants´ referred to the preliminary opinion of the Bundespatentgericht concerning the EP ‘004 (Exhibit HE 42) and its different opinion, it does not affect the findings of this Court. The Federal Patent Court comes to a reasonable expectation of success by relying on supporting documents whose identity with the prior art presented in the case at hand has neither been confirmed nor explained in detail. A detailed review is therefore not possible.

d) Swergold poster (Exhibit HE 96/Exhibit BP 11)

156. The document request (R. 190.1 RoP) made by Defendants does not have to be decided

anymore as the Claimants presented the whole Swergold poster in Exhibit HE 96. The abstract does not disclose any information going beyond the disclosure of the poster and this has not been argued by the parties. Therefore, the Court will discuss inventive step only starting from the poster.

157. Assuming that the skilled person would have regarded this poster as a realistic starting point, it does not motivate the skilled person to use a PCSK9 inhibitor as a therapy for reducing Lp(a) levels.

158. The Swergold poster reports the results of a Phase 1 clinical trial investigating the safety and pharmacodynamic effects of REGN727/SAR236553 (REGN727), a fully human monoclonal antibody directed against PCSK9, having potential as a new therapeutic modality for hypercholesterolemia. Pharmacodynamic measures included LDL-C, HDL-C, non-HDL-C, ApoB, ApoA1, Lp(a), and triglycerides (see Abstract). In conclusion, the authors state that SC administration of REGN727 to healthy volunteers with LDL-C >100 mg/dL resulted in dose-dependent reductions in mean LDL-C. No dose-limiting toxicities were observed. REGN727 is being investigated in further studies for the treatment of hypercholesterolemia (also Abstract). From this information, it is clear to the skilled person that the aim of the Swergold study is primarily to assess the safety and pharmacodynamic effects of a PCSK9 inhibitor as a treatment for hypercholesterolemia (i.e. lowering LDL-C levels) and not as a (potential) treatment for reducing Lp(a) levels.

159. Even if the skilled person would, despite the focus on hypercholesterolemia and the reduction of LDL-C, focus on the effect of the PCSK9 inhibitor on Lp(a) levels and take this document as a realistic starting point having regard to the underlying technical problem, they would first of all realise that the teaching of the poster with respect to Lp(a) levels is inconsistent . In the abstract Lp(a) is not mentioned at all. In the column “methods“ under the heading “assessment“ Lp(a) is part of the lipid panel and according to the last line Lp(a) was measured besides TG, VLDL-C, HDL-C, and non-HDL-C. In Table 1 of the “Results” Lp(a) is not included. Under “effects on lipid levels”, it is mentioned that the administration of the PCSK9 antibody ”had no major or consistent effects on serum levels …of Lp(a).” Finally, in “Conclusions” it is predicted, that ”the detailed effects of REGN727/SAR236553 on LDL-C, TG, HDL-C, and Apo A-I and other lipid parameters alone or in combination with other lipid-lowering agents will be investigated in larger studies”. From this information, the predominant teaching for the skilled person who is interested in finding a therapy to reduce Lp(a) levels is that the PCSK9 inhibitor tested in the clinical trial had no major or consistent effects on Lp(a). No actual results of measurement of the Lp(a) levels are presented. As a next step, the poster suggests to investigate the detailed effects of the PCSK9 antibody on LDL-C, TG, HDL-C, and Apo A-I and other lipid parameters. Lp(a) is not individually mentioned. So, the skilled person is taught that Lp(a) levels although measured did not achieve good or promising results as it is not mentioned any more in results and drawn conclusions. Therefore, Swergold will not motivate the skilled person to use an anti-PCSK9 antibody for reducing Lp(a) levels.

e) „Try and see“ of the EPO

160. It is not necessary to decide whether the UPC will follow this approach, as there is no prior art clearly demonstrating that PCSK9 has the effect of lowering Lp(a) levels.

