

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* FRANZ **ESSER**, HELMUT STÄHLE,  
SVEN LÜTTKE, IKONOBU MURAMATSU,  
HISATO KITAGAWA and SHUJIL UCHIDA

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Appeal 2006-3252  
Application 09/536,728  
Patent Application Publication 2002/0040150 A1  
Technology Center 1600

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Decided: September 27, 2007

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*Before:* MICHAEL R. FLEMING, Chief Administrative Patent Judge,  
and EDWARD C. KIMLIN, *Administrative Patent Judge*, and  
FRED E. McKELVEY, *Senior Administrative Patent Judge*,  
and RICHARD E. SCHAFER, RICHARD TORCZON,  
TONI R. SCHEINER, and DONALD E. ADAMS, *Administrative  
Patent Judges*.

Opinion for the Board filed by *Senior Administrative Patent Judge*  
McKELVEY.

DECISION ON APPEAL

1           **A. Statement of the case**

2           The application has been before the Board on prior occasions.

3           In initially filing and pursuing an appeal, Franz Esser, Helmut Stähle,  
4 Sven Lüttke, Ikonobu Muramatsu, Hisato Kitagawa, and Shujil Uchida  
5 (hereafter "**Esser**") sought review under 35 U.S.C. § 134(a) of rejections of  
6 claims 21-24, 26, 30-33, 39-50, 55-65, and 71-81.

7           The real party in interest is Boehringer Ingelheim Pharma KG.

8           We have jurisdiction under 35 U.S.C. § 6(b).

9           Esser claims the benefit of (1) application 09/277,944, filed  
10 11 January 1999 (now U.S. Patent 6,268,398), and (2) PCT/EP96/01568,  
11 filed 13 April 1996.

12           The Examiner rejected various groups of claims as being unpatentable  
13 (1) under 35 U.S.C. § 103(a) over the prior art and (2) for provisional double  
14 patenting over Esser application 09/227,944, which ultimately matured into  
15 Esser U.S. Patent 6,268,398.

16           On a prior occasion, a panel of the Board [Judges Ellis (who is no  
17 longer at the Board), Scheiner and Adams] took the following action:

18                   (1) A rejection of claims 21-24, 26, 47-50 and 73-81 as being  
19 unpatentable under § 103(a) over Olson was reversed.

20                   (2) A rejection of claims 21-24, 30-33, 39-50, 55-65, and 71-72  
21 as being unpatentable under § 103(a) over York was affirmed, but the  
22 affirmance was designated as a new rejection pursuant to 37 C.F.R.  
23 § 41.50(b).

1           (3) A rejection of claims 21-24, 30-33, 39, 46, 61, 73-75, 77-79  
2           and 81 as being unpatentable under § 103(a) over Stähle (U.S. Patent  
3           4,213,995) was not reached because the panel felt that a remand was  
4           in order to clarify certain aspects of the rejection.

5           (4) A rejection of claims 21-24, 30-33, 39-50, 55-65, and 71-72  
6           based on provisional double patenting was remanded for further  
7           consideration in view of the fact that the application on which the  
8           provisional double patenting was based had issued as a patent.

9           (5) A rejection of claims 21-24, 30-33, 39-50, 55-65, and 71-72  
10          as being unpatentable under § 103(a) over Stähle (EP 012,822) was  
11          not decided.

12          See *Ex parte Esser*, Appeal 2005-0393 (Bd. Pat. App. & Int. Apr. 14, 2005).

13          The Examiner responded to the remand. Examiner's Communication  
14          dated 26 August 2005.

15          Esser in turn filed a response. *See* Communication Concerning  
16          Decision on Appeal and Remand, filed 09 June 2005. In the  
17          communication, Esser says (page 2:1-4):

18                 [Esser] ... is not reopening prosecution or requesting rehearing  
19                 as to the new ground of rejection by the Board for Rejection II  
20                 under 37 C.F.R. § 41.50(b) [based on obviousness over York].  
21                 Accordingly, the remand for Rejection IV [relating to  
22                 provisional double patenting] is also moot as all the claims in  
23                 Rejection IV have also been rejected under Rejection II.

24          Since Esser has elected not to take advantage of available  
25          administrative remedies (37 C.F.R. § 41.50(b) (1) & (2) (2006)), Esser has

1 waived its right to further consideration in this application of claims 21-24,  
2 30-33, 39-50, 55-65 and 71-72.

3 A second remand was ordered by the panel. *Ex parte Esser*,  
4 Appeal 2005-0393 (Bd. Pat. App. & Int. Nov. 30, 2005).

5 The Examiner filed a response to the second remand. *See*  
6 Supplemental Examiner's Answer, entered 12 December 2005.

7 In the Supplemental Examiner's Answer, the Examiner addresses the  
8 rejection under 35 U.S.C. § 103(a) over Stähle (U.S. Patent 4,213,995). The  
9 Examiner also advised the Board—correctly—that the panel had not decided  
10 the rejection based on Stähle (EP 0 012 822). At this point, however, Esser  
11 is no longer pursuing any claim rejected over Stähle (EP 0 012 288).  
12 Accordingly, the rejection based on Stähle (EP 0 012 822) is moot and need  
13 not be reached.

14 As a result of the prosecution history in this appeal, only claims 26  
15 and 73-81 are now involved in the appeal.

16 The following prior art was upon by the Examiner.

17

18	<u>Name</u>	<u>Patent Number</u>	<u>Issue Date</u>
19	Stähle	EP 0 012 822	09 July 1980
20	Stähle	US 4,213,995	22 Jul. 1980
21	Olson	US 4,287,201	01 Sep. 1981
22	York	US 4,461,904	24 Jul. 1984

23

1           A translation into English of Stähle EP 0 012 822 (which is written in  
2 German) appears in the record. As noted earlier, however, the rejection  
3 based on Stähle EP 0 012 822 is moot.

4           All four prior art references are prior art under 35 U.S.C. § 102(b).

5           We also cite the following patent.

6	<u>Name</u>	<u>Patent Number</u>	<u>Issue Date</u>
7			
8	Esser	US 6,268,389 B1	31 Jul. 2001

9  
10           As noted earlier, the Esser patent is the patent which matured from the  
11 application upon which the Examiner previously had based a provisional  
12 double patenting rejection.

13  
14           **B. Record on appeal**

15           In deciding this appeal, we have considered *only* the following  
16 documents:

- 17           1. Specification, including original claims (there are no  
18 drawings).
- 19           2. Patent Application Publication US 2002/0040150 A1,  
20 published 04 April 2002 (a publication of the Specification).
- 21           3. A rejection entered 25 March 2003 (Non-Final Office  
22 Action).
- 23           4. The Appeal Brief filed 27 January 2004.
- 24           5. The Examiner's Answer entered 09 April 2004.
- 25           6. The Reply Brief filed 22 April 2004.

1           7. The Examiner's Notice transmitting the appeal to the Board  
2 entered 28 June 2004.

3           8. The Decision of the Board entered 14 April 2005 (*Ex parte*  
4 *Esser*, Appeal 2005-0393 (Bd. Pat. App. & Int. Apr. 14, 2005).

