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(19) Weltorganisation für geistiges

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(81) Bestimmungsstaaten (soweit nicht anders angegeben, für
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SZ, TZ, UG, ZM, ZW), eurasisches (AM, AZ, BY, KG,

[Fortsetzung auf der nächsten Seite]

(54) Title: PROCESS FOR THE PREPARATION OF 2-{4-[2-({2-(4-CHLOROPHENYL)-1,3-THIAZOL-4-YL}METHYL)SULFANYL)-3,5-DICYANO-6-(PYRROLIDIN-1-YL)PYRIDIN-4-YL]PHENOXY}ETHYL-L-ALANYL-L-ALANINATE MONOHYDROCHLORIDE

(54) Bezeichnung : VERFAHREN ZUR HERSTELLUNG VON 2-{4-[2-({2-(4-CHLOROPHENYL)-1,3-THIAZOL-4-YL}METHYL)SULFANYL)-3,5-DICYANO-6-(PYRROLIDIN-1-YL)PYRIDIN-4-YL]PHENOXY}ETHYL-L-ALANYL-L-ALANINAT-MONOHYDROCHLORID

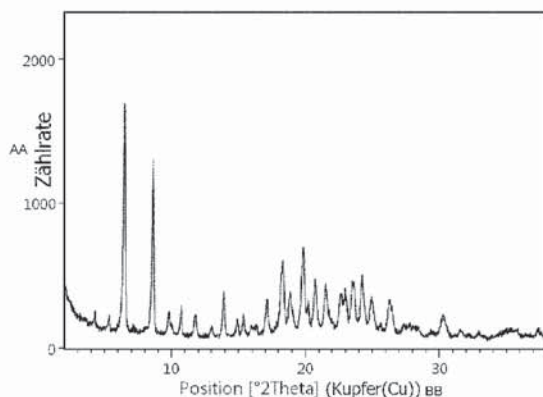
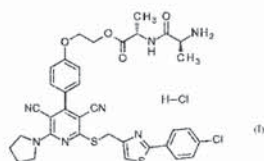


Abbildung 1: Röntgendiffraktogramm der Verbindung der Formel (I) in kristalliner Form der Modifikation I CC

AA Counts
BB Position [°2Theta] (Copper(Cu))

CC X-ray diffractogram of the compound of formula (I) in crystalline form of the modification I



(57) Abstract: The present invention relates to a novel and improved process for the preparation of the compound 2-{4-[2-({2-(4-chlorophenyl)-1,3-thiazol-4-yl}methyl)sulfanyl)-3,5-dicyano-6-(pyrrolidin-1-yl)-pyridin-4-yl]-phenoxy}-ethyl-L-alanyl-L-alaninate monohydrochloride of formula (I), new precursors for their preparation, as well as to the production and use of the crystalline modification I of 2-{4-[2-({2-(4-chlorophenyl)-1,3-thiazol-4-yl}methyl)sulfanyl)-3,5-dicyano-6-(pyrrolidin-1-yl)pyridin-4-yl]phenoxy}ethyl-L-alanyl-L-alaninate monohydrochloride of formula (I).

(57) Zusammenfassung: Die vorliegende Anmeldung betrifft ein neues und verbessertes Verfahren zur Herstellung der Verbindung 2-{4-[2-({2-(4-Chlorphenyl)-1,3-thiazol-4-yl}methyl)sulfanyl)-3,5-dicyan-6-(pyrrolidin-1-yl)pyridin-4-yl]-phenoxy}ethyl-L-alanyl-L-alaninat-Monohydrochlorid der Formel (I), neue Vorstufen zu deren Herstellung, sowie die Herstellung und Verwendung der kristallinen Modifikation I von 2-{4-[2-({2-(4-Chlorphenyl)-1,3-thiazol-4-yl}methyl)sulfanyl)-3,5-dicyan-6-(pyrrolidin-1-yl)pyridin-4-yl]phenoxy}ethyl-L-alanyl-L-alaninat-Monohydrochlorid der Formel (I).



KZ, RU, TJ, TM), europäisches (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Erklärungen gemäß Regel 4.17:

- *hinsichtlich der Berechtigung des Anmelders, ein Patent zu beantragen und zu erhalten (Regel 4.17 Ziffer ii)*

Veröffentlicht:

- *mit internationalem Recherchenbericht (Artikel 21 Absatz 3)*

From the INTERNATIONAL BUREAU

PCTNOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

To:

BIP PATENTS
c/o Bayer Intellectual Property GmbH
Alfred-Nobel-Str. 10
40789 Monheim am Rhein
ALLEMAGNE

Date of mailing (day/month/year) 18 September 2017 (18.09.2017)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference BHC141062-WO	
International application No. PCT/EP2016/059779	International filing date (day/month/year) 02 May 2016 (02.05.2016)

1. The following indications appeared on record concerning:		
☐ the applicant	☒ the inventor	☐ the agent
☐ the common representative		
Name and Address	State of Nationality	State of Residence
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	Facsimile No.	
	E-mail address	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:		
☒ the person	☐ the name	☐ the address
☐ the nationality		
☐ the residence		
Name and Address KUHLMANN, Thomas Severinstr. 64 50678 Köln Germany	State of Nationality	State of Residence
	Telephone No.	
	Facsimile No.	
	E-mail address ☐ Notifications by e-mail authorized	
3. Further observations, if necessary: The person identified in Box 2 has been added as inventor only.		
4. A copy of this notification has been sent to:		
☒ the receiving Office	☐ the International Preliminary Examining Authority	
☒ the International Searching Authority	☒ the designated Offices concerned	
☐ the Authority(ies) specified for supplementary search	☐ the elected Offices concerned	
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The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Drabi Ahmed e-mail pct.team5@wipo.int Telephone No. +41 22 338 74 05
Facsimile No. +41 22 338 89 75	

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Name and Address	State of Nationality	State of Residence
	Telephone No.	
	Facsimile No.	
	E-mail address	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:		
☒ the person	☐ the name	☐ the address
☐ the nationality	☐ the residence	
Name and Address MEIBOM, Daniel In den Birken 62b 42113 Wuppertal Germany	State of Nationality	State of Residence
	Telephone No.	
	Facsimile No.	
	E-mail address ☐ Notifications by e-mail authorized	
3. Further observations, if necessary: The person identified in Box 2 has been added as inventor only.		
4. A copy of this notification has been sent to:		
☒ the receiving Office	☐ the International Preliminary Examining Authority	
☒ the International Searching Authority	☒ the designated Offices concerned	
☐ the Authority(ies) specified for supplementary search	☐ the elected Offices concerned	
	☐ other:	

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