IV. Insufficiency

161. The subject-matter of claim 1 as granted is sufficiently disclosed. The patent in suit discloses the claimed invention in a manner sufficiently clear and complete for it to be carried out by the skilled person.

1. General principles

162. As established in the Decision of the Düsseldorf Local Division of 28 January 2025 (UPC_CFI_355/2023, Fujifilm v Kodak), it is the position of the Court that the subject-matter of a patent claim must be sufficiently disclosed in the patent as a whole, including the examples. It is the patent that has to demonstrate the workability of the claimed subject-matter. However, as the invention has to be disclosed sufficiently clear and complete for it to be carried out by the skilled person, the skilled person´s common general knowledge must also be taken into account when considering the question of sufficiency.

163. In a case of a second medical use claim, the claimed "use", which is based on a therapeutic effect, is part of the claim. Therefore, the use (including the therapeutic effect) has to be sufficiently (reproducibly) disclosed in the patent (as a whole).

2. Case at hand

164. It is not in dispute between the parties that PCSK9 inhibitory antibodies were compounds known to the person skilled person (see paragraphs [0036] – [0044]). Likewise, it is not in dispute that the skilled person knew how to make those compounds and how to administer them as a medicine to a patient in need thereof.

165. The Defendants are basically arguing that the patent in suit, in particular the data provided in Table 3B, does not sufficiently disclose the therapeutic effect of reducing Lp(a) in patients that are not on statins.

166. First of all, the skilled person knew on the basis of their common general knowledge and the information in the patent in suit how to measure the effect of a PCSK9 inhibitor on Lp(a) levels. Lp(a) is and was at the priority date a common lipid parameter that can be measured, using known techniques (see par. [0012] of the patent), and that should be measured at least once in the life time of a CVD patient. The skilled person also knew that (for instance in a clinical trial setting) the effect of a compound on Lp(a) levels can be readily determined by measuring the Lp(a) levels before and after the administration of a compound. Moreover, the patent in suit provides information about the protocols used in the patent to measure Lp(a) levels (example in paragraph [0069]).

167. Table 3B of the patent in suit provides results concerning the effects of the administration of a PCSK9 inhibitor on the Lp(a) levels of patients not on a statin regimen compared to placebo. Those levels were measured before the administration of the PCSK9 inhibitor ("baseline") and 57 days after ("day 57").

168. Table 3B reports as a result that after treatment with a PCSK9 inhibitor, Lp(a) levels were 43,8% lower compared to the placebo group ("%change vs Pbo"). This would lead the skilled person to the conclusion that the administration of the PCSK9 inhibitor decreased Lp(a) levels, at least in a population of patients not on a statin regimen. This consideration of the skilled person would be in line with several passages in the patent (see for example paragraph [0076], [0081], [0083], [0102] which states that *"Importantly, reductions were*

also observed in Lp(a)"). In general, and especially for the skilled person, an effect relative to placebo is a clinically-meaningful result, because such a result indicates whether the treatment has a desired effect (in this case reducing the Lp(a) level) relative to what it would have been in the absence of the treatment. Indeed, clinical trials are normally conducted with a placebo group for comparison.

169. Further, the Court agrees with Claimants´ arguments with regard to Table 6 of the patent which shows a clear reduction of the Lp(a) levels for patients treated with a PCSK9 inhibitor and statin. Even if those patients are on a daily statin regimen, which is not part of the scope of claim 1, the skilled person would take these results as confirmation that the Lp(a) reducing effect of PCSK9 inhibitors will also be achieved in patients who are not on a statin regimen, because in Table 6, the effect of the anti-PCSK9 antibody in patients receiving only 10 mg atorvastatin was almost the same than the effect in patients receiving a far higher dose (80 mg) of atorvastatin and because it was known before the priority date that statins do not affect Lp(a) levels).

170. In conclusion, given the technical information provided in the patent in suit, including the (clinical) data presented, in view of the common general knowledge of the skilled person, the Defendants, who carry the burden of presentation and proof, have not succeeded in raising serious doubts substantiated by verifiable facts about the sufficiency of disclosure of the subject matter claimed in the patent in suit.