5           9. The Examiner's Supplemental Answer entered 26 August  
6 2005.

7           10. Esser's Communication Concerning Decision on Appeal  
8 and Remand, filed 09 June 2006.

9           11. A Decision of the Board entered 30 November 2005  
10 remanding the appeal to the Examiner. *Ex parte Esser*, Appeal 2005-0393  
11 (Bd. Pat. App. & Int. Nov. 30, 2005).

12           12. Supplemental Examiner's Answer entered 12 December  
13 2005.

14           13. Docketing Notice entered by the Board on 15 September  
15 2006.

16           14. PTO bibliographic data sheet for the application on appeal.

17           15. Olson, U.S. Patent 4,287,201.

18           16. York, U.S. Patent 4,461,904

19           17. Stähle, U.S. Patent 4,213,955.

20           18. Stähle, EP 0 012 822 (and a translation thereof).

21           19. Esser U.S. Patent 6,268,389 B1.

22           20. Claims 26 and 73-81 (see Appendix 1).

1           **C. Issues**

2           There are several issues before us at this time:

3           A first issue is whether Esser has sustained its burden of showing that  
4 the Examiner erred in rejecting the claims 73-75, 77-79 and 81 as being  
5 unpatentable under 35 U.S.C. § 103(a) over Stähle, U.S. Patent 4,213,955.

6           A second issue is whether claims 73-81 are unpatentable under  
7 35 U.S.C. § 103(a) over York.

8           A third issue is whether, notwithstanding the earlier panel decision,  
9 claims 26 and 73-81 are unpatentable under 35 U.S.C. § 103(a) over Olson.

10

11           **D. Findings of fact**

12           The following findings of fact are believed to be supported by a  
13 preponderance of the evidence. To the extent that a finding of fact is a  
14 conclusion of law, it may be treated as such. Additional findings as  
15 necessary may appear in the Discussion portion of the opinion.

16

The invention

17           The typewritten specification of the application does not have line  
18 numbers on each page.

19           The Patent Application Publication has page numbers and paragraph  
20 numbers. We will refer to the Patent Application Publication and the  
21 paragraph numbers of the publication with the understanding that we are  
22 referring to the specification of the application, as filed.

23           The invention relates to the use of what Esser calls  $\alpha_{1L}$ -agonists for  
24 treating urinary incontinence, particularly stress incontinence. Publication,  
25 ¶ 0001.



1

2

$R^6$  and  $R^7$  together [form various cyclic groups].

3

Publication, ¶¶ 0013 through 0023.

4

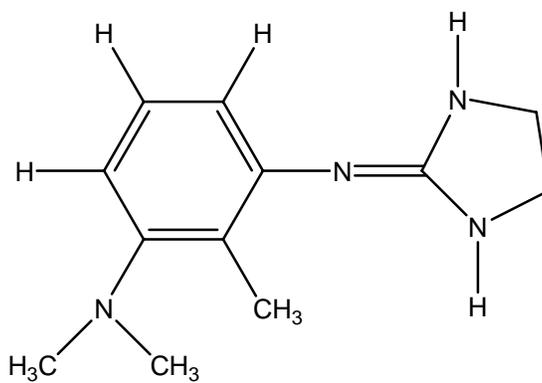
One compound within the scope of the Esser disclosure is

5

2-(3-dimethylamino-2-methylphenylimino)imidazolidine. Publication,

6

¶¶ 0096 through 0105. The compound has the chemical structure:



7

8

9

Formula 2

10

11

A method for making the compound is described in Esser Example 1.

12

Publication, ¶¶ 0096 through 0105.

13

Another compound within the scope of the Esser genus is

14

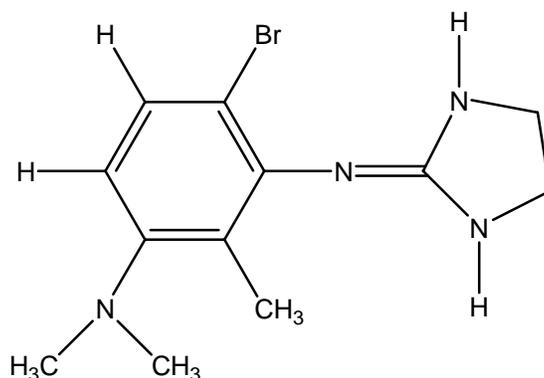
2-(6-bromo-3-dimethylamino-2-methylphenylimino)imidazolidine.

15

Publication, ¶¶ 0106 through 0108. The compound has the chemical

16

structure:



Formula 3

1  
2  
3  
4  
5 A method for making the compound is described in Esser Example 2.  
6 Publication, ¶¶ 0106 through 0108.

7 A comparison of the compound of Esser Example 2 with  
8 phenylephrine for treatment of urinary incontinence is described in Table 1.  
9 Publication, ¶¶ 0137 through 0139.

10  
11 Claims under consideration

12 Claims 26 and 73-81 are before us.

13 We refer the reader to Appendix 1 for a copy of the claims, as well as  
14 non-involved claim 21 from which some claims before us depend.

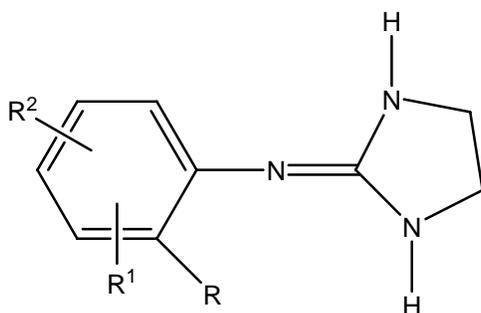
15  
16 Olson

17 Olson, owned by Merck & Co., Inc., relates to "novel" compounds  
18 and a method of using the compounds to delay the onset of egg production  
19 in young pullets and interrupting the egg production of mature laying hens  
20 by administration of one or more of the compounds—usually in a feed mix.  
21 Col. 1:6-21.



- 1
- 2 (7) C<sub>1-3</sub> alkylamino,
- 3
- 4 (8) di(C<sub>1-3</sub> alkyl)amino,
- 5
- 6 (9) hydroxy,
- 7
- 8 (10) carboxy,
- 9
- 10 (11) C<sub>1-3</sub> alkoxy carbonyl,
- 11
- 12 (12) C<sub>1-4</sub> alkanoyl, such as formyl, ethanoyl or the like,
- 13
- 14 (13) C<sub>1-4</sub> alkylthio,
- 15
- 16 (14) trifluoromethylthio,
- 17
- 18 (15) phenylthio, either unsubstituted or substituted with C<sub>1-3</sub>
- 19 alkyl, C<sub>1-3</sub> alkoxy, or halo such as chloro, or bromo,
- 20
- 21 (16) phenoxy, either unsubstituted or substituted with C<sub>1-3</sub>
- 22 alkyl, C<sub>1-3</sub> alkoxy, or halo such as chloro or bromo,
- 23
- 24 (17) C<sub>1-4</sub> alkyl substituted with
- 25
- 26 (a) amino,
- 27
- 28 (b) C<sub>1-3</sub> alkylamino,
- 29
- 30 (c) di(C<sub>1-3</sub> alkyl)amino,
- 31
- 32 (d) hydroxy, or
- 33
- 34 (e) C<sub>1-3</sub> alkoxy.
- 35





Formula 4b

1  
2  
3 As in the case of the numbered phenyl rings (Formula 5a and  
4 Formula 5b), from a chemistry point of view, Formula 4b is an alternative  
5 way of showing Formula 4a.

