

*Collegio Italiano dei
Consulenti in Proprietà Industriale*

La plausibilità un anno dopo

L'effetto della decisione **G2/21** sul requisito della
sufficienza di descrizione



FÉDÉRATION INTERNATIONALE DES CONSEILS
EN PROPRIÉTÉ INTELLECTUELLE
INTERNATIONAL FEDERATION OF
INTELLECTUAL PROPERTY ATTORNEYS
INTERNATIONALE FEDERATION
VON PATENTANWÄLTEN

G2/21

- If for acknowledgement of **inventive step** the patent proprietor relies on a technical effect and has submitted evidence, such as experimental data, to prove such an effect, this evidence not having been public before the filing date of the patent in suit and having been filed after that date (post-published evidence):

Principio della valutazione delle prove

G2/21

- The Enlarged Board concludes from these considerations that the principle of free evaluation of evidence qualifies as a universally applicable principle in assessing any means of evidence by a board of appeal.
- Hence, **evidence submitted by a patent applicant or proprietor to prove a technical effect relied upon for acknowledgement of inventive step** of the claimed subject-matter may not be **disregarded** solely on the ground that such evidence, on which the effect rests, had not been public before the filing date of the patent in suit and was filed after that date.

Principio della valutazione delle prove G2/21

- Notwithstanding the specific drafting of the referred questions, the Enlarged Board accepts that the gist of the matter underlying **the present referral extends beyond the literal wording of question 1.**
- The Enlarged Board considers the conceptional notion inherent in the term “**plausibility**”, which is often used as a generic catchword, as not being a distinct condition of patentability and patent validity, but **a criterion for the reliance on a purported technical effect.**

Sufficienza di descrizione

- The reasoned findings of the boards of appeal in the decisions referred to above make clear that **the scope of reliance on post published evidence is much narrower under sufficiency of disclosure (Article 83 EPC) compared to the situation under inventive step (Article 56 EPC)**. In order to meet the requirement that the disclosure of the invention be sufficiently clear and complete for it to be carried out by the person skilled in the art, the proof of a claimed therapeutic effect has to be provided in the application as filed, in particular if, **in the absence of experimental data in the application as filed, it would not be credible to the skilled person that the therapeutic effect is achieved. A lack in this respect cannot be remedied by post-published evidence.**

T 2790/17 (brevetto mantenuto in opposizione)

- *"1. Use of one of: an acid-beta-glucocerebrosidase (GBA) polypeptide or a polynucleotide encoding an acid-beta-glucocerebrosidase (GBA) polypeptide, in the preparation of a medicament for use in a method of **treating a subject with a synucleinopathy**, but not a clinically diagnosed lysosomal storage disease, wherein the polypeptide or polynucleotide is administered alone, and in an amount effective to reduce a level of α -synuclein in the subject's central or peripheral nervous system, or both."*

T 2790/17

- The board agrees with the appellant that the marked increase in the level of α S indicated for the "low" level of GBA in both figure 2B and 2C is the opposite of what would be expected if GBA were to effect a lowering of α S levels.
- Although as argued by the respondent, it is correct that certain drugs only exert an effect when a certain threshold is reached, this does not correspond to the present situation. Rather, **the data shows that a lower amount of GBA transfection leads to an effect which is diametrically opposed to that which is desired**, namely increased α S levels, while a higher amount leads to the desired effect.
- Hence, **in the absence of a credible explanation of these observations, a doubt arises as to the scientific validity of the Western blot results show**

T 2790/17

- "... when comparing the changes in α -synuclein steadystate to known quantities or recombinant α -synuclein protein that was loaded in parallel, it was recorded that the co-expression (5 μ g, 10 cm dish) of wild-type GBA (but not prosaposin) with α S under these conditions **did not significantly change α S** levels (109.7 +/- 9.88% of vector cDNA control levels). **This is in contrast to the result observed in Example 5 above**". (emphasis added by the board)
- Hence, according to the conclusions of example 7, stated in the application as filed as being a more reliable method than that of example 5, **the expression of GBA does not significantly change α S levels.**

T 2790/17

- **Consequently, the functional technical effect mentioned in claim 1 is not credibly demonstrated on the basis of the data provided in the application as filed**

T 2790/17

- insofar as the respondent relied upon **postpublished evidence D17 and/or D23** in support of the alleged technical effect (e.g. reply to the statement of grounds of appeal, 6.9, 6.12, 6.21, 6.22 and 6.23), the board notes that according to Enlarged Board of Appeal decision **G 2/21, reason 77** [...]
- As set out above, even though experimental data is provided in the application as filed, it is not credible on the basis of this data that the claimed therapeutic effect is achieved. Hence, in the present case, **post-published evidence D17 and D23 cannot be taken into account. s 77** [...].

T 0025/20 (brevetto mantenuto in opposizione)

- "A pharmaceutical composition comprising cyclobenzaprine in a therapeutically effective amount and a therapeutically effective carrier, **for use in a method for treating the development of a post-traumatic stress disorder (PTSD) symptom, or the initiation of a PTSD symptom, or the consolidation of a PTSD symptom, or the perpetuation of a PTSD symptom following a traumatic event** comprising administering to a human in need of such treatment said pharmaceutical composition, wherein such treatment eliminates or ameliorates the PTSD symptom, wherein the therapeutically effective amount of cyclobenzaprine administered is between 0.5 mg and 50 mg/day."

T 0025/20

- Examples 1 and 2 of the application as filed disclose the manufacture of pharmaceutical compositions comprising cyclobenzaprine. Example 3 describes a protocol for a study still to be conducted with the composition of example 2. Example 3 does not report on any results. Lastly, examples 4 to 6 describe what the treatment of PTSD with cyclobenzaprine should ideally look like and, as accepted by the respondent, are purely prophetic in nature.
- In view of this, **the parties agreed that the application as filed does not contain any experimental evidence relating to the therapeutic effect in question.**

T 0025/20

- The application as filed does in fact not demonstrate any mode of action of cyclobenzaprine. With regard to the therapeutic effect at issue, i.e. the treatment of sleep disturbances associated with PTSD, there are no investigations or explanations setting cyclobenzaprine apart from other drugs. **There is no teaching as to what exactly makes a compound, let alone cyclobenzaprine, suitable for the treatment of sleep disturbances associated with PTSD.** The application as filed lacks any specificity in relation to cyclobenzaprine: the word "cyclobenzaprine" could simply be replaced by the name of any other drug. Ultimately, this means that **the credibility of the purported mode of action of cyclobenzaprine, and with it the credibility of the technical concept, rests only on the well-known property of cyclobenzaprine set out in the application as filed, i.e. its suitability for the treatment of sleep disturbances associated with various conditions other than PTSD.**

T 0025/20

- In the absence of a credible technical concept, the mere allegation in the application as filed that cyclobenzaprine is suitable for treating sleep disturbances associated with PTSD, as covered by both claims 1 and 6, is a mere statement which is not enough to ensure sufficiency of disclosure. **This lack of sufficiency cannot be remedied by post-published evidence D12**, which the respondent considered proof of the therapeutic effects recited in claims 1 and 6.

T 0197/22

- 1. **"A pharmaceutical composition** comprising a pharmaceutically acceptable excipient and at least one mRNA molecule encoding a peptide or polypeptide for use in therapy, wherein the at least one mRNA molecule is encapsulated in a liposome having a size of less than 100 nm, wherein said liposome comprises one or more cationic lipid(s), one or more non-cationic lipid(s), and one or more PEG-modified lipid(s), and wherein said **at least one mRNA encodes a functional protein or enzyme.**"

T 0197/22

- **claim 1 of the main request defines a composition for use in therapy**, the patent must provide the skilled person with sufficient instructions for applying the compositions within the scope of the claim in some form of therapy without undue burden.

T 0197/22

- The experiments of examples 7 and 8 of the patent merely demonstrated the unquantified in vivo expression in hepatocytes of mRNA for a reporter protein, namely firefly luciferase (FFL). The patent did thereby not demonstrate any therapeutically relevant level of expression of mRNA nor the absence of unacceptable toxicity.
- As confirmed by document D14 the luciferase activity in such experiments only indirectly measured protein expression levels.

T 0197/22

- the Board considers that the patent does not provide the skilled person with a sufficient disclosure to generally enable the therapeutic use of the claimed formulation comprising the mRNA encoding for an accordingly defined protein.

T 1210/20

- 15. **Use** of 3'-{N'-[1-(3,4-Dimethylphenyl)-3-methyl-5-oxo-1,5-dihydropyrazol-4-ylidene]hydrazino}-2'-hydroxybiphenyl-3-carboxylic acid and/or a pharmaceutically acceptable salt thereof in the manufacture of a medicament for use in the treatment of a precancerous syndrome in a human in need thereof, wherein the treatment is **prevention of cancer**.

T 1210/20

- The application as filed comprises examples with data demonstrating that eltrombopag elicits an antiproliferative effect on several cancer cell lines ("Cancer Proliferation Assay", page 31 and associated table on page 32). This data is hereinafter referred to as the data in the application as filed. The credibility of this data was not called into question by the appellant insofar as the treatment of cancer was concerned.

T 1210/20

- However, the appellant's contention that **according to the above paragraph of G 2/21, proof of a technical effect is unconditionally required in the application as filed, is not correct.** Rather, this paragraph (*point 77 ndr*) refers to the requirement for proof in the application as filed in particular **if it would not be credible to the skilled person** that the claimed therapeutic effect is achieved on the basis of the application as filed.

T 1210/20

- the examples of the patent are all concerned with the anti-proliferative effect of eltrombopag, indicating that the intended treatment of a precancerous syndrome disclosed in the application as filed at least includes the treatment to prevent cancer.
- As established above, the data in the application as filed credibly demonstrates the anti-proliferative effect of eltrombopag. Since as set out above it was known at the filing date of the patent that precancerous conditions are also at least in part characterised by abnormally proliferating cells, it is credible on the basis of this data that eltrombopag is also effective in the treatment of precancerous syndromes by prevention of cell proliferation, and hence the prevention of cancer. No evidence to the contrary was submitted by the appellant.

T 1057/22

- **"A composition comprising a combination of fish oil and juice in an oil-in-water emulsion, for the use in treatment of cancer, wherein said fish oil is selected from fish oil having a totox value below 20 and omega-3 content above 10% by weight based on the total weight of the fish oil and wherein a suitable emulsifier is used to stabilize the emulsion, wherein the concertypes treated are selected from the group consisting of **pancreatic cancer and neurological cancer.**"**

T 1057/22

- **The respondent substantially criticised the breadth of claim 1 with respect to the feature "juice", which was broadly defined, and it submitted that it was not plausible that any juice was successful in treating the two types of cancer defined in claim 1.**

T 1057/22

- However, there is clear guidance on page 6, lines 11 to 15 of the application as filed (see also paragraph [0025] of the patent) that juices from fruits or berries having a high level of antioxidants, preferably from fruits having a minimum level of metal ions functioning as oxidising agent, may be used in the claimed composition. On page 6, lines 17 to 25 of the application as filed (see also paragraph [0026] of the patent), a comprehensive list of suited juices is given, so a skilled person is provided with ample guidance on the juices which may be used in the claimed composition. Nutrifriend 2000 as used in examples 2 and 4 contains apple, pear, pomegranate and aronia juices.

T 1057/22

- **Moreover, there is no evidence on file to support the respondent's allegation that choosing any of these explicitly proposed juices might fail to achieve the claimed therapeutic effects. The respondent has not submitted any such evidence, for example, in the form of experimental data.**

T 1057/22

- In addition, it can be taken from example 4 that an increased apoptosis of pancreatic cancer cells by natural killer (NK) cells is achieved by Nutrifriend 2000 (a composition falling within the scope of claim 1) compared with the control and with the administration of the omega-3 fatty acid docosahexaenoic acid (DHA) alone (see Table 1 of the patent). However, Table 1 also shows that the omega-3 fatty acid DHA alone, which is a crucial ingredient of fish oil, leads to a slight increase in apoptosis of pancreatic cancer cells by NK cells. Under these circumstances, it is credible from the information given in the application as filed that also the claimed combination of fish oil and juice leads to the claimed therapeutic effects (see G 2/21, Reasons 74).
- D27 is not necessary to consider credible the claimed therapeutic effects (see G 2/21, Reasons 77), it only supports that conclusion.

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