V. Added matter

1. General principles

171. In order to ascertain whether there is added matter, the Court must thus first ascertain what the skilled person would derive directly and unambiguously using his common general knowledge and seen objectively and relative to the date of filing, from the whole of the application as filed, whereby implicitly disclosed subject-matter, i.e. matter that is a clear and unambiguous consequence of what is explicitly mentioned, shall also be considered as part of its content (CoA, Decision of 14 Feburary 2025 – Abbott v. Sibio).

2. Case at hand

172. Claim 1 of the patent in suit fulfils the requirements of Article 123(2) EPC.

173. The patent in suit has been filed under the patent application number 19162319.8. This is a divisional application of application 12761864.3 ("original application").

174. Concerning claim 1 of the patent in suit, it is not contested between the parties that the feature 4.3 (the Lp(a) threshold value of 30 mg/dL) and feature 4.2 (the patient is not on a statin regimen) were disclosed in the original application:

- paragraphs [0004], [0005], [0012] - [0014], Table 3B,
- and in aspects of the invention 11 and 27 of the original application (cf. page 32-34).

175. The Parties disagree on whether the combination of the two above features derives directly

and unambiguously from the original application. According to the Court, the skilled person will identify all of the features of claim 1 of the patent in suit in the application as filed, in particular in Table 3B.The measurement of different lipid parameters in the blood of patients not on a statin regimen (cf. [0076], "diet only – no atorvastatin treatment": feature 4.2 of claim 1 of patent in suit), and the average level of Lp(a) of those patients before the administration was 34 mg/dL which is above 30 mg/dl is shown (feature 4.3). As a consequence, the combination of the two above features is directly and unambiguously disclosed in Table 3B of the original application and in the cited paragraphs explaining the experiments presented inTable 3B.

176. For the sake of completeness, the Court notes that there is no information in the original application from which it follows for the skilled person that the claimed technical features 4.2 and 4.3 should not be combined together in one embodiment (especially the embodiment corresponding of claim 1 of patent in suit). Such information, which is absent, could have deterred the person skilled in the art to derive directly and unambiguously the subject-matter of such embodiment.

177. Therefore, the subject matter of claim 1 of the patent in suit can be derived directly and unambiguously from original application.

VI. Auxiliary request

178. As the main request is successful there is no need to decide on the auxiliary requests.

E. Infringement

179. The Defendants do not infringe the patent in suit by offering or placing the contested embodiment on the market.

I. General principles

180. There are no statutory provisions regarding infringement of second medical use claims and so far, there is no harmonised approach in the UPC. The legal framework for the assessment of (direct) infringement is primarily set out in Art. 25 UPCA and 69 EPC (and the Protocol).

181. The nature of the second medical use claim as a purpose-limited product claim includes, on the one hand, the characteristics of a product claim meaning it can be infringed like one (cf. Art. 25(a) UPCA and the infringing acts specified therein). On the other hand, the purpose-limitation contrasts the claim from a "normal" product claim which affords "absolute" protection, regardless of its (intended) use. In order to find infringement of a purpose-limited product claim, the Claimants must therefore prove that the allegedly infringing product fulfils the "use" feature(s) of the claim.

182. In finding a balance between a fair protection for the patent proprietor and a reasonable degree of legal certainty for third parties, a limitation of the scope of protection to cases where the product is already or actually being used for the claimed therapeutic purposes would unduly limit the protection of the patent proprietor. It is the opinion of the Court that, for a finding of infringement of a second medical use claim, the alleged infringer must offer

or place the medical product on the market in such way that it leads or may lead to the claimed therapeutic use of which the alleged infringer knows or reasonably should have known that it does. In other words, as an objective element, there must be either a prescription in order to lower Lp(a) levels, or there must be at least circumstances showing that such a use may be expected to occur. In addition, as a subjective element the infringer must know this or reasonably should have known.

183. The requirements of such behaviour cannot be defined in an abstract manner but require an analysis of all the relevant facts and circumstances of the case at hand. Starting from the construction of the patent claim in question, relevant facts may include

- the extent or significance of the allegedly infringing use,
- the relevant market including what is customary on that market,
- the market share of the claimed use compared to other uses,
- what actions the alleged infringer has taken to influence the respective market,
  - either "positively", *de facto* encouraging the patented use,
  - or "negatively" by taking measures to prevent the product from being used for patented use.

184. The manufacturing of the product and in particular the package insert and the SmPC of a pharmaceutical product can be important. However, they are not always the only decisive factor to be taken into account in assessing whether the alleged infringer is in the end liable for patent infringement. Additionally, the extent to which the alleged infringer knows or should have known that the product will be used for the claimed purpose is of relevance.

II. Case at hand

185. In applying these principles, the Claimants must show (and prove) in particular that the contested embodiment (Repatha) is offered or placed on the market in such a way that either a use in reducing Lp(a) levels in a patient as defined in feature group 4 is already occurring or, depending on the circumstances, may be expected to occur. In addition, the Claimants must allege (and, if the submission was substantially disputed, prove) that the Defendants at least should have known that offering or placing the medical product on the market leads or may lead to the claimed therapeutic use. The contested embodiment (Repatha) is undisputedly a pharmaceutical composition comprising a PCSK9 inhibitory antibody and thus meets feature 1 and 2 of the claim. But there are remaining doubts which the Claimants did not disprove that the Defendants´ placing on the market of the contested embodiment leads to the claimed use. The Claimants also fail to show and prove that it even may lead to the claimed use.

186. The contested embodiment is offered and marketed in the relevant Member States in two administration forms, as pre-filled pens and mini-dosers, and in various package sizes. The Claimants did not show any marketing efforts by Defendants´ aimed at "selling" the drug for the claimed use. At the centre of the dispute is the information on the Lp(a) levels in the SmPC (Exhibit HE 23) and the conclusions that treating physicians may draw from it for their prescribtion practise.

a)

187. It is undisputed that the contested embodiment lowers the Lp(a) value by at least 25% and that elevated Lp(a) levels are a risk factor for CVD (see Exhibit HE 20). However, other risk factors like elevations in LDL cholesterol, triglyceride (TG) levels, overweight and smoking are significantly more important for a physician in treating CVD.

188. Undisputedly the SmPC (Exhibit HE 23) of the contested embodiment is available, meaning the SmPC is on the market together with the product and physicians will study it.

189. According to Section 4.1. of the SmPC (therapeutic indications), there is no indication of Repatha for lowering Lp(a) levels meaning the drug is not approved for it. Rather, Repatha "is indicated in adults with primary hypercholesterolemia [...] or mixed dyslipidemia [...] […] alone or in combination with other lipid-lowering therapies in patients who are statin-intolerant, or for whom a statin is contraindicated […]" and „indicated in adults with established atherosclerotic cardiovascular disease (myocardial infarction, stroke or peripheral arterial disease) to reduce cardiovascular risk by lowering LDL-C levels, as an adjunct to correction of other risk factors: […] alone or in combination with other lipid-lowering therapies in patients who are statin-intolerant, or for whom a statin is contraindicated" (Exhibit HE 23, p. 2 et.seq). Summarized, the drug is approved for lowering LDL-C and mixed hyperlipodemia. This means after a clinical trial program, evaluated by the EMA, the contested embodiment was deemed to be clinically effective and safe for the listed indications.

190. In Section 5.1 SmPC (pharmacodynamics properties) mentions under pharmacodynamics effects that "in clinical trials, Repatha reduced unbound PCSK9, LDL-C, ApoB, non-HDL-C, TC/HDL-C, ApoB/ApoA1, VLDL-C, TG and Lp(a) […]." (Exhibit HE 23, p. 7). In contrast to Section 4.1, Section 5.1 SmPC does not report a clinical relevance (efficacy and safety) of this effect in terms of improving the CVD risk for patients. That is the reason why the available Guidelines (exhibit HE 20, i.g.p. 3939, right column) consistently refer to PCSK9 inhibitors as not being approved for Lp(a) lowering.

191. So, the prescribing physicians are certainly able to take note of the information, that the contested embodiment reduces Lp(a). And they can derive from the studies mentioned in the SmPC that the contested embodiment can lower the Lp(a) level value by around 25%. Nevertheless, the physician´s decision to prescribe the contested embodiment is based on the therapeutic indications for which the drug is approved, which is here lowering LDL-C and mixed hyperlipodemia. By referring to Section 5.1 SmPC, the Claimants did not show and prove that a risk factor of elevated Lp(a) levels is addressed independently, let alone that the contested embodiment is prescribed for reducing Lp(a). In the context of infringement of a second medical use claim it is irrelevant that reducing LDL-C may have the windfall effect to reduce an elevated Lp(a) value. As set out above the infringer is held accountable for placing the product on the market in a way that leads or may lead to the claimed use. This requires for example presenting information about the product in a certain way. In the case at hand, the Defendants do not emphasise in any way that the contested embodiment reduces Lp(a) (e.g. by labelling it as recommended for that use). The pharmacodynamic effects in Section 5.1 SmPC are of relevance (and even mandatory) e.g. if the physician has to take account certain side effects as the Defendants presented in this case for diabetes patients. It is the objective report of an outcome effect of a clinical study which is comparable to background information. This also implies that if the physician prescribes the product for lowering Lp(a) and LDL-C, they are prescribing the drug "off-label". So, under the circumstances of the case

Section 5.1 SmPC is not suitable for showing that the Defendants´ place the contested product on the market in an infringement-relevant manner.

b)

192. The Claimants also failed to demonstrate that the placement on the market of the contested embodiment may lead to the claimed use after all.

193. This could have been done by providing evidence that such prescriptions have already been made or that there is a substantial likelihood that they will be made.

194. The Claimants brought forward Parhofer´s expert opinion stating that it can be expected that a concomitantly (together with LDL-C level) elevated Lp(a) level is often also taken into consideration when deciding to prescribe a PCSK9 inhibitor. He and his colleagues in his clinic pay attention to the Lp(a) value when deciding on the use of a PCSK9 inhibitor and assume that a patient with an elevated Lp(a) value will benefit from its reduction. They therefore are taking the effect of Lp(a) lowering into account. Having a choice between a PCSK9 inhibitor that lowers Lp(a), even if only slightly, and a theoretical PCSK9 inhibitor that does not have this effect on Lp(a) levels but otherwise has the same effect on LDL-C levels, he would choose the former in a patient with concomitantly elevated Lp(a) (see Exhibit HE 23, cf. 17 and 18).

195. Defendants put forward Dr Franke´s expert opinion (Exhibit BP 63, 63a, cif. 5) stating:

> "*PCSK9 inhibitors have at best a moderate lowering effect on elevated Lp(a) levels requiring treatment. They can therefore not be used to treat elevated Lp(a) levels. In this respect, it is an irrelevant side effect, which in my practice plays no role in the decision to prescribe a PCSK9 inhibitor. I am not aware that my colleagues judge this differently. In particular, I am not aware that my colleagues should take the lowering effect with them when prescribing PCSK9 inhibitors or prescribe PCSK9 inhibitors earlier than would actually be indicated after the prescription restriction. In other words: In my practice, an elevated Lp(a) value has no effect on my decision to prescribe a PCSK9 inhibitor*."

196. Defendants also present Prof Sechtem´s expert opinion (Exhibit BP 76, cf. 5) stating:

> 5. In my practice, I have never treated a patient with a PCSK9 inhibitor because of an elevated Lp(a) value. It may be that I have prescribed alirocumab and evolocumab to CVD patients who happen to have an elevated Lp(a) value, but this was not with the aim of lowering Lp(a). Nevertheless, I try to lower LDL-C more aggressively in a patient with an elevated Lp(a) level and thus I am more inclined to use PCSK9 inhibitors because LDL-C values of 30 mg/dL[3] or less are usually not achievable using oral LDL-C lowering agents (such as statins). Again, in such a situation, I would not prescribe a PCSK9 inhibitor with the goal of lowering the patient's Lp(a) but, instead, would be focused on lowering the patient's LDL-C, which is a primary driver of CV risk and disease. As my goal is not the lowering of Lp(a), I never measure or try to control Lp(a) levels after initiation of PCSK9 therapy. In contrast
>
> [...]

I have not received any reports or other information from my colleagues about the intentional use of the available PCSK9 inhibitors (in particular Repatha® and Praluent®) outside the approved indications. In particular, I am not aware of my colleagues specifically taking into account the moderate lowering effect on Lp(a) when prescribing PCSK9 inhibitors or that this moderate lowering effect on Lp(a) causes them to prescribe PCSK9 inhibitors earlier than would actually be indicated according to the prescribing restrictions.

[…]

197. The Court finds that the evidence does not prove a likelihood that physicians will prescribe the contested embodiment for use in reducing Lp(a) levels. Even the Claimant´s expert only refers to an "expectation" that that a concomitantly (with LDL-C level) elevated Lp(a) level is often also taken into consideration. This is contradicted by the Defendants` experts.

198. Furthermore, Defendants showed that additional benefit of PCSK9 inhibitors to lower Lp(a) is still a matter of debate amongst medical experts (see Exhibit BP 61 (2022), p. 38). An increased Lp(a) value might be an indication for a more stringent (aggressive) control of LDL-C. This makes it more likely that a PCSK9-inhibitor will be prescribed to patients with elevated Lp(a) (e.g. if statins do not achieve the desired result in such a patient, or if a patient is statin-intolerant). However, this is still prescribing a PCSK9 inhibitor to reduce LDL-C and not to reduce Lp(a) levels (see Exhibit BP 76, cited above, but also e.g. BP 59, point 11; Exhibit HE20, Fig. 6 consensus statement). Additionally, Defendants have cast sufficient doubts that physicians do not recommend the "off-label" use. In this context, the Defendants have credibly put forward that there are the hurdles for the prescriber for an "off-label" use, in particular the special need for medical justification and the risk of a refusal of reimbursement or recourse by the health insurance funds, particularly considering the existing prescription restrictions. This supports the Court´s finding that there is no likelihood that physicians will prescribe the contested embodiment for the claimed use.

c)

199. For the sake of completeness, Claimants also did not show the use specifically for patients exhibiting Lp(a) levels above 30 mg/dL as required by feature 4.3. Even if the Court were to rely on the Claimants' expert, Prof Parhofer (Exhibit HE 21, see cf. 20 and 21), who analyses data from patients receiving PCSK9-inhibitors in his clinic, this would not justify any conclusion on the subjective element, which must also be satisfied. The Claimants did not show that the Defendants were aware that the contested embodiment is used to lower Lp(a) levels in patients with high levels or that they should have been aware of this.

d)

200. According to R. 9.2 RoP, the Court rejects the additional briefs brought forward by both parties shortly before the oral hearing (Claimants' brief of 4 February 2025, Defendants´ brief of 18 February 2025) as the facts which they address were already presented before in the written procedure and could have been addressed earlier.

201. Even if the Court had accepted the additional submissions, the patient letters concerning four individual patients do not alter the Court´s findings on infringement. None of the letters do show any prescription directly made to lower Lp(a) levels. One letter (9 October 2019) shows at best that a windfall beside lowering LDL-C was appreciated. The patient letter (28 November 2024) seems to show a patient being on statin (rosuvastatin) after all and is therefore not an example of a prescription for the claimed use. The two other patient letters

(dated 10 December 2024 and 19 December 2024) are presented to show that measuring Lp(a) levels is common practice. However, such a small number of patients does not seem to be sufficient to establish the likelihood of a practice of prescription.

