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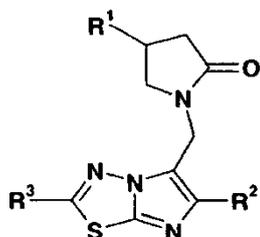
(54) Title **2-OXO-1-PYRROLIDINYL IMIDAZOTHIADIAZOLE DERIVATIVES**

(56) References Cited: WO-A1-2005/054188  
WO-A2-01/62726  
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Enclosed is a translation of the patent claims in Norwegian. Please note that as per the Norwegian Patents Acts, section 66i the patent will receive protection in Norway only as far as there is agreement between the translation and the language of the application/patent granted at the EPO. In matters concerning the validity of the patent, language of the application/patent granted at the EPO will be used as the basis for the decision. The patent documents published by the EPO are available through Espacenet (<http://worldwide.espacenet.com>) or via the search engine on our website here: <https://search.patentstyret.no/>

## Patentkrav

1. 2-okso-1-pyrrolidinylimidazotiadiazol-derivater i henhold til formel I, deres  
5 geometriske isomerer, enantiomerer, diastereomerer og blandinger, eller et farmasøytisk akseptabelt salt derav,



(I)

hvor

- 10  $R^1$  er et C<sub>-1-4</sub>alkyl inneholdende minst én halogensubstituent;  
 $R^2$  er enten et halogen eller et C<sub>-1-4</sub>alkyl inneholdende minst én halogen-  
 substituent;  
 $R^3$  er et C<sub>-1-4</sub>alkyl inneholdende minst én hydrokso- eller alkoksosubstituent,  
 forbindelsene med formel (I) eventuelt er deuterert i hvilken som helst stilling.
- 15
2. Forbindelse ifølge krav 1, hvor  $R^1$  er en 2,2-difluorpropyl-, 2-klor-2,2-difluoretyl-,  
 en 2,2-difluoretyl-, en 2,2,2-trifluoretyl-, en 3,3,3-trifluorpropyl- eller en 2-fluoretyl-  
 del.
- 20 3. Forbindelse ifølge krav 1 eller 2, hvor  $R^2$  er enten en klor-, en difluormetyl- eller en  
 trifluormetyl-del.
4. Forbindelse ifølge hvilket som helst av de foregående krav, hvor  $R^3$  er enten en  
 hydroksymetyl-, en metoksymetyl-, en [(<sup>2</sup>H<sub>3</sub>)metyloksy]metyl-, en metoksy(<sup>2</sup>H<sub>2</sub>)-  
 25 metyl-, en (2,2,2-trifluoretoksy)metyl- eller en 2-metoksyetyl-del.
5. Forbindelse ifølge hvilket som helst av de foregående krav, hvor
- 30  $R^1$  er en 2,2-difluorpropyl-, 2-klor-2,2-difluoretyl-, en 2,2,2-trifluoretyl- eller en  
 3,3,3-trifluorpropyl-del;  
 $R^2$  er en klor-, en difluormetyl- eller en trifluormetyl-del;  
 $R^3$  er en metoksymetyl-del.

6. Forbindelse ifølge hvilket som helst av de foregående krav som er valgt fra gruppen bestående av:

- 5 4-(2,2-difluorpropyl)-1-{[2-(metoksymetyl)-6-(trifluormetyl)imidazo[2,1-b]-  
[1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;  
(+)-4-(2,2-difluorpropyl)-1-{[2-(metoksymetyl)-6-(trifluormetyl)imidazo[2,1-b]-  
[1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;  
(-)-4-(2,2-difluorpropyl)-1-{[2-(metoksymetyl)-6-(trifluormetyl)imidazo[2,1-b]-  
[1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;
- 10 4-(2-klor-2,2-difluoretyl)-1-{[2-(metoksymetyl)-6-(trifluormetyl)imidazo[2,1-b]-  
[1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on-trifluoracetat;  
(4S)-4-(2-klor-2,2-difluoretyl)-1-{[2-(metoksymetyl)-6-(trifluormetyl)imidazo-  
[2,1-b][1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;  
(4R)-4-(2-klor-2,2-difluoretyl)-1-{[2-(metoksymetyl)-6-(trifluormetyl)imidazo-  
[2,1-b][1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;
- 15 4-(2-klor-2,2-difluoretyl)-1-{[2-(hydroksymetyl)-6-(trifluormetyl)imidazo[2,1-  
b][1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;  
(4R)-4-(2-klor-2,2-difluoretyl)-1-{[2-(hydroksymetyl)-6-(trifluormetyl)imidazo-  
[2,1-b][1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;
- 20 (4S)-4-(2-klor-2,2-difluoretyl)-1-{[2-(hydroksymetyl)-6-(trifluormetyl)imidazo-  
[2,1-b][1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;  
1-{[2-(metoksymetyl)-6-(trifluormetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-yl]-  
metyl}-4-(2,2,2-trifluoretyl)pyrrolidin-2-on;  
(4R)-1-{[2-(metoksymetyl)-6-(trifluormetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-yl]-  
metyl}-4-(2,2,2-trifluoretyl)pyrrolidin-2-on;
- 25 (4S)-1-{[2-(metoksymetyl)-6-(trifluormetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-yl]-  
metyl}-4-(2,2,2-trifluoretyl)pyrrolidin-2-on;  
1-{[2-(hydroksymetyl)-6-(trifluormetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-yl]-  
metyl}-4-(2,2,2-trifluoretyl)pyrrolidin-2-on;
- 30 1-{[2-(metoksymetyl)-6-(trifluormetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-yl]-  
metyl}-4-(3,3,3-trifluorpropyl)pyrrolidin-2-on;  
(4S)-1-{[2-(metoksymetyl)-6-(trifluormetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-yl]-  
metyl}-4-(3,3,3-trifluorpropyl)pyrrolidin-2-on;  
(4R)-1-{[2-(metoksymetyl)-6-(trifluormetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-yl]-  
metyl}-4-(3,3,3-trifluorpropyl)pyrrolidin-2-on;
- 35 (4S)-1-{[2-(hydroksymetyl)-6-(trifluormetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-  
yl]metyl}-4-(3,3,3-trifluorpropyl)pyrrolidin-2-on;

