

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
19 May 2022 (19.05.2022)



(10) International Publication Number
WO 2022/101382 A1

(51) International Patent Classification:

A61K 31/437 (2006.01) A61P 31/14 (2006.01)
A61K 31/4439 (2006.01) A61P 31/16 (2006.01)
A61K 31/47 (2006.01) A61P 31/20 (2006.01)
A61P 11/00 (2006.01) A61P 31/22 (2006.01)

TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

(21) International Application Number:

PCT/EP2021/081467

(22) International Filing Date:

12 November 2021 (12.11.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

102020000027251 13 November 2020 (13.11.2020) IT

Published:

- with international search report (Art. 21(3))

(71) Applicant: **DRUG DISCOVERY AND CLINIC S.R.L.**
[IT/IT]; Via Quarello 15/A, I-10135 Torino (IT).

(72) Inventors: **BOSCHI, Donatella**; Via Berthollet 45,
I-10125 Torino (IT). **GIORGIS, Marta**; Corso Inghilterra
17, I-10138 Torino (IT). **LOLLI, Marco Lucio**; Via
Berthollet 45, I-10125 Torino (IT). **MARTINELLI, Gio-**
vanni; Corte Colombarola 1, I-37060 Mozzecane (Verona)
(IT). **SAGLIO, Giuseppe**; Via Bertoldi 65, I-15043 Fubine
(Alessandria) (IT).

(74) Agent: **COMOGLIO, Elena** et al.; c/o JACOBACCI &
PARTNERS SPA, Corso Emilia 8, I-10152 Torino (IT).

(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, IT, 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, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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,

(54) Title: PYRAZOLO DERIVATIVES AS HUMAN DIHYDROOROTATE DEHYDROGENASE (HDHODH) INHIBITORS FOR
USE AS ANTIVIRALS

(57) Abstract: The invention relates to hDHODH inhibitors, in particular 2- hydroxypyrazolo[1,5- a]pyridine derivatives, for use as
antiviral agents. The hDHODH inhibitors for use according to the invention are effective as inhibitors of the replication of a wide
spectrum of both DNA and RNA viruses, including, i.a., Herpes simplex virus 1 (HSV-1), Herpes simplex virus 2 (HSV-2), Influenza
A virus, Influenza B virