



(12) Translation of
European patent specification

(11) NO/EP 3265448 B1

NORWAY

(19) NO
(51) Int Cl.
C07D 277/82 (2006.01)
A61K 31/428 (2006.01)
A61K 31/454 (2006.01)
A61K 31/496 (2006.01)
A61K 31/5377 (2006.01)
A61K 38/05 (2006.01)
A61K 45/06 (2006.01)
A61P 25/00 (2006.01)
A61P 25/28 (2006.01)
C07D 417/12 (2006.01)

Norwegian Industrial Property Office

(45)	Translation Published	2022.03.28
(80)	Date of The European Patent Office Publication of the Granted Patent	2021.12.29
(86)	European Application Nr.	16759303.7
(86)	European Filing Date	2016.02.26
(87)	The European Application's Publication Date	2018.01.10
(30)	Priority	2015.03.03, US, 201562127684 P
(84)	Designated Contracting States:	AL ; AT ; BE ; BG ; CH ; CY ; CZ ; DE ; DK ; EE ; ES ; FI ; FR ; GB ; GR ; HR ; HU ; IE ; IS ; IT ; LI ; LT ; LU ; LV ; MC ; MK ; MT ; NL ; NO ; PL ; PT ; RO ; RS ; SE ; SI ; SK ; SM ; TR
(73)	Proprietor	Biohaven Therapeutics Ltd., 215 Church Street, New Haven, CT 06510, USA
(72)	Inventor	WROBEL, Jay Edward, 15 Rosetree Lane, Lawrenceville, NJ 08648, USA REITZ, Allen B., 109 Greenbriar Road, Lansdale, PA 19446, USA PELLETIER, Jeffery Claude, 4015 First Avenue, Lafayette Hill, PA 19444, USA SMITH, Garry Robert, 110 Rosemont Lane, Royersford, PA 19468, USA BIAN, Haiyan, 109 York Drive, Princeton, NJ 08540, USA
(74)	Agent or Attorney	ZACCO NORWAY AS, Postboks 488, 0213 OSLO, Norge

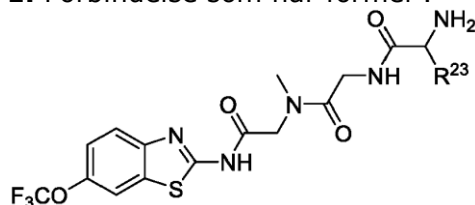
(54)	Title	RILUZOLE PRODRUGS AND THEIR USE
(56)	References Cited:	WO-A2-2013/192610 WO-A1-2013/138753 US-B2- 8 247 412 MCDONNELL MARK E ET AL: "Riluzole prodrugs for melanoma and ALS: Design, synthesis, and in vitro metabolic profiling", BIOORGANIC & MEDICINAL CHEMISTRY, PERGAMON, GB, vol. 20, no. 18, 1 January 2012 (2012-01-01), pages 5642-5648, XP028938221, ISSN: 0968- 0896, DOI: 10.1016/J.BMC.2012.07.004

PELLETIER ET AL.: 'Intramolecular rearrangement of alpha-amino acid amide derivatives of 2-aminobenzothiazoles' TETRAHEDRON LETTERS vol. 55, no. 30, 01 January 2014, pages 4193 - 4195, XP028861761 DOI: 10.1016/J.TETLET.2014.05.046
MCDONNELL ET AL.: 'Riluzole prodrugs for melanoma and ALS: design, synthesis, and in vitro metabolic profiling' BIOORGANIC & MEDICINAL CHEMISTRY vol. 20, no. 18, 01 January 2012, pages 5642 - 5648, XP028938221 DOI: 10.1016/J.BMC.2012.07.004

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/>

EP3265448

1

Patentkrav**1.** Forbindelse som har formel :

5 som inkluderer enantiomerer, diastereomerer, hydrater, solvater og farmasøytisk akseptable salter derav, hvori:

R²³ er valgt fra gruppen bestående av H, CH₃, CH₂CH₃, CH₂CH₂CH₃, CH₂CCH₃, CH(CH₃)₂, CH₂CH(CH₃)₂, CH(CH₃)CH₂CH₃, CH₂OH, CH₂OCH₂Ph, CH₂CH₂OCH₂Ph, CH(OH)CH₃, CH₂Ph, CH₂(sykloheksyl), CH₂(4-OH-Ph), (CH₂)₄NH₂,
 10 (CH₂)₃NHC(NH₂)NH, CH₂(3-indol), CH₂(5-imidazol), CH₂CO₂H, CH₂CH₂CO₂H, CH₂CONH₂, og CH₂CH₂CONH₂;

2. Forbindelse ifølge krav 1, valgt fra gruppen bestående av:

(S)-2-amino-N-(2-(metyl(2-okso-2-((6-(trifluormetoksy)benzo[d]tiazol-2-yl)amino)etyl)amino)-2-oksoetyl)propanamid;

(R)-2-amino-N-(2-(metyl(2-okso-2-((6-(trifluormetoksy)benzo[d]tiazol-2-yl)amino)etyl)amino)-2-oksoetyl)propanamid;

(S)-2-amino-3-metyl-N-(2-(metyl(2-okso-2-((6-(trifluormetoksy)benzo[d]tiazol-2-yl)amino)etyl)amino)-2-oksoetyl)butanamid;

(R)-2-amino-3-metyl-N-(2-(metyl(2-okso-2-((6-(trifluormetoksy)benzo[d]tiazol-2-yl)amino)etyl)amino)-2-oksoetyl)butanamid;

(S)-2-amino-N-(2-(metyl(2-okso-2-((6-(trifluormetoksy)benzo[d]tiazol-2-yl)amino)etyl)amino)-2-oksoetyl)-3-fenylpropanamid;

(R)-2-amino-N-(2-(metyl(2-okso-2-((6-(trifluormetoksy)benzo[d]tiazol-2-yl)amino)etyl)amino)-2-oksoetyl)-3-fenylpropanamid;

(S)-2-amino-4-metyl-N-(2-(metyl(2-okso-2-((6-(trifluormetoksy)benzo[d]tiazol-2-yl)amino)etyl)amino)-2-oksoetyl)pentanamid;

(R)-2-amino-4-metyl-N-(2-(metyl(2-okso-2-((6-(trifluormetoksy)benzo[d]tiazol-2-yl)amino)etyl)amino)-2-oksoetyl)pentanamid;

(S)-2-amino-3-hydroksy-N-(2-(metyl(2-okso-2-((6-(trifluormetoksy)benzo[d]tiazol-2-yl)amino)etyl)amino)-2-oksoetyl)propanamid;

EP3265448

2

(R)-2-amino-3-hydroksy-N-(2-(metyl(2-okso-2-((6-(trifluormetoksy)benzo[d]tiazol-2-yl)amino)etyl)amino)-2-oksoetyl)propanamid;
2-(2-aminoacetamido)-N-metyl-N-(2-okso-2-((6-(trifluormetoksy)benzo[d]tiazol-2-yl)amino)etyl)acetamid;
5 eller et farmasøytisk akseptabelt salt derav.

3. Forbindelse ifølge krav 1, hvori R^{23} er H.

4. Forbindelse ifølge krav 2 som er 2-(2-aminoacetamido)-N-metyl-N-(2-okso-2-
10 ((6-(trifluormetoksy)benzo[d]tiazol-2-yl)amino)etyl)acetamid.