F. Decision on costs and ceiling

202. Pursuant to Art. 69(1) UPCA in conjunction with R. 118.5 RoP, a decision on costs had to be made. Since the Claimants have been unsuccessful in their action for infringement, they must bear the costs in this respect, each of them in equal shares. As the Defendants have been entirely unsuccessful in relation to the counterclaim for revocation, it is justified to order them to bear the costs in full and to order each of them to pay half of the costs.

203. Pursuant to Art. 69(1) UPCA, the costs are to be borne up to a maximum amount determined in accordance with the Rules of Procedure. In the oral hearing the parties agreed that the legal costs for both, the infringement action and the counterclaim for revocation, shall be mutually recognised depending on the cost decision pursuant to R. 118.5 RoP up to the scale of ceiling, the table adopted by the Administrative Committee on April 24, 2023, on the basis of R. 152.2 RoP, including a 25% increase in the cap in accordance with Art. 2(1)(b) Scale of Ceilings meaning that the parties wave their right to challenge the reimbursability of individual costs items up to this amount. The maximum limit for reimbursable costs of up to EUR 1.875.000 is determined.

DECISION:

I. The infringement action is dismissed.

II. The counterclaim for revocation is dismissed.

III. The costs of the infringement action shall be borne by the Claimants in equal shares.

IV. The costs of the counterclaim for revocation shall be borne by the Defendants in equal shares.

V. The value in dispute for the infringement action is set at EUR 20.000.000 and for the counterclaim for revocation at EUR 25.000.000.

VI. The ceiling of recoverable representation costs is set at a total of EUR 1.875.000 for the infringement action and the counterclaim for revocation.

DETAILS OF THE DECISION:

Main proceedings ACT_597355/2023 and CC_24999/2024

UPC-Number: UPC_CFI_505/2023

Subject of the Proceedings: Patent infringement action and counterclaim for revocation

Düsseldorf on 13 May 2025
NAMES AND SIGNATURES

Presiding Judge Thomas	Ronny Thomas Digital unterschrieben von Ronny Thomas Datum: 2025.05.12 10:46:45 +02'00'
Legally qualified Judge Dr Thom	Anna Bérénice Dr. THOM Digital unterschrieben von Anna Bérénice Dr. THOM Datum: 2025.05.12 10:32:24 +02'00'
Legally qualified Judge Kupecz	András Ferenc Kupecz Digital unterschrieben von András Ferenc Kupecz Datum: 2025.05.12 15:24:36 +02'00'
Techniqually qualified Judge Dorland-Galliot	XAVIER THOMAS OLIVIER DORLAND Signature numérique de XAVIER THOMAS OLIVIER DORLAND Date : 2025.05.12 14:32:18 +02'00'
For the sub-registrar Boudra-Seddiki	Rachida Boudra-Seddiki Digital unterschrieben von Rachida Boudra-Seddiki Datum: 2025.05.12 14:53:06 +02'00'

INFORMATION ON APPEAL:

An appeal against this decision may be brought before the Court of Appeal by any party whose claims have been unsuccessful, in whole or in part, within two months of service of the decision (Art. 73(1) UPCA, R. 220.1 (a) RoP, 224.1 (a) RoP).

INFORMATION ON ENFORCEMENT (Art. 82 UPCA, Art. 37(2) UPCS, R. 118.8, 158.2, 354, 355.4 RoP):

An authentic copy of the enforceable order will be issued by the Deputy-Registrar upon request of the enforcing party, R. 69 RegR.

INSTRUCTION TO THE REGISTRY:

A certified copy of the decision shall be sent to the European Patent Office and the German Patent and Trade Mark office as soon as the decision on the revocation action has become legally binding

This decision was read in open court on 13 May 2025.

Presiding Judge Thomas

Ronny Thomas

Digital unterschrieben von Ronny Thomas
Datum: 2025.05.13 09:02:30 +02'00'