



(12) Translation of new
European patent specification
After opposition procedure

(11) NO/EP 2207791 B2

NORWAY

(19) NO
(51) Int Cl.

A61P 19/08 (2006.01)
A61P 25/28 (2006.01)
A61P 31/00 (2006.01)
A61P 33/00 (2006.01)
A61P 35/00 (2006.01)
A61P 37/00 (2006.01)

A61P 37/06 (2006.01)
C07D 301/00 (2006.01)
C07D 301/03 (2006.01)
C07D 303/36 (2006.01)
C07K 5/087 (2006.01)
A61K 38/06 (2006.01)

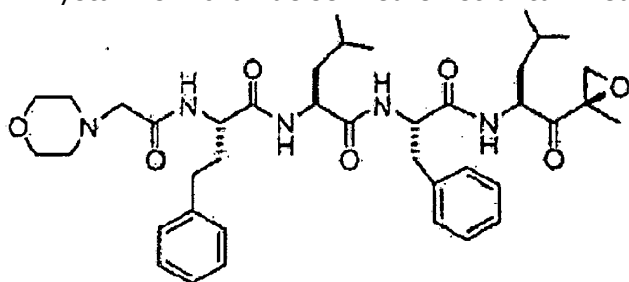
Norwegian Industrial Property Office

(21)	Translation Published	2016.08.15
(80)	Date of The European Patent Office Publication of the Granted Patent	2016.04.13
(45)	Decision of the opposition in EPO	2019.08.07
	Decision of the opposition in NIPO	2019.11.18
(86)	European Application Nr.	08834964.2
(86)	European Filing Date	2008.10.03
(87)	The European Application's Publication Date	2010.07.21
(30)	Priority	2007.10.04, US, 997613 P, 2007.12.20, US, 8987 P
(84)	Designated Contracting States: Designated Extension States:	AT ; BE ; BG ; CH ; CY ; CZ ; DE ; DK ; EE ; ES ; FI ; FR ; GB ; GR ; HR ; HU ; IE ; IS ; IT ; LI ; LT ; LU ; LV ; MC ; MT ; NL ; NO ; PL ; PT ; RO ; SE ; SI ; SK ; TR AL ; BA ; MK ; RS
(73)	Proprietor	Onyx Therapeutics, Inc., One Amgen Center Drive, Thousand Oaks, CA 91320- 1799, USA
(72)	Inventor	PHIASIVONGSA, Pasit, 2712 Saint Regis Avenue, BrentwoodCA 94513, USA SEHL, Louis, C., 403 Alameda de la Pulgas, Redwood CityCA 94062, USA FULLER, William, Dean, 3085 Driscoll Drive, San DiegoCA 92117, USA LAIDIG, Guy, J., 329 Waverley Street, Menlo ParkCA 94025, USA
(74)	Agent or Attorney	ZACCO NORWAY AS, Postboks 2003 Vika, 0125 OSLO, Norge