- 4-(2,2-difluoretyl)-1-{{2-(metoksymetyl)-6-(trifluormetyl)imidazo[2,1-b][1,3,4]-  
tiadiazol-5-yl]metyl}pyrrolidin-2-on;
- (+)-4-(2,2-difluoretyl)-1-{{2-(metoksymetyl)-6-(trifluormetyl)imidazo[2,1-b]-  
[1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on, isomer A;
- 5 (-)-4-(2,2-difluoretyl)-1-{{2-(metoksymetyl)-6-(trifluormetyl)imidazo[2,1-b]-  
[1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on, isomer B;
- 4-(2-klor-2,2-difluoretyl)-1-{{6-(difluormetyl)-2-(metoksymetyl)imidazo[2,1-b]-  
[1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;
- (-)-4-(2-klor-2,2-difluoretyl)-1-{{6-(difluormetyl)-2-(metoksymetyl)imidazo-  
10 [2,1-b][1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;
- (+)-4-(2-klor-2,2-difluoretyl)-1-{{6-(difluormetyl)-2-(metoksymetyl)imidazo-  
[2,1-b][1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;
- 4-(2-klor-2,2-difluoretyl)-1-{{6-klor-2-((2,2,2-trifluoretoksy)metyl)imidazo[2,1-  
b][1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;
- 15 1-{{6-klor-2-(metoksymetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-yl]metyl}-4-(3,3,3-  
trifluorpropyl)pyrrolidin-2-on;
- (-)-1-{{6-klor-2-(metoksymetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-yl]metyl}-4-  
(3,3,3-trifluorpropyl)pyrrolidin-2-on;
- (+)-1-{{6-klor-2-(metoksymetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-yl]metyl}-4-  
20 (3,3,3-trifluorpropyl)pyrrolidin-2-on;
- 1-{{6-klor-2-(metoksymetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-yl]metyl}-4-(2-  
fluoretyl)pyrrolidin-2-on;
- (4R)-1-{{2-(hydroksymetyl)-6-(trifluormetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-  
yl]metyl}-4-(2,2,2-trifluoretyl)pyrrolidin-2-on;
- 25 (4R)-4-(2-klor-2,2-difluoretyl)-1-{{2-{{(2H<sub>3</sub>)metyloksy}metyl}-6-(trifluormetyl)-  
imidazo[2,1-b][1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;
- (4R)-4-(2-klor-2,2-difluoretyl)-1-{{2-{{metoksy(2H<sub>2</sub>)metyl}-6-(trifluormetyl)-  
imidazo[2,1-b][1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;
- (4R)-4-(2-klor-2,2-difluoretyl)-1-{{2-(metoksymetyl)-6-(trifluormetyl)-imidazo-  
30 [2,1-b][1,3,4]tiadiazol-5-yl](2H<sub>2</sub>)metyl}pyrrolidin-2-on
- 4-(2-klor-2,2-difluoretyl)-1-{{2-(2-metoksyetyl)-6-(trifluormetyl)imidazo[2,1-b]-  
[1,3,4]tiadiazol-5-yl]metyl}pyrrolidin-2-on;
- 1-{{2-(2-metoksyetyl)-6-(trifluormetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-yl]-  
metyl}-4-(2,2,2-trifluoretyl)pyrrolidin-2-on; og
- 35 1-{{2-(2-metoksyetyl)-6-(trifluormetyl)imidazo[2,1-b][1,3,4]tiadiazol-5-yl]-  
metyl}-4-(3,3,3-trifluorpropyl)pyrrolidin-2-on.

**7.** Forbindelse ifølge hvilket som helst av kravene 1 til 6, for anvendelse som et medikament.

**8.** Et farmasøytisk preparat omfattende en effektiv mengde av en forbindelse ifølge krav 1 til 6, i kombinasjon med et farmasøytisk akseptabelt fortynningsmiddel eller bærer.

**9.** Forbindelse ifølge hvilket som helst av kravene 1 til 6, for anvendelse ved behandling av pasienter med refraktær epilepsi.