

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



(10) International Publication Number

WO 2018/193084 A8

(43) International Publication Date
25 October 2018 (25.10.2018)

WIPO | PCT

(51) International Patent Classification:

A61K 45/06 (2006.01) A61P 35/00 (2006.01)
G01N 33/00 (2006.01) A61P 35/02 (2006.01)
A61K 31/7064 (2006.01) A61K 31/00 (2006.01)
A61K 31/7088 (2006.01) A61K 38/00 (2006.01)
A61K 31/713 (2006.01) A61K 38/19 (2006.01)

(21) International Application Number:

PCT/EP2018/060172

(22) International Filing Date:

20 April 2018 (20.04.2018)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

17167295.9 20 April 2017 (20.04.2017) EP

(71) Applicant: **IOMX THERAPEUTICS AG** [DE/DE];
Fraunhoferstrasse 13, 82152 Martinsried (DE).

(72) Inventors: **SORRENTINO, Antonio**; c/o DKFZ, Im
Neuenheimer Feld 280, 69120 Heidelberg (DE). **BECK-
HOVE, Philipp**; Spitalkellerweg 3, 93059 Regensburg
(DE). **MICHEL, Tillmann**; c/o DKFZ, Im Neuen-
heimer Feld 280, 69120 Heidelberg (DE). **KHANDELW-
AL, Nisit**; c/o iOmx Therapeutics AG, Fraunhoferstrasse
13, 82152 Martinsried (DE). **BOUTROS, Michael**; Un-
tere Neckarstrasse 76, 67117 Heidelberg (DE). **BREINIG,
Marco**; In den Felsenbäumen 5, 69198 Schriesheim (DE).
SENNHEHN, Peter; c/o iOmx Therapeutics AG, Fraun-
hoferstrasse 13, 82152 Martinsried (DE). **MEIER-EW-
ERT, Sebastian**; c/o iOmx Therapeutics AG, Fraunhofer-
strasse 13, 82152 Martinsried (DE). **VOLPIN, Valenti-
na**; Hermann-Geib-Strasse 31, 93053 Regensburg (DE).
MENEVSE, Ayse; Clermont-Ferrand-Allee 10, 93049 Re-
gensburg (DE).

(74) Agent: **KUTTENKEULER, David**; Boehmert &
Boehmert, Pettenkoferstrasse 22, 80336 Munich (DE).

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,

CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,
KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA,
SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (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).

Published:

- with international search report (Art. 21(3))
- with sequence listing part of description (Rule 5.2(a))

(48) Date of publication of this corrected version:

15 November 2018 (15.11.2018)

(15) Information about Correction:

see Notice of 15 November 2018 (15.11.2018)

(54) Title: INTRACELLULAR KINASE ASSOCIATED WITH RESISTANCE AGAINST ANTI-TUMOUR IMMUNE RESPONSES, AND USES THEREOF

(57) Abstract: The invention is based on the surprising finding that SIK3 is associated with resistance against anti-tumour immune responses. In particular, the invention provides methods for treating proliferative diseases using inhibitors of SIK3, especially nucleic acid or small molecule inhibitors of SIK3. Also provided are methods of sensitising cells involved with a proliferative disorder against the cytotoxic effect of certain pro-inflammatory signalling pathways, and/or to kill such cells and/or methods for treating proliferative diseases, using a SIK3 inhibitor together with ligands or agonists of such signalling pathways. Other methods provided by the invention include those involving SIK3 inhibitors to enhance or overcome certain side effects associated with treatments that utilise such signalling pathways, as well as diagnostic, prognostic and monitoring methods and kits based on the detection of SIK3 in a sample obtained from a subject, and screening methods useful for identifying or characterising inhibitors of SIK3.

WO 2018/193084 A8