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Datasheet for the decision of 10 March 2025

Case Number: T 0990/23 - 3.3.02

Application Number: 15849396.5

Publication Number: 3203840

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Language of the proceedings: EN

Title of invention:

MODULATORS OF CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR

Patent Proprietor:

Vertex Pharmaceuticals Incorporated

Opponent:

Generics [UK] Limited

Headword:

VERTEX PHARMACEUTICALS / CFTR MODULATORS

Relevant legal provisions:
EPC Art. 100(c), 100(b), 100(a), 56

Keyword:
Grounds for opposition - added subject-matter (no) - insufficiency of disclosure (no)
Inventive step (yes)

Decisions cited:
G 0003/14, T 0939/92, T 0415/11, T 0465/19

Catchword:

Europäisches Patentamt
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Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0

Case Number: T 0990/23 - 3.3.02

D E C I S I O N
of Technical Board of Appeal 3.3.02
of 10 March 2025

Appellant: (Opponent)	Generics [UK] Limited Building 4, Trident Place Mosquito Way Hatfield Hertfordshire AL10 9UL (GB)
Representative:	Elkington and Fife LLP Prospect House 8 Pembroke Road Sevenoaks, Kent TN13 1XR (GB)
Respondent: (Patent Proprietor)	Vertex Pharmaceuticals Incorporated 50 Northern Avenue Boston, MA 02210 (US)
Representative:	Carpmaels & Ransford LLP One Southampton Row London WC1B 5HA (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 22 February 2023 rejecting the opposition filed against European patent No. 3203840 pursuant to Article 101(2) EPC.**

Composition of the Board:

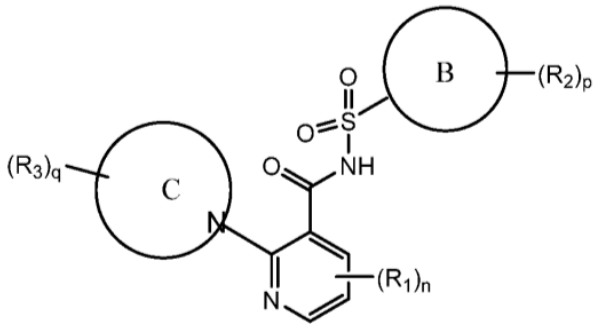
Chairman	M. O. Müller
Members:	M. Maremonti
	B. Burm-Herregodts

Summary of Facts and Submissions

I. The appeal by the opponent (appellant) lies from the opposition division's decision to reject the opposition against European patent No. 3 203 840 ("the patent").

II. Claim 1 as granted reads as follows:

1. A compound of formula Ib-iii:



Ib-iii

or a pharmaceutically acceptable salt thereof, wherein:

Ring B is a C6-C10 aryl ring or C3-C10 heteroaryl or heterocyclic ring wherein anywhere from 1 to 4 ring atoms are independently O, S, N, or NR;
Ring C is a C3-C14 heteroaryl or heterocyclic ring wherein anywhere from 1 to 4 ring atoms are independently N, O, or S, and wherein one nitrogen on Ring C is the point of attachment to the pyridine ring;

and wherein, independently for each occurrence:

R_1 is halo; CN; F_5S; SiR_3; OH; NRR; C1-C6 alkyl or fluoroalkyl; C1-C6 alkoxy or fluoroalkoxy; C1-C6 alkenyl; C1-C6 alkynyl; (C1-C9 alkylene)-R_4 wherein up to four CH_2 units are independently replaced with O, CO, S, SO, SO_2 or NR; C6-C10 aryl; C3-C10 heteroaryl or heterocyclic ring wherein anywhere from 1 to 4 ring atoms are independently O, S, N, or NR; or C3-C10 cycloalkyl;
R_2 is halo; OH; NRR; azide; CN; CO_2R; C1-C6 alkyl or fluoroalkyl; C1-C6 alkoxy or fluoroalkoxy; C1-C6 alkenyl; C1-C6 alkynyl; C6-C10 aryl; C3-C13 heteroaryl or heterocyclic ring wherein anywhere from 1 to 4 ring atoms are independently O, S, N, or NR; C3-C10 cycloalkyl; or a (C1-C9 alkylene)-R_4 wherein up to four CH_2 units

are independently replaced with O, CO, S, SO, SO_2 or NR; or two R_2 groups taken together may form a $=CH_2$ or =O group;
R_3 is halo; CN; CO_2R; C1-C6 alkyl or fluoroalkyl; C1-C6 alkenyl; C1-C6 alkynyl; C1-C6 alkoxy or fluoroalkoxy; or C6-C10 aryl; C3-C10 heteroaryl or heterocyclic ring wherein anywhere from 1 to 4 ring atoms are independently O, S, N, or NR; C3-C10 cycloalkyl; or a (C1-C9 alkylene)-R_4 wherein up to four CH_2 units are independently replaced with O, CO, S, SO, SO_2 or NR; or two R_3 groups taken together may form a $=CH_2$ or =O group;
R_4 is H; azide; CF_3; CHF_2; OR; CCH; CO_2R; OH; C6-C10 aryl, C3-C10 heteroaryl or heterocycloalkyl wherein anywhere from 1 to 4 ring atoms are independently O, S, N, or NR; C3-C10 cycloalkyl; NRR, NRCOR, CONRR, CN, halo, or SO_2R;
R is independently H; OH; CO_2H; CO_2C1-C6 alkyl; C1-C6 alkyl; C1-C6 alkenyl; C1-C6 alkynyl; C6-C10 aryl; C3-C10 heteroaryl or heterocycloalkyl wherein anywhere from 1 to 4 ring atoms are independently O, S, N, or NR; or C3-C10 cycloalkyl;
n is 0, 1, 2 or 3;
p is 0, 1, 2, or 3; and
q is 0, 1, 2, 3, 4, or 5;
wherein each of the specific groups for the variables R_1-R_4 can be optionally substituted with one or more group selected from halo, phospho, OH, cycloalkyl, heterocycloalkyl, aryl, heteroaryl, fluoroalkyl, alkyl, alkenyl, alkynyl, nitro, CN, hydroxyl, and (C1-C9alkylene)-E wherein up to 4 CH_2 units are independently replaced with O, S, SO_2, SO, CO, NH, *N*-alkyl, *N*-alkenyl, or *N*-alkynyl, and E is H, aryl, cycloalkyl, heterocycloalkyl, heteroaryl, alkoxy,CN, or CF_3, further wherein each of the aryl, cycloalkyl, heterocycloalkyl, and heteroaryl is optionally substituted with one or more group selected from halo, alkyl, amino, CN, alkenyl, alkynyl, and alkoxy; and when two alkoxy groups are bound to the same atom or adjacent atoms, the two alkoxy groups can form a ring together with the atom(s) to which they are bound; and
wherein the term "amino" refers to NH_2 which is optionally substituted with one or two groups independently selected from alkyl, cycloalkyl, and heterocycloalkyl.

III. The opposition was based on the grounds under Article 100(a) to (c) EPC. Reference was made, *inter alia*, to the following document:

D12: WO 2010/123822 A1

IV. The opposition division came, *inter alia*, to the following conclusion.

- None of the grounds for opposition invoked by the opponent prejudiced maintenance of the patent as granted.
- In particular, the subject-matter of claim 1 as granted involved an inventive step in view of D12 taken as the closest prior art.

V. In the statement of grounds of appeal, the appellant contested the opposition division's reasoning and argued that the subject-matter of claims 1 to 15 as granted extended beyond the content of the application as filed. Moreover, the subject-matter of granted

claim 1 was not sufficiently disclosed and lacked inventive step.

VI. In its reply to the appeal, the patent proprietor (respondent) rebutted the appellant's arguments, maintaining that the grounds for opposition invoked by the appellant did not prejudice maintenance of the patent as granted.

VII. The parties were summoned to oral proceedings as per their requests.

VIII. By letter dated 20 December 2024, the appellant withdrew its request for oral proceedings and announced that it would not attend the oral proceedings.

IX. By a subsequent communication, the board cancelled the oral proceedings.

X. Final requests relevant to the decision

The appellant requested that the appealed decision be set aside and that the patent be revoked in its entirety.

The respondent requested that the appeal be dismissed, implying that the patent be maintained as granted.

XI. As regards the parties' submissions of relevance to the decision, reference is made to them in the reasons for the decision below.

Reasons for the Decision

Main request - patent as granted - claims 1 to 15 - ground for opposition under Article 100(c) EPC - added subject-matter

1. The appellant argued that the subject-matter of claims 1 to 15 as granted extended beyond the content of the application as filed.

1.1 Granted claim 1 (point II above) defines a formula Ib-iii with substituents R_1 to R_4 and R (the formula itself contains only substituents R_1 to R_3, R_4 and R being substituents present in the groups defined in claim 1 for R_1 to R_3).

1.2 As noted by the opposition division (appealed decision, point 7 on page 2), formula Ib-iii is disclosed in paragraph [0227] of the application as filed.

1.3 According to the opponent, paragraph [0227] of the application as filed, while disclosing formula Ib-iii and the definitions of variables R_1 to R_4 required by granted claim 1, did not disclose the following three features also required by claim 1 as granted:

- the substitutions for the variables R_1 to R_4 expressed in granted claim 1 by the feature: "*wherein each of the specific groups for the variables R_1-R_4 can be optionally substituted with one or more group selected from halo, phospho, OH, cycloalkyl, heterocycloalkyl, aryl, heteroaryl, fluoroalkyl, alkyl, alkenyl, alkynyl, nitro, CN, hydroxyl, and (C1-C9 alkylene)-E wherein up to 4 CH_2 units are independently replaced with O, S, SO_2, SO, CO, NH, N-alkyl, N-alkenyl, or N-alkynyl, and E is H, aryl, cycloalkyl, heterocycloalkyl, heteroaryl, alkoxy,CN, or CF_3, further wherein each of the aryl, cycloalkyl, heterocycloalkyl, and heteroaryl is optionally substituted with one or more group selected from halo, alkyl, amino, CN, alkenyl, alkynyl, and alkoxy;*

- the feature that "*when two alkoxy groups are bound to the same atom or adjacent atoms, the two alkoxy groups can form a ring together with the atom(s) to which they are bound;*

- and the feature that "*the term "amino" refers to NH_2 which is optionally substituted with one or two groups independently selected from alkyl, cycloalkyl, and heterocycloalkyl*".

In the opponent's view, contrary to what had been established by the opposition division (appealed decision, point 7), paragraphs [0028], [0029] and [0043] of the application as filed, which respectively disclosed the three features of claim 1 mentioned above, did not concern the compounds of formula Ib-iii. This was especially true in view of the fact that paragraphs [0228] to [0241] of the application as filed, disclosing particular embodiments of the compounds of the invention, did not refer to paragraphs [0028], [0029] and [0043] as filed.

1.4 The appellant specifically submitted that the second feature of granted claim 1 mentioned above was found only in paragraph [0029] of the application as filed and was not directly linked to any genus or subgenus (or substituents thereof) of the compounds of the invention, let alone to compounds of formula Ib-iii. The same applied to the third feature ("amino" definition) found in paragraph [0043] of the application as filed. Therefore, there was no basis for combining the alkoxy group definition of paragraph [0029] as filed with the disclosure in paragraph [0227], let alone in combination with the disclosures in paragraphs [0028] and [0043] of the application as filed, to arrive at the subject-matter of granted claim 1.

1.5 Additionally, the appellant argued that granted dependent claims 2 to 15 defined new combinations of features by virtue of their multiple dependencies, which were not disclosed in the application as filed. This was because each relevant paragraph in the

description as filed disclosing the subject-matter of one granted dependent claim was a separate disclosure not linked to the other paragraphs disclosing the subject-matter of the other granted dependent claims. This was evident, for example, from the definitions of ring C in claim 4 as granted that were not compatible with the definitions of ring C in granted claim 3.

1.6 Finally, according to the appellant, the values for n and p as mentioned in granted claims 8 and 9 were not disclosed in the application as filed in combination with compounds of formula Ib-iii.

2. The board disagrees for the following reasons:

2.1 It is common ground that formula Ib-iii with the definitions for the variables R_1 to R_4 as required by granted claim 1 is disclosed in paragraph [0227] of the application as filed.

2.2 As regards the three features required by granted claim 1 objected to by the appellant, the board concurs with the respondent's view that paragraphs [0028], [0029] and [0043] of the application as filed are part of a section labelled "*Definitions*", starting in paragraph [0011] on page 5 of the application as filed. Paragraph [0028] specifies that the disclosed substitutions for variables R_1 to R_4 apply to all compounds of the invention as defined by formulae I to Id-ii, i.e. including the compounds of formula Ib-iii defined in claim 1 as granted and disclosed in paragraph [0227] of the application as filed. Therefore, the board holds that the disclosures in paragraphs [0028], [0029] and [0043] of the application as filed directly and unambiguously apply *inter alia* to the compounds of formula Ib-iii as disclosed in paragraph [0227] of the application as filed.

2.3 Since paragraph [0028] of the application as filed discloses verbatim all substitutions for the variables R_1 to R_4 mentioned in claim 1 as granted (first feature objected to by the appellant), no new subject-matter derives from the combination of these substitutions with the disclosure in paragraph [0227].

2.4 Paragraphs [0029] and [0043] further disclose respectively the second and third features of claim 1 as granted, which were objected to by the appellant (see above).

2.5 It follows that the subject-matter of granted claim 1 is directly and unambiguously disclosed in paragraph [0227] in combination with paragraphs [0028], [0029] and [0043] of the application as filed.

2.6 As regards the subject-matter of dependent claims 2 to 15 as granted, the board concurs with the respondent's view that these claims find their basis in the application as filed as follows:

granted claim 2 (various alternatives for ring B in formula Ib-iii of claim 1) in paragraphs [0229] and [0230] as filed

granted claims 3 and 4 (various alternatives for ring C in formula Ib-iii of claim 1) in paragraphs [0231] and [0232] as filed

granted claim 5 (various alternatives for R_1 in formula Ib-iii of claim 1) in paragraphs [0233] and [0234] as filed

granted claim 6 (various alternatives for R_2 in formula Ib-iii of claim 1) in paragraphs [0235] and [0236] as filed

granted claim 7 (various alternatives for R_3 in formula Ib-iii of claim 1) in paragraphs [0237] and [0238] as filed

granted claim 8 (various alternatives for n in formula Ib-iii of claim 1) in paragraph [0239] as filed

granted claim 9 (various alternatives for p in formula Ib-iii of claim 1) in paragraph [0240] as filed

In respect of claims 2 to 9 as granted, the board agrees with the respondent's view that above-mentioned paragraphs [0229] to [0240] directly and unambiguously follow from paragraph [0227] disclosing compounds of formula Ib-iii as defined in granted claim 1. Therefore, the disclosures in these paragraphs would have been read by the skilled person as applying, alone or in combination with each other, to the compounds of said formula Ib-iii.

Claims 10 to 12 as granted are dependent only on granted claim 1 and find their basis in paragraph [0241] as filed.

Claims 13 to 15 as granted are also dependent only on granted claim 1 and find their basis in paragraphs [0271], [0312] and [0350] as filed, respectively.

2.7 As regards some inconsistencies between the definitions of some options for ring C given in granted claim 4 and the definitions of ring C given in granted claim 3, the board concurs with the view of the respondent and the opposition division (appealed decision, page 3, sixth paragraph) that this at most results in a lack of clarity, not to be addressed in these proceedings (see decision G 3/14 of the Enlarged Board of Appeal, OJ 2015 EPO, 102).

2.8 For these reasons, the board concludes that the subject-matter of claims 1 to 15 as granted does not extend beyond the content of the application as filed. The ground for opposition under Article 100(c) EPC does not prejudice maintenance of the patent as granted.

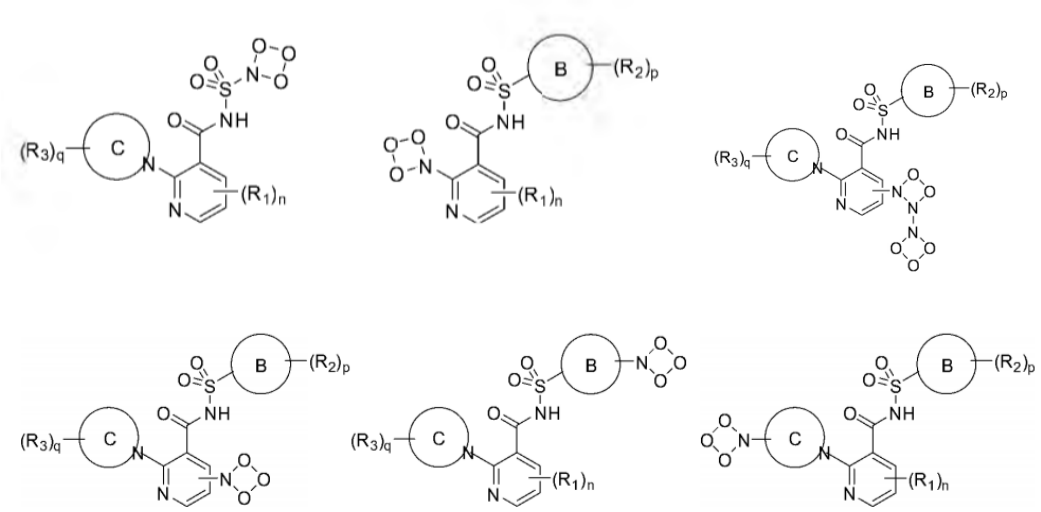
Main request - patent as granted - claim 1 - ground for opposition under Article 100(b) EPC - sufficiency of disclosure

3. The appellant objected to the sufficiency of disclosure of the subject-matter of claim 1 as granted.

3.1 It argued that claim 1 as granted defined the claimed compounds by means of a Markush formula encompassing a vast number of chemical compounds. For such claimed subject-matter to be sufficiently disclosed, the skilled person had, using common general knowledge, to be able to synthesise substantially all compounds falling within the ambit of the claims.

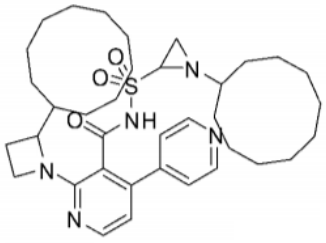
3.2 The appellant acknowledged that when Markush formulae are used, a reasonable extrapolation of synthetic transformations disclosed in the description was permissible. However, in the current case, reasonable extrapolation was not permissible based on the fact that some compounds falling under granted claim 1 were either inherently unstable or could not be synthesised owing to steric hindrance.

3.3 The appellant observed that claim 1 as granted defined that ring B, ring C, R_1, R_2, R_3, R_4, and R could each be a C3-C10 (C3-C14 in the case of ring C) heterocyclic ring wherein anywhere from 1 to 4 ring atoms were independently O, S, N, or NR. This definition covered for example the compounds shown on pages 6 and 7 of the statement of grounds of appeal, reproduced below:



These compounds might not be synthesised, or, if synthesised, would immediately decompose. Indeed, four-membered rings containing three oxygen atoms and a nitrogen atom were inherently unstable.

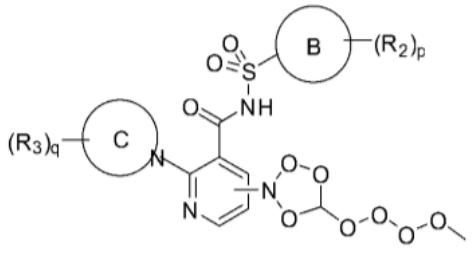
3.4 The appellant further argued that an additional issue concerned steric hindrance, as exemplified by the compound shown on top of page 8 of the statement of grounds of appeal, also covered by granted claim 1 and reproduced below:



This example did not even go to the extremes of the substituent definitions provided by claim 1. For example, it did not account for substitution of R_1, R_2 or R_3 with further large substituents nor did it consider the largest group definitions for ring C (C11-C14) or substitution of R_1 and R_2 with planar aromatic substituents, which would likely pose a greater steric

barrier than cycloalkyl substituents, particularly in combination with further substitution of R_1, R_2 or R_3 with aromatic substituents.

3.5 The appellant additionally submitted that claim 1 as granted contained a second definition, this being that, in addition to the first definition mentioned above, each of R_1 to R_4 might further be optionally substituted with (C1-C9 alkylene)-E wherein up to 4 CH_2 units were independently replaced with O, S, SO_2, SO, CO, NH, N-alkyl, N-alkenyl, or N-alkynyl. By applying the first and second definition only to R_1, one might obtain the compound shown on the bottom of page 8 of the statement of grounds of appeal and reproduced below:



It was immediately evident to a skilled person that such a compound could not be obtained, owing to the four consecutive oxygen atoms present in the side-chain at the bottom right.

3.6 The appellant thus concluded that the subject-matter of claim 1 as granted was not sufficiently disclosed across the whole claimed scope.

4. The board disagrees for the following reasons.

4.1 As observed by the respondent, the patent disclosed general preparation methods showing how intermediates and then final compounds falling under the scope of claim 1 as granted might be prepared.

4.2 In particular, the patent provides ample description of more than 1600 compounds falling under the Markush formula of granted claim 1 and specifically discloses their syntheses, thus giving the skilled person sufficient guidance for the preparation of the claimed compounds.

4.3 As regards the objection that the claims covered compounds which are inherently unstable and have steric hindrance, the board concurs with the respondent's view that this does not lead to any finding of a lack of sufficient disclosure. In fact, the skilled person is capable of identifying and reproducing the working embodiments, using their common general knowledge and the abundance of worked examples provided in the patent, and, on the basis of this common general knowledge, readily knows how to avoid unsuitable or non-working embodiments such as those highlighted by the appellant (see for example T 465/19, reasons 2.2).

4.4 In other words, as argued by the respondent, the skilled person would have recognised that the theoretical compounds illustrated in the appellant’s statement of grounds of appeal were not feasible in practice due to instability and/or steric hindrance. As such, the skilled person would have understood the practical limitations of the claimed subject-matter as also explicitly disclosed in paragraph [0029] on page 8 of the patent, which teaches that "*combinations of substituents envisioned by this invention are those combinations that result in the formation of stable or chemically feasible compounds*".

4.5 For these reasons, the board concludes that the claimed subject-matter is sufficiently disclosed. The ground for opposition under Article 100(b) EPC does not prejudice maintenance of the patent as granted.

Main request - patent as granted - claim 1 - ground for opposition under Article 100(a) EPC - inventive step under Article 56 EPC

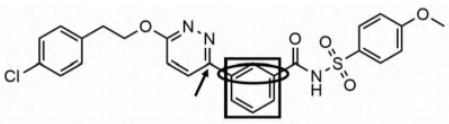
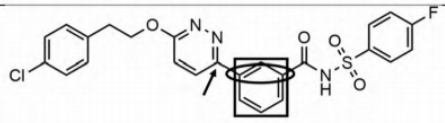
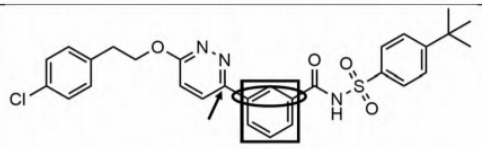
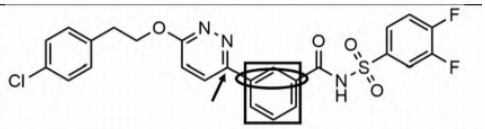
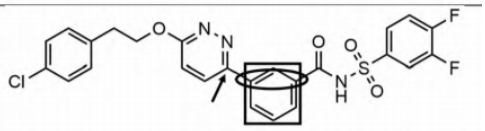
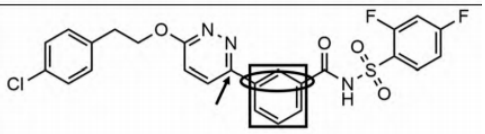
5. The invention

The patent concerns modulators of cystic fibrosis transmembrane conductance regulator (CFTR) and these compounds for uses in methods of treatment, pharmaceutical compositions, and kits thereof.

6. Closest prior art

6.1 In line with the appealed decision (point 9, pages 4 and 5), both parties argued inventive step in view of document D12 taken as the closest prior art. In view of the disclosure in D12, the board sees no reason to take any other stance.

6.2 Document D12 discloses (paragraph [0002]) pyridazine sulfonamide-containing compounds that inhibit the transport of ions, especially chloride ions, across cell membranes expressing the CFTR protein. The appellant especially referred to compounds nos. 11, 12, 14, 15, 19 and 21 as disclosed in table 3 on pages 41 to 44 of D12 as the starting point for the assessment of inventive step. These compounds are reproduced here below (signs added by the respondent as explained below):

Compound 11 of D12	
Compound 12 of D12	
Compound 14 of D12	
Compound 15 of D12	
Compound 19 of D12	
Compound 21 of D12	

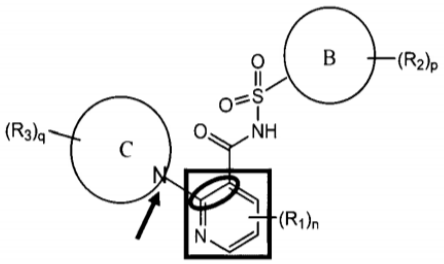
7. Distinguishing features

7.1 As observed by the respondent, all above-mentioned compounds of D12 referred to by the appellant are characterised by the following features:

- a central phenyl group (highlighted with a square in the above formulae)
- a pyridazine bound to the central phenyl group via a carbon atom on the pyridazine (highlighted with an arrow in the above formulae), and
- an acyl sulfonamide group bound to the central phenyl group meta to the pyridazine, thus resulting in a 1,3-substitution pattern on the central phenyl group (highlighted with an oval in the above formulae)

7.2 It is common ground that the features distinguishing the compounds defined in claim 1 as granted from the above-mentioned compounds of D12 are:

- a central pyridine ring (highlighted with a square in the formula below) instead of a phenyl ring
- a heteroaryl or heterocyclic ring (referred to as ring C in claim 1) bound to the central pyridine ring via a nitrogen atom on ring C (highlighted with an arrow in the formula below) instead of a carbon atom, and
- an acyl sulfonamide group bound to the central pyridine ring ortho to ring C, thus resulting in a 2,3-substitution pattern on the central pyridine ring (highlighted with an oval in the formula below) instead of a 1,3-substitution pattern



8. Objective technical problem

8.1 As regards the objective technical problem, the respondent referred to the activity of the claimed compounds as modulators of CFTR.

8.2 The appellant argued that the objective technical problem could make reference to treatment of cystic fibrosis (CF) only if the respondent had shown that it was credible that substantially all the claimed compounds possessed activity as CFTR modulators. The appellant made reference to decision T 415/11, stating that "*when the credibility that a technical effect is achieved by substantially all claimed compounds is at*

issue and in a situation where, it is prima facie unlikely that this is credible, it is not the opponent, but the patentee who has the burden of proving that the effect is achieved".

8.3 The appellant further noted that it was established case law that, *a priori*, the skilled person would have expected changes in the structure of compounds to disturb biological activity. Given the breadth of granted claim 1, it was simply not credible that all the claimed compounds were active. Even assuming that, as stated by the opposition division, the central moiety of the claimed compound was narrowly defined, the narrow definition of the central ring could not compensate for the breadth of the definitions of rings B, C and variables R_1 to R_4.

8.4 The appellant thus contested the formulation of the objective technical problem by the opposition division as being the provision of alternative compounds useful as modulators of CFTR activity. According to the appellant the objective technical problem had instead to be formulated as the provision of mere compounds (statement of grounds of appeal, page 12, point (73)).

8.5 The board disagrees for the following reasons.

8.5.1 As submitted by the respondent, the application as filed discloses more than 1600 compounds containing the same central conserved region of the claimed structure Ib-iii (point II above), for which activity as CFTR modulators has been demonstrated (see table 3 on pages 1190 to 1224 of the patent corresponding to pages 1392 to 1426 of the application as filed).

8.5.2 This conserved region, which distinguishes the compounds of granted claim 1 from D12 (see point 7 above), is thus a structural feature associated with CFTR modulator activity. In fact, the examples of the

application as filed confirm that varying the substituents while maintaining the same central moiety does not affect CFTR modulator activity.

8.5.3 At no point has the appellant provided any evidence that the claimed compounds are inactive. Moreover, the examples provided in the patent are structurally diverse with respect to the substituents on the conserved central moiety. As illustrated by the respondent, at least 37 different ring moieties are exemplified for the group represented by ring C in formula Ib-iii, including mono-, bi- and spiro-cyclic rings, and including heteroaryl and heterocyclic rings; similarly, at least 153 different moieties are exemplified for variable R_2, and at least 94 different moieties are exemplified as substituents on the R_1 to R_4 variables. Therefore, the board agrees with the respondent that the scope of the claims is commensurate with the examples. In the absence of any proof to the contrary, the appellant's argument that the CFTR modulating activity is not achieved across the whole claimed scope amounts to mere speculation.

8.5.4 Therefore, the board concurs with the respondent's view that it is credible that the CFTR modulator activity is achieved across the whole claimed scope. Hence, the rationale of decision T 415/11 invoked by the appellant does not apply to the case at hand.

8.6 Therefore, the objective technical problem has to be formulated as being the provision of alternative compounds useful as modulators of CFTR.

9. Obviousness of the claimed solution

9.1 As the solution to the above-mentioned objective technical problem, claim 1 as granted proposes compounds of formula Ib-iii (point II above).

9.2 As regards obviousness, the appellant merely argued that, when the objective technical problem is the provision of mere compounds, all structures are obvious. In this respect, it referred to decision T 939/92, point 2.5.3 of the reasons.

9.3 However, for the reasons set out above, the objective technical problem is not the provision of mere compounds but that of alternative compounds useful as modulators of CFTR. Therefore, the rationale developed in decision T 939/92, point 2.5.3 of the reasons, does not apply to the current case.

9.4 The appellant has not explained how the skilled person, starting from D12 and faced with the above-mentioned objective technical problem, would have arrived at the claimed compounds in an obvious way.

9.5 The appellant not having provided any argument in this respect, the board sees no reason why the skilled person starting from D12 would have been prompted to modify the structure of the compounds disclosed therein so as to arrive at the subject-matter of claim 1 as granted while having a reasonable expectation of CFTR modulating activity being maintained.

10. For these reasons, the board concludes that the subject-matter of claim 1 as granted involves an inventive step within the meaning of Article 56 EPC. Therefore, the ground for opposition under Article 100(a) EPC does not prejudice maintenance of the patent as granted.

Conclusions

11. None of the appellant's objections is convincing. Therefore, the appeal against the opposition division's decision rejecting the opposition must be dismissed, implying that the patent be maintained as granted.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

U. Bultmann M. O. Müller

Decision electronically authenticated