6 One compound described by Olson is "2-(3-diethylamino-2-  
7 methyl)imidazolidine." Example 14, col. 15:50 through col. 16:2.

8 On page 2 of the Office Action entered 25 March 2003, the Examiner  
9 notes that the name given the "compound" in Example 14 is not correct.

10 Instead, the Examiner found that Example 14 describes the  
11 preparation of 2-(3-diethylamino-2-methylphenylimino)imidazolidine.

12 The Examiner repeated the finding on page 4 of the Examiner's  
13 Answer entered 09 April 2004.

14 Esser did not challenge the Examiner's finding in either the Appeal  
15 Brief filed 27 January 2004 or the Reply Brief filed 22 April 2004.

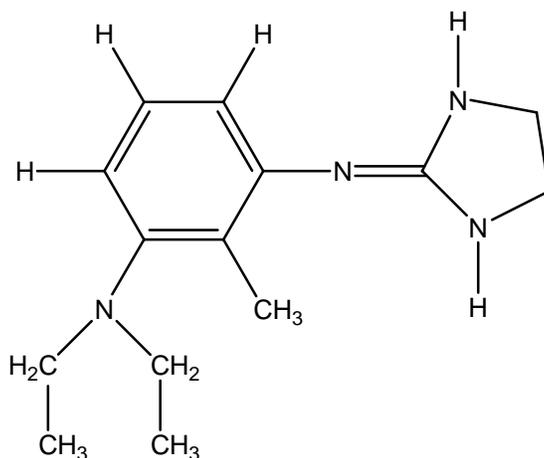
16 In any event, the Examiner's finding is supported by the evidence.

17 Olson describes modifying peracetylated 2-(2-methyl-3-nitro-  
18 phenylimino)imidazolidine to convert the 3-nitro group to a 3-diethylamino  
19 group—note the reference to the "diethylamino derivative". Col. 15:61.

20 We find, as did the Examiner, that a person skilled in the art would  
21 have recognized that (1) the language "2-(3-diethylamino-2-

1 methylimidazolidine" is a typographical error and (2) Example 14 describes  
2 the preparation of 2-(3-diethylamino-2-methylphenylimino)imidazolidine.

3 The compound made by the process described in Example 14 has the  
4 formula:



5

6

7

Formula 6

8 Formula 6 corresponds to Olson's overall Formula 4b when the R, R<sup>1</sup>  
9 and R<sup>2</sup> radicals of the overall formula are:

10 R is methyl [—CH<sub>3</sub>];

11 R<sup>2</sup> is in the 3-position on the 6-membered aromatic ring and is  
12 di(C<sub>1-3</sub> alkyl)amino where the alkyl is ethyl: —N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, which is two  
13 ethyl groups attached to the amino nitrogen [N].

14 R<sup>1</sup> is hydrogen [—H].

15

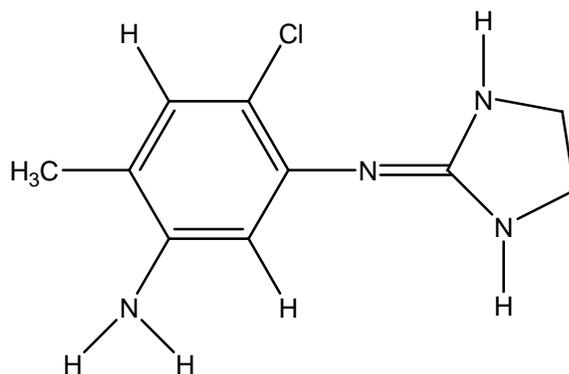
16

Stähle U.S. Patent

17 Stähle, U.S. Patent 4,213,995, describes certain compounds which are  
18 said to be useful as hypotensives. Col. 1:5-10.

1           The most relevant compound described in the Stähle patent is a  
2 2-(substituted phenyl-imino)-imidazolidine having the formula set out at  
3 col. 1:30-35 where R is 2-chloro-4-methyl-5-amino phenyl. Col. 1:38. The  
4 compound has the structural formula:

5



6

7

8

9

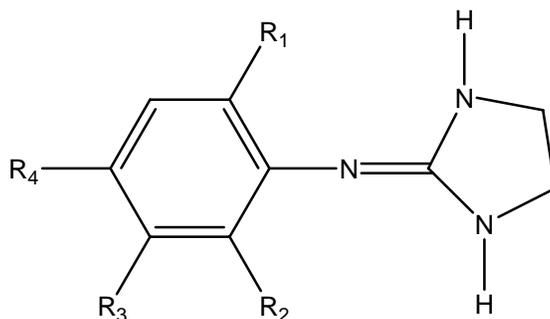
Formula 7

10

York

11           York relates to compounds said to be suitable for use in the treatment  
12 of glaucoma and ocular hypertension. Col. 1:5-7.

13           The York compounds are broadly described as including compounds  
14 having the following structure.



15

16

Formula 8

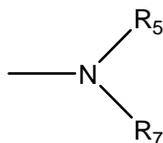
1 where:

2  $R_1 = R_2 =$  methyl, ethyl, trifluoromethyl, chloro or bromo,

3 alternatively  $R_1 \neq R_2 =$  methyl, ethyl, trifluoromethyl, fluoro, chloro

4 or bromo;

5  $R_3$  is selected from three groups, the relevant group being:



6

7  $R_4 =$  H [hydrogen];

8  $R_5 =$  H or lower alkyl;

9  $R_7 =$  H, lower alkyl, 2-hydroxyethyl, 2-hydroxypropyl or 3-hydroxy

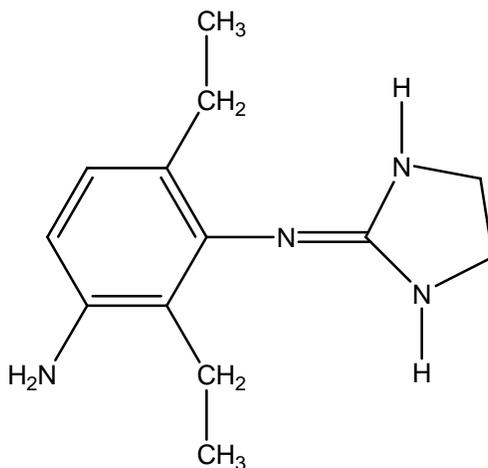
10 propyl; and

11 where the sum of the carbon atoms in  $R_5$  and  $R_7$  is 4 or less.

12 See Col. 1:60 through Col. 2:17.

13 One particular compound described by York has the following

14 chemical formula:



15

16

Formula 9

1 Other findings

2 Other findings are made in the Analysis portion of this opinion,  
3 including findings related to (1) differences between the subject matter of  
4 the claims and the prior art and (2) the level of skill in the art.

5  
6 **E. Principles of law**

7 A claimed invention is not patentable if the subject matter of the  
8 claimed invention would have been obvious to a person having ordinary skill  
9 in the art. 35 U.S.C. § 103(a); *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct.  
10 1727, 82 USPQ2d 1385 (2007); *Graham v. John Deere Co.*, 383 U.S. 1  
11 (1966).

12 Facts relevant to a determination of obviousness include (1) the scope  
13 and content of the prior art, (2) any differences between the claimed  
14 invention and the prior art, (3) the level of skill in the art and (4) any  
15 relevant objective evidence of obviousness or non-obviousness. *KSR*, 127  
16 S. Ct. at 1734, 82 USPQ2d at 1389, *Graham*, 383 U.S. at 17-18.

17 A person having ordinary skill in the art uses known elements and  
18 process steps for their intended purpose. *Anderson's-Black Rock, Inc. v.*  
19 *Pavement Salvage Co.*, 396 U.S. 57 (1969) (use of radiant-heat burner for its  
20 intended purpose held to be obvious).

21 The invention claimed in a patent is presumed to be operative because  
22 the patent enjoys a statutory presumption of validity and operativeness is a  
23 prerequisite to validity. *Cf. In re Spence*, 261 F.2d 244, 246, 120 USPQ 82,  
24 83 (CCPA 1958).

25

1           **F. Analysis**

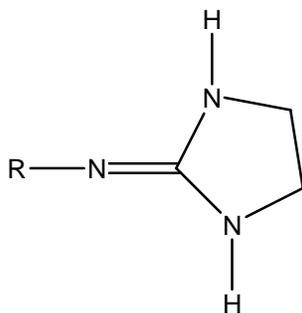
2                           Examiner's § 103 rejection based on Stähle

3           The difference between the subject matter of Esser generic claim 73  
4 and Stähle is that the 3-amino group of Stähle is not substituted with any  
5 alkyl group, *e.g.*, a methyl group. The Esser R<sup>2</sup> group is —NR<sup>6</sup>R<sup>7</sup> where R<sup>6</sup>  
6 cannot be hydrogen. Thus, the Esser R<sup>2</sup> amino group is a substituted amino  
7 group, with the simplest Esser substitution being a methylamino group, *i.e.*,  
8 —NHCH<sub>3</sub> whereas Stähle group is amino, *i.e.*, —NH<sub>2</sub>.

9           The Examiner reasoned that it would have been obvious to replace a  
10 hydrogen with a lower alkyl group on a nitrogen atom. Examiner's Answer,  
11 page 7. The Examiner does not rely on prior art, including any teaching of  
12 Stähle, to support his reasoning. Rather, the Examiner cites *Ex parte*  
13 *Weston*, 121 USPQ 428 (Bd. App. 1958) and *In re Hoeksema*, 399 F.2d 269  
14 (CCPA 1968).

15           A resolution of a question of obviousness is necessarily and intimately  
16 tied to the precise facts in each case. The facts here are not the facts in  
17 *Weston*.

18           In our opinion and on this record, a person having ordinary skill in the  
19 art would not have had a technological reason for believing that compounds  
20 beyond those specifically described by Stähle would be useful for Stähle's  
21 purpose. The broadest description of the Stähle invention involves the use  
22 of a limited number of compounds as hypotensives. The "generic" formula  
23 of the Stähle compounds is limited to compounds having the formula:



Formula 10

where R is limited to the Markush Group:

- (1) 2,6-dichloro-4-hydroxymethyl-phenyl;
- (2) 2-chloro-4-methyl-5-amino-phenyl (the compound of Formula 7, *supra*);
- (3) 2,5-dichloro-4-methyl-phenyl;
- (4) 2-chloro-4-methyl-5-nitro-phenyl;
- (5) 2,3-dichloro-4-methyl-phenyl;
- (6) 2-chloro-4-methyl-6-nitro-phenyl;
- (7) 2-chloro-4-methyl-6-amino-phenyl;
- (8) 2,4,6-trifluorophenyl;
- (9) tetrafluorophenyl; or
- (10) 3-bromo-4-fluoro-phenyl.

Stähle thus discloses ten compounds (although tetrafluorophenyl can be considered a subgenus of compounds because there are four fluoro groups and five positions on which a fluoro can be attached). The closest Stähle compound is the compound of Formula 7, where the R includes a 5-amino group [ $\text{—NH}_2$ ]—the compound identified in Markush member (2), *supra*. The 6-amino compound identified in Markush member (7), *supra*, is not as

1 close because the amino group is in the 6-position and Esser requires an  
2 amino group in the 5-position.

3         The Examiner's rejection based on Stähle is not a case where an  
4 inventor has used a known element for its intended purpose to get an  
5 expected result. We have been unable to find a reason why one having  
6 ordinary skill in the art would have been inclined to depart from the precise  
7 teachings of Stähle. *KSR* notes that "it can be important to identify a reason  
8 that would have prompted a person of ordinary skill in the relevant field to  
9 combine the elements in the way the claimed new invention does." 127 S.  
10 Ct. at 1741, col. 1, 82 USPQ2d at 1396.

11         In this case, the "relevant field" is the field of Stähle looking for new  
12 hypotensive compounds. The Stähle patent, which is the only evidence  
13 relied upon by the Examiner in support of the rejection, is narrowly drawn  
14 and does not suggest much to one of ordinary skill in the art beyond its "four  
15 corners." To the extent that (1) there is a "next adjacent homologue rule" as  
16 mentioned by *Weston*, and (2) methyl ( $\text{—CH}_3$ ) might in an appropriate  
17 circumstance be regarded as the next adjacent homologue of hydrogen  
18 ( $\text{—H}$ ), this case is not that case. The teachings of Stähle are too narrowly  
19 drawn to permit broad inferences for departing from those narrow teachings.

20         *Hoeksema* likewise provides little comfort to support the rejection.  
21 In that case, the CCPA reversed an obviousness rejection because the prior  
22 art did not have an enabling description for making the Hoeksema  
23 compounds. Accordingly, any discussion about substituting a methyl for a  
24 hydrogen or vice-versa is dicta.

1           Esser claims 74-75 and 77-79 also require a substituted amino group  
2 at the 3-position. Accordingly, they fall with independent Esser claim 73.

3           Independent Esser claim 81, directed to a pharmaceutical  
4 composition, has the same relevant limitations as Esser claim 73.  
5 Accordingly, it too falls with claim 73.

6           The decision of the Examiner rejecting Esser claims 73-75, 77-79 and  
7 81 as being unpatentable under 35 U.S.C. § 103(a) over Stähle is reversed.

8  
9

Examiner's § 103 rejection based on Olson

10           We begin our analysis of the patentability of subject matter of Esser  
11 claims 26 and 73-81 by acknowledging that a prior panel held that subject  
12 matter to be non-obvious over Olson. The prior panel's decision reversing  
13 the Examiner's rejection based on Olson has not become final. Likewise, the  
14 prior panel entered its decision prior to *KSR*. We are obliged to follow *KSR*.  
15 Under the circumstances, we believe that it is appropriate to *sua sponte*  
16 revisit the Examiner's rejection under § 103 of the claims before us based on  
17 Olson. We now affirm that rejection.

18

Prima facie obviousness

19           The difference between Esser claim 26 (to a specific compound—see  
20 Formula 2) and the compound of Example 14 of Olson is that Olson does  
21 not *explicitly* describe a compound with a dimethylamino group  
22 [ $-\text{N}(\text{CH}_3)_2$ ] at the 3-position on the phenyl ring.

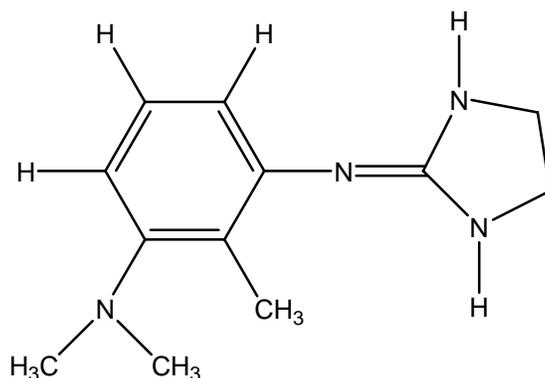
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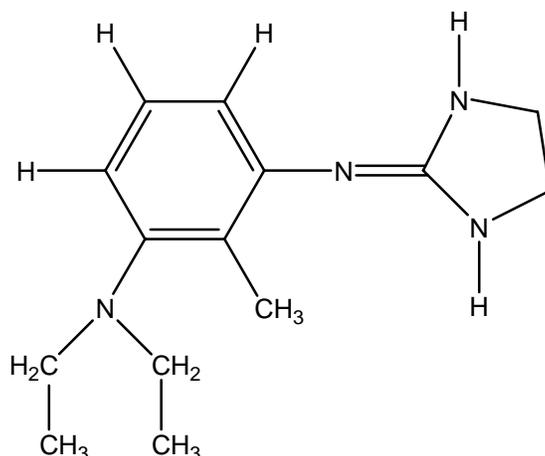
          However, Olson describes a fully analogous compound having a  
diethylamino group [ $-\text{N}(\text{CH}_2\text{CH}_3)_2$ ] at the 3-position, and like the  
compound of Esser claim 26, a methyl on the 2-position of the phenyl ring.

- 1 Compare the Esser compound of Formula 2 with the Olson compound of
- 2 Formula 6:



- 3
- 4

Formula 2



- 5
- 6

Formula 6

- 7 What reason is provided in the prior art for modifying the Olson of
- 8 Formula 6 to replace two ethyl groups (—CH<sub>2</sub>CH<sub>3</sub>) with two methyl groups
- 9 (—CH<sub>3</sub>)?

- 10 A person having ordinary skill in the art would be taught by Olson
- 11 that the R<sub>5</sub> and R<sub>7</sub> groups of the amino group at R<sub>3</sub> can be hydrogen or lower
- 12 alkyl having 1-3 carbon atoms. Olson, col. 2:68. A lower alkyl having 1-3
- 13 carbon atoms include both methyl and an ethyl group.

1           Olson, unlike the facts involving the rejection based on Stähle,  
2 provides a reason why one skilled in the art would have found it obvious to  
3 substitute ethyl groups on the compound of Olson represented by Formula 6  
4 with methyl groups. Olson contains an express suggestion to do so with its  
5 alkyl having 1-3 carbons teaching. Moreover, given the presumption that  
6 the subject matter claims by Olson is enabling, *In re Spence, supra*, there is  
7 no reason to believe one skilled in the art would not have been inclined to  
8 follow the overall teachings of Olson.

9                           Esser's argument in favor of patentability over Olson

10           Esser's arguments for patentability over Olson appear on pages 5-8 of  
11 the Appeal Brief and pages 1-2 of the Reply Brief.

12           Esser argues that Olson is "nonanalogous" art and therefore the  
13 Examiner's rejection cannot stand.

14           Apparently, what Esser contends is that Olson is essentially irrelevant  
15 since it concerns delaying the onset of egg production in young pullets and  
16 interrupting the egg production in mature laying hens whereas Esser is  
17 concerned with treating urinary incontinence.

18           Esser's pre-*KSR* argument is now foreclosed. *KSR* makes a couple of  
19 points relevant to Esser's argument. First, *KSR* tells us that what matters is  
20 the "objective reach of the claim." 127 S. Ct. at 1742, 82 USPQ2d at 1397.  
21 Second, *KSR* also tells us that in evaluating obviousness we are not to be  
22 confined "to the problem the patentee was trying to solve." 127 S. Ct. at  
23 1742, 82 USPQ2d at 1397. The Federal Circuit has expressed similar  
24 reasoning in a case involving teachings from a *combination* of two or more  
25 references to meet the objective reach of a claim. *In re Kemps*, 97 F.3d

1 1427, 1430, 40 USPQ2d 1309, 1310 (Fed. Cir. 1996) ("Although the  
2 motivation to combine here differs from that of the applicant, the motivation  
3 in the prior art to combine the references does not have to be identical to that  
4 of the applicant to establish obviousness." *See also In re Beattie*, 974 F.2d  
5 1309, 1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992) (the law does not  
6 require that the teachings of references be combined for the reasons  
7 contemplated by the inventor).

8 On several occasions, the Supreme Court has emphasized that the  
9 purpose of § 103 is to preclude removal of existent knowledge from the  
10 public domain. *Graham v. John Deere Co.*, 383 U.S. 1, 6 (1966). Section  
11 103 permits free access to materials already available. The Supreme Court  
12 reemphasized the point, albeit in somewhat of a different context involving  
13 preemption of state law protecting inventions, in *Bonito Boats, Inc. v.*  
14 *Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989) (United States  
15 Government should not "authorize the issuance of patents whose effects are  
16 to remove existent knowledge from the public domain, or to restrict free  
17 access of materials already available."). *KSR* again reemphasizes the point  
18 in a § 103 context by noting that a patent which withdraws what is already  
19 known into the field of its monopoly "diminishes the resources available to  
20 skillful men" quoting from *Great Atlantic & Pacific Tea Co. v. Supermarket*  
21 *Equipment Corp.*, 340 U.S. 147, 152 (1950). 127 S. Ct. at 1739.

22 What Esser seeks to do is remove from the public domain the right of  
23 the public to use for any purpose compounds that Olson suggests, including  
24 the use described and claimed by Olson. But, for reasons given above, that  
25 use would have been obvious. Consistent with *Graham*, *Bonito Boats* and

1 *KSR*, no cogent rationale can justify granting Esser a patent to compounds  
2 which the public is free to use to accomplish objectives described by Olson.

3 In this case, it turns out that the prior art ultimately shows that Esser  
4 invented a new use of a group of known or obvious compounds described by  
5 Olson. A new and unobvious use of a known compound may be patentable.  
6 In this case, the Examiner thought the new use was patentable. Based on the  
7 Examiner's assessment, the Director granted Esser Patent 6,268,389 to a  
8 method for the treatment of urinary incontinence by administering  
9 compounds, some of which fall within the scope of the Olson compounds.  
10 We can agree that a method of delaying onset or interrupting egg production  
11 with particular compound generally would not suggest the use of the same or  
12 some of the same compounds to treat urinary incontinence. But, Esser's  
13 discovery should not result in the public being precluded from using the  
14 Olson compounds for Olson's purpose. That is exactly what would happen  
15 if Esser is granted a patent with the compound claims now before us in this  
16 appeal.

17 In a case, such as the case before us, where obviousness is based on a  
18 single reference, Esser's argument that to be reasonably pertinent, a  
19 reference must logically have commended itself to an inventor's attention in  
20 considering an inventor's problem (Appeal Brief, page 6) misses the mark.  
21 The question here is not whether Olson deals with Esser's problem. Rather,  
22 it is whether Esser's claimed compounds are within the grasp of one of  
23 ordinary skill in the art and thereby in the public domain.

24 In general, the question of "nonanalogous" art surfaces only where the  
25 teachings of two or more patents are sought to be combined. *Cf. Dann v.*

1 *Johnston*, 425 U.S. 219, 229 (1976) and *Graham v. John Deere Co.*, 383  
2 U.S. 1, 35 (1966).

3 The prior panel decision

4 Esser maintains, and the prior panel found, that there would have been  
5 no reason to modify the Olson compounds to come up with the now claimed  
6 Esser compounds. Both Esser and the prior panel believe that the mere fact  
7 that the now claimed Esser compounds are a "subgenus" of the "genus" of  
8 compounds described by Olson does not, by itself, establish obviousness.  
9 The panel, but not Esser, cited and relied on *In re Baird*, 16 F.3d 380, 382  
10 (Fed. Cir. 1994). According to the panel, (1) one must first select the  
11 compound of Olson Example 14 and then (2) pick and choose from the  
12 possible R groups listed in col. 3 of Olson to come up with Esser's claimed  
13 compounds. Consistent with *KSR* principles applicable to the obviousness  
14 inquiry, we believe a focus on "selecting" and "picking and choosing" is too  
15 narrow and represents a "rigid approach" to resolving obviousness which  
16 *KSR* tells us we are to avoid.

17 We need not decide in resolving the rejection based on Olson whether  
18 *Baird* survived *KSR*. Even if one can assume *arguendo* that *Baird* remains  
19 viable, *Baird* is not applicable here.

20 The panel, and presumably Esser, apparently had some difficulty with  
21 why one skilled in the art would "first select" the compound of Example 14  
22 of Olson. The proper question is: Why would a person skilled in the art not  
23 select any of the options offered up by Olson? Olson describes in Example  
24 14 a compound useful for Olson's purpose and therefore one skilled in the  
25 art is free to "select" the compound of Example 14 whether it is the "first",

1 "second" or umpteenth" selection. The Examiner did not have to have a  
2 reason for "first" selecting the compound of Example 14 because Olson  
3 explicitly tells one that the compound is useful for Olson's purpose.

4 The question then becomes, why modify the compound of  
5 Example 14 to account for differences between that compound and, *e.g.*, the  
6 compound of Esser claim 23. There are not a "large number of variables"  
7 involved. The only "variable" (difference would be a better word) is the  
8 ethyl groups on the nitrogen of the Example 14 compound (Formula 6). The  
9 relevant question is: Would one having ordinary skill in the art have found  
10 it obvious to replace those ethyl groups with methyl groups to "come up"  
11 with the compound of Esser claim 23 (Formula 2) for use in the process of  
12 Olson. The answer is "yes." Why? Olson tells us in no uncertain terms that  
13 the groups which can be attached to the nitrogen are hydrogen and 1-3 alkyl  
14 (which means methyl, ethyl, propyl and iso-propyl, or a total of five  
15 choices). The *KSR* reason for changing ethyl to methyl is provided right in  
16 the prior art and it manifestly would have been "obvious to try" (in the *KSR*  
17 sense, 127 S. Ct. 1742, col. 2) hydrogen, methyl, propyl or isopropyl in  
18 place of ethyl. Section 103 allows one skilled in the art to do so and Esser is  
19 not entitled to a claim which preclude one skilled from doing so.

20 The panel made the following observation on page 7 of its opinion:  
21 "there is no evidence that the claimed compounds are homologs or that they  
22 have the same properties as the prior art [Olson] compounds." At pages 7-8  
23 of the opinion, the panel also said there was no expectation that Esser  
24 compound (Formula 2) and the Olson compound (Formula 6) would have  
25 similar properties. The Olson ethyl compound (Formula 6) and the Esser

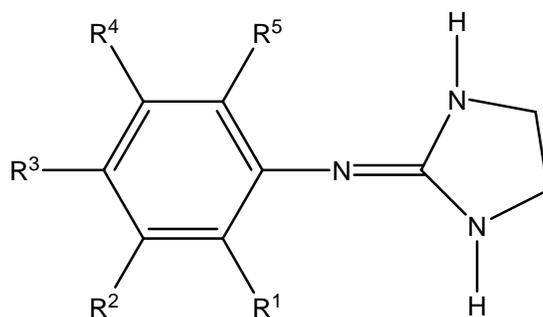
1 compound (Formula 2) are indeed homologs in the sense that ethyl is the  
2 next adjacent homolog of methyl. A series of organic compound in which  
3 each successive member has one more CH<sub>2</sub> is a homologous series.  
4 *Hawley's Condensed Chemical Dictionary*, page 606 (12th ed. 1993);  
5 Morrison & Boyd, *Organic Chemistry*, page 87 (6th ed. 1992). While  
6 homology gives rise to a *general* scientific presumption that homologs  
7 would be expected to have similar properties, in this case there is no need to  
8 rely on any *legal* presumption based on homology. Olson itself tells us that  
9 the hydrogen, methyl and ethyl options are all useful for Olson's purpose.  
10 There is absolutely no reason to question the Olson teachings. One skilled  
11 in the art would have expected the Olson ethyl compound and the Esser  
12 methyl compound to have similar properties—for Olson's purpose or for that  
13 matter Esser's purpose albeit Olson's purpose is what defeats Esser  
14 entitlement to the claims before us.

15 Disposition of the rejection based on Olson

16 The decision of the Examiner to reject claims 26 and 73-81 over  
17 Olson is affirmed.

18 Patentability of claims 73-81 over York

19 Esser claims 73 include numerous compounds, including a subgenus  
20 of compounds:



Formula 1

1

2

3

4

5 where:

6 R<sup>1</sup> can be methyl, ethyl or halo [halogen];

7 R<sup>2</sup> can be —NR<sup>6</sup>R<sup>7</sup>, where

8 R<sup>6</sup> can be methyl and

9 R<sup>7</sup> can be hydrogen, methyl and ethyl;

10 R<sup>3</sup> can be hydrogen;

11 R<sup>4</sup> can be hydrogen; and

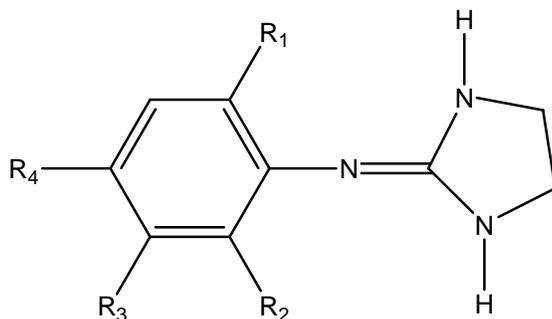
12 R<sup>5</sup> can be hydrogen, fluoro, bromo and iodo.

13

14 York describes a different genus of compound, but falling within the

15 genus of the York compounds is a subgenus of compounds similar to the

16 subgenus of Esser.



Formula 8

1  
2  
3 York's R<sub>1</sub> corresponding to Esser's R<sup>5</sup> can be methyl or ethyl;

4 York's R<sub>4</sub> corresponding to Esser's R<sup>3</sup> is hydrogen, as is Esser's R<sup>3</sup>;

5 York's R<sub>3</sub> corresponding to Esser's R<sup>2</sup> is —NR<sub>5</sub>R<sub>7</sub>, where

6 R<sub>5</sub> can be hydrogen or lower alkyl and

7 R<sub>7</sub> can be hydrogen or lower alkyl; and

8 York's R<sub>2</sub> corresponding to Esser's R<sup>1</sup> can be methyl, ethyl, fluoro,  
9 bromo or iodo.

10 While Esser claim 73 includes additional compounds and York  
11 describes additional compounds, it is apparent that there is a considerable  
12 overlap in the Esser and York compounds. What the considerable overlap  
13 shows is that granting a patent to Esser containing claim 73 would preclude  
14 those with skill in the art, and the public, from using a sizeable number of  
15 York compounds for York's purpose. For reasons advanced in connection  
16 with the Olson analysis, § 103 operates to preclude Esser from preventing  
17 the public from using the York compounds for York's purpose.

18 Esser claims 74-81 involve a similar overlap in coverage and therefore  
19 are unpatentable for the reasons given in connection with Esser claim 73.

20

1                                    Patentability of claims 74-80 under § 112, ¶ 4

2            Claims 74-76 and 78-80 depend directly or indirectly from non-  
3 involved Esser claim 21.

4            Esser claim 21 calls for an R<sup>1</sup> that *inter alia* can be fluorine, bromine  
5 and iodine (actually bromo, fluoro and iodo). Esser claim 73, which  
6 depends from Esser claim 21, calls for an R<sup>1</sup> that can be halogen. Halogen is  
7 broader than fluoro, bromo and iodo, because halogen includes, *e.g.*, chloro.  
8 Accordingly, Esser claim 74 does not narrow the scope of Esser claim 21; in  
9 fact, Esser claim 74 purports to broaden the scope of Esser claim 21.

10           The same is true of Esser claims 75-76 and 78-80. A dependent claim  
11 which does not include all the limitations of the claim from which it depends  
12 is not patentable under the fourth paragraph of 35 U.S.C. § 112. *Pfizer, Inc.*  
13 *v. Ranbaxy Laboratories Limited*, 457 F.3d 1284, 1292, 79 USPQ2d 1583,  
14 1590 (Fed. Cir. 2006) ("Although the district court was reluctant to find the  
15 fourth paragraph of § 112 to be an invalidating provision, doing so does not  
16 exalt form over substance. Rather, it is consistent with the overall statutory  
17 scheme that requires applicants to satisfy certain requirements before  
18 obtaining a patent, some of which are more procedural or technical than  
19 others.")

20

1           **G. Conclusions of law**

2           Esser has sustained its burden on appeal of showing that the Examiner  
3           erred in rejecting Esser claims 73-75, 77-79 and 81 as being unpatentable  
4           under 35 U.S.C. § 103(a) over Stähle.

5           On the record before us, Esser is not entitled to a patent containing  
6           Esser claims 26 and 73-81.

7           Esser claims 26 and 73-81 are unpatentable under 35 U.S.C. § 103  
8           over Olson.

9           Esser claims 73-81 are unpatentable under 35 U.S.C. § 103 over York.

10          Esser claims 74-76 and 79-80 are unpatentable under the fourth  
11          paragraph of 35 U.S.C. § 112.

12

1           **H. Decision**

2           ORDERED that the decision of the Examiner rejecting  
3 claims 73-75, 77-79 and 81 over Stähle is *reversed*.

4           FURTHER ORDERED that the decision of the Board of Patent  
5 Appeals and Interferences in *Ex parte Esser*, Appeal 2005-0393 (Bd. Pat.  
6 App. & Int. Apr. 14, 2005), reversing the Examiner's rejection of claims 26  
7 and 73-81 as being unpatentable over Olson is *vacated*.

8           FURTHER ORDERED that the decision of the Examiner  
9 rejecting Esser claims 26 and 73-81 as are unpatentable under 35 U.S.C.  
10 § 103 over Olson is *affirmed*.

11           FURTHER ORDERED that Esser claims 73-81 are  
12 unpatentable under 35 U.S.C. § 103 over York.

13           FURTHER ORDERED that Esser claims 74-76 and 78-80 are  
14 unpatentable under the fourth paragraph of 35 U.S.C. § 112.

15           FURTHER ORDERED that since our rationale for refusing  
16 Esser claims 26 and 73-81 is new, our determination that those claims are  
17 unpatentable is designated as a new rejection. 37 CFR § 41.50(b) (2006).

18           FURTHER ORDERED that our decision is not a final agency  
19 action.

20           FURTHER ORDERED that within **two (2) months** from the  
21 date of our decision appellant may further prosecute Esser claims 26 and  
22 73-81 by exercising one of the two following options:

23                   1. Request that prosecution be reopened by submitting  
24 an amendment or evidence or both. 37 CFR § 41.50(b)(1) (2006).

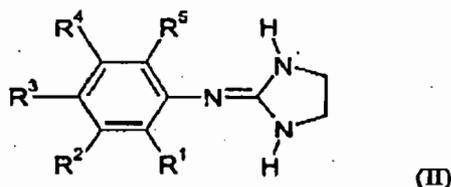


Appeal 2006-3252  
Application 09/536,728

Appendix 1

Copy of Esser claims 21, 26 and 73-81.

21. A compound of the formula (II)



wherein:

R<sup>1</sup> is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl, C<sub>3-6</sub>-cycloalkyl, C<sub>1-6</sub>-alkoxy, fluorine, bromine, iodine, -CF<sub>3</sub>, or -OCF<sub>3</sub>;

R<sup>2</sup> is -NR<sup>6</sup>R<sup>7</sup>, wherein

R<sup>6</sup> is methyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl, or C<sub>3-6</sub>-cycloalkyl,

R<sup>7</sup> is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl, C<sub>3-6</sub>-cycloalkyl, or C<sub>2-4</sub>-acyl, or

R<sup>6</sup> and R<sup>7</sup> together with the nitrogen between them form a 5- or 6-membered, saturated or unsaturated ring containing 0, 1, or 2 additional heteroatoms selected from the group consisting of oxygen, sulfur, and nitrogen, wherein each additional nitrogen atom is unsubstituted or substituted by methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, or *tert*-butyl, or R<sup>6</sup> and R<sup>7</sup> together with the nitrogen between them form phthalimido;

R<sup>3</sup> is hydrogen, halogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl, C<sub>1-6</sub>-alkoxy, -CF<sub>3</sub>, or -OCF<sub>3</sub>;

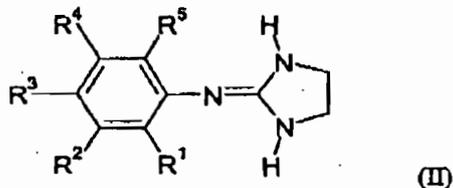
R<sup>4</sup> is hydrogen, halogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, or hexyl; and

R<sup>5</sup> is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl, C<sub>1-6</sub>-alkoxy, halogen, -CF<sub>3</sub>, or -OCF<sub>3</sub>;

or a pharmaceutically acceptable salt thereof.