(54) Title **CRYSTALLINE PEPTIDE EPOXY KETONE PROTEASE INHIBITORS AND THE SYNTHESIS OF AMINO ACID KETO-EPOXIDES**

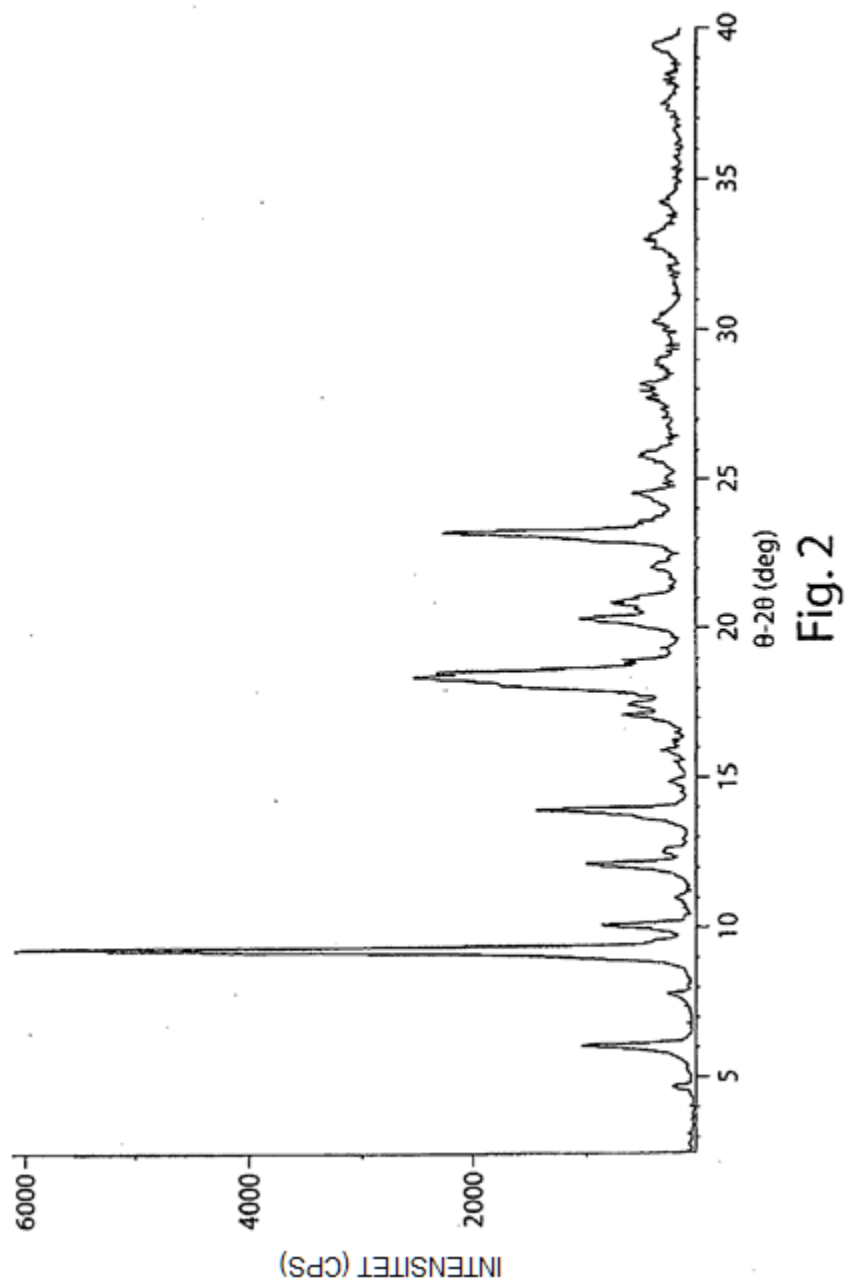
(56) References
Cited: WO-A-2006/017842, US-A1- 2005 245 435 SUSAN D DEMO, CHRISTOPHER J KIRK, MONETTE A AUJAY, TONIA J BUCHHOLZ, MAYA DAJEE, MARK N HO, JING JIANG, GUY J LAIDIG ET AL.: "Antitumour Activity of PR-171, a Novel Irreversible Inhibitor of the Proteasome" CANCER RESEARCH, vol. 63, no. 13, 1 July 2007 (2007-07-01), pages 6383-6391, XP002503827 ELOFSSON M ET AL: "TOWARDS SUBUNIT-SPECIFIC PROTEASOME INHIBITORS: SYNTHESIS AND EVALUATION OF PEPTIDE ALPHA',BETA'-EPOXYKETONES" CHEMISTRY AND BIOLOGY, CURRENT BIOLOGY, LONDON, GB, vol. 6, no. 11, 1 January 1995 (1995-01-01), pages 811-822, XP001002198 ISSN: 1074-5521

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.** Krystallinsk forbindelse med en struktur med formel (II)

(II)

5 med et XRPD-mønster som i det vesentlige er som vist i figur 2:



og/eller

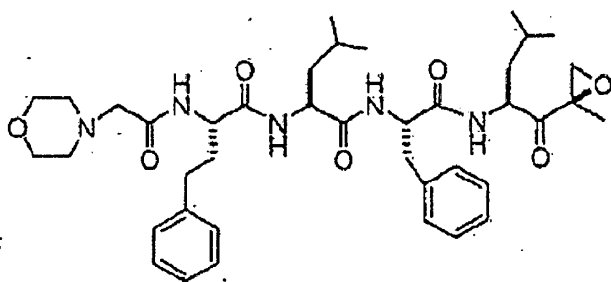
med 2θ -verdier 6,10; 8,10; 9,32; 10,10; 11,00; 12,14; 12,50; 13,64; 13,94; 17,14; 17,52; 18,44; 20,38; 21,00; 22,26; 23,30; 24,66; 25,98; 26,02; 27,84; 28,00; 28,16; 29,98; 30,46; 32,98; 33,22; 34,52; 39,46.

5

2. Krystallinsk forbindelse ifølge krav 1 med et smeltepunkt på 211 til 213 °C.

3. Krystallinsk salt av en forbindelse med en struktur med formel (II)

3



(II)

hvor saltet er et citratsalt med et XRPD-mønster som i det vesentlige er som vist i figur 12:

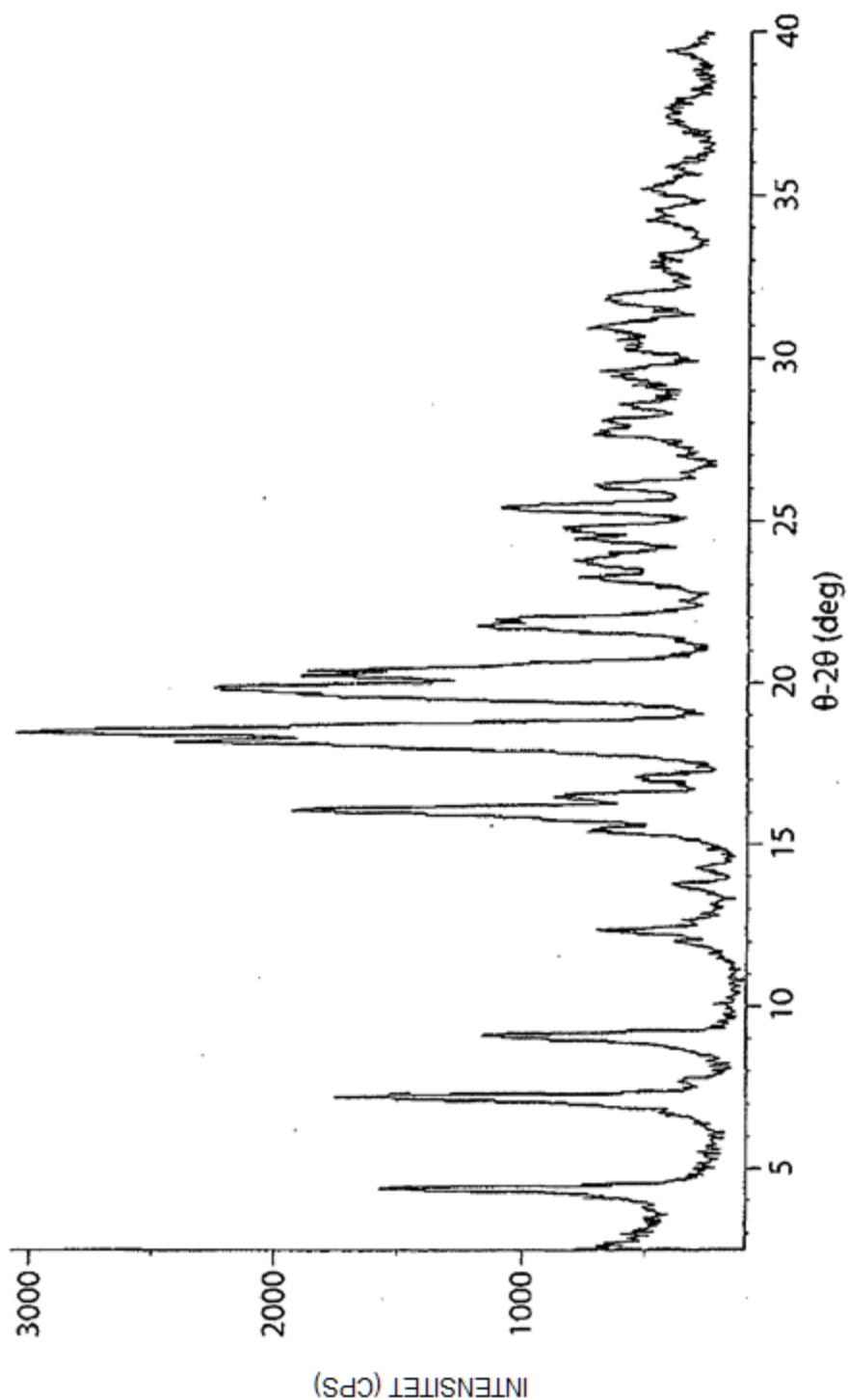


Fig. 12

og/eller

med 2θ -verdier 4,40; 7,22; 9,12; 12,36; 13,35; 14,34; 15,54; 16,14; 16,54; 17,00; 18,24; 18,58; 19,70; 19,90; 20,30; 20,42; 21,84; 22,02; 23,34; 23,84; 24,04; 24,08; 24,48; 24,76; 25,48; 26,18; 28,14; 28,20; 28,64; 29,64; 31,04; 31,84; 33,00; 33,20; 34,06; 34,30; 34,50; 35,18; 37,48; 37,90; 39,48.

5

4. Krystallinsk salt ifølge krav 3 med et smeltepunkt på 184 til 188 °C.

5. Krystallinsk forbindelse ifølge et hvilket som helst av kravene 1 eller 2 for anvendelse i medisin.

5 **6.** Krystallinsk forbindelse for anvendelse ifølge krav 5 for anvendelse i behandling av en sykdom eller tilstand valgt fra kreft, autoimmun sykdom, graft- eller transplantatrelatert tilstand, nevrodegenerativ sykdom, fibrotisk-assosiert tilstand, iskemisk-relaterte tilstander, infeksjon (viral, parasittisk eller prokaryotisk) og sykdommer assosiert med bentap.

10 **7.** Krystallinsk forbindelse for anvendelse ifølge krav 6, hvori sykdommen eller tilstanden er kreft, og kreften er multipelt myelom.

15 **8.** Farmasøytisk sammensetning omfattende en krystallinsk forbindelse ifølge et hvilket som helst av kravene 1 eller 2 og en farmasøytisk akseptabel bærer.