26. 2-(3-dimethylamino-2-methylphenylimino)imidazolidine, or a pharmaceutically acceptable salt thereof.

73. A compound of the formula (II)



wherein:

R<sup>1</sup> is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl, C<sub>3-6</sub>-cycloalkyl, C<sub>1-6</sub>-alkoxy, halogen, -CF<sub>3</sub>, or -OCF<sub>3</sub>;

R<sup>2</sup> is -NR<sup>6</sup>R<sup>7</sup>, wherein

R<sup>6</sup> is methyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl, or C<sub>3-6</sub>-cycloalkyl,

R<sup>7</sup> is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl, C<sub>3-6</sub>-cycloalkyl, or C<sub>2-4</sub>-acyl, or

R<sup>6</sup> and R<sup>7</sup> together with the nitrogen between them form a 5- or 6-membered, saturated or unsaturated ring containing 0, 1, or 2 additional heteroatoms selected from the group consisting of oxygen, sulfur, and nitrogen, wherein each additional nitrogen atom is unsubstituted or substituted by methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, or *tert*-butyl, or R<sup>6</sup> and R<sup>7</sup> together with the nitrogen between them form phthalimido;

R<sup>3</sup> is hydrogen, halogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl, C<sub>1-6</sub>-alkoxy, -CF<sub>3</sub>, or -OCF<sub>3</sub>;

R<sup>4</sup> is hydrogen, halogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, or hexyl; and

R<sup>5</sup> is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl, C<sub>1-6</sub>-alkoxy, fluorine, bromine, iodine, -CF<sub>3</sub>, or -OCF<sub>3</sub>;

or a pharmaceutically acceptable salt thereof.

74. The compound of the formula (II) according to claim 21, wherein:

R<sup>1</sup> is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, cyclopropyl, C<sub>1-4</sub>-alkoxy, halogen, -CF<sub>3</sub>, or -OCF<sub>3</sub>;

R<sup>2</sup> is -NR<sup>6</sup>R<sup>7</sup>, wherein

R<sup>6</sup> is methyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, or C<sub>3-6</sub>-cycloalkyl,

R<sup>7</sup> is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, C<sub>3-6</sub>-cycloalkyl, or acetyl, or

R<sup>6</sup> and R<sup>7</sup> together with the nitrogen between them form phthalimido;

R<sup>3</sup> is hydrogen, halogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, C<sub>1-4</sub>-alkoxy, -CF<sub>3</sub>, or -OCF<sub>3</sub>;

R<sup>4</sup> is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, or halogen; and,

R<sup>5</sup> is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, C<sub>1-4</sub>-alkoxy, fluorine, bromine, iodine, -CF<sub>3</sub>, or -OCF<sub>3</sub>;

or a pharmaceutically acceptable salt thereof.

75. The compound of the formula (II) according to claim 21, wherein:

$R^1$  is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, cyclopropyl,  $C_{1-3}$ -alkoxy, halogen, or  $-CF_3$ ;

$R^2$  is  $-NR^6R^7$ , wherein

$R^6$  is methyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, or cyclopropyl,

$R^7$  is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, or *tert*-butyl, or

$R^6$  and  $R^7$  together with the nitrogen between them form phthalimido;

$R^3$  is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl,  $C_{1-3}$ -alkoxy, halogen, or  $-CF_3$ ;

$R^4$  is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, or halogen; and,

$R^5$  is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl,  $C_{1-3}$ -alkoxy, fluorine, bromine, iodine, or  $-CF_3$ ;

or a pharmaceutically acceptable salt thereof.

76. The compound of the formula (II) according to claim 21, wherein:

$R^1$  is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, or halogen;

$R^2$  is  $-NR^6R^7$ , wherein

$R^6$  is methyl,

$R^7$  is hydrogen or methyl, or

$R^6$  and  $R^7$  together with the nitrogen between them form phthalimido;

$R^3$  is hydrogen, methyl, fluorine, chlorine, or bromine;

$R^4$  is hydrogen; and

$R^5$  is hydrogen, methyl, or bromine;

or a pharmaceutically acceptable salt thereof.

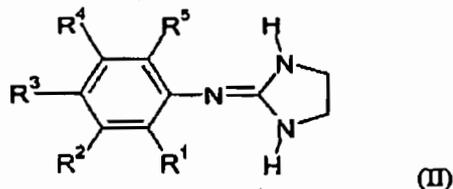
77. A pharmaceutical composition comprising a compound in accordance with claim 73, and one or more pharmaceutically acceptable excipients, adjuvants, carriers, or preservatives.

78. A pharmaceutical composition comprising a compound in accordance with claim 74, and one or more pharmaceutically acceptable excipients, adjuvants, carriers, or preservatives.

79. A pharmaceutical composition comprising a compound in accordance with claim 75, and one or more pharmaceutically acceptable excipients, adjuvants, carriers, or preservatives.

80. A pharmaceutical composition comprising a compound in accordance with claim 76, and one or more pharmaceutically acceptable excipients, adjuvants, carriers, or preservatives.

81. A pharmaceutical composition comprising a compound of the formula (II)



wherein:

$R^1$  is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl,  $C_{3-6}$ -cycloalkyl,  $C_{1-6}$ -alkoxy, halogen,  $-CF_3$ , or  $-OCF_3$ ;

$R^2$  is  $-NR^6R^7$ , wherein

$R^6$  is ethyl,

$R^7$  is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl,  $C_{3-6}$ -cycloalkyl, or  $C_{2-4}$ -acyl, or

$R^6$  and  $R^7$  together with the nitrogen between them form a 5- or 6-membered, saturated or unsaturated ring containing 0, 1, or 2 additional heteroatoms selected from the group consisting of oxygen, sulfur, and nitrogen, wherein each additional nitrogen atom is unsubstituted or substituted by methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, or *tert*-butyl, or  $R^6$  and  $R^7$  together with the nitrogen between them form phthalimido;

$R^3$  is hydrogen, halogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl,  $C_{1-6}$ -alkoxy,  $-CF_3$ , or  $-OCF_3$ ;

$R^4$  is hydrogen, halogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, or hexyl; and

$R^5$  is hydrogen, methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *sec*-butyl, *tert*-butyl, pentyl, hexyl,  $C_{1-6}$ -alkoxy, fluorine, bromine, iodine,  $-CF_3$ , or  $-OCF_3$ ;

or a pharmaceutically acceptable salt thereof; and

one or more pharmaceutically acceptable excipients, adjuvants, carriers, or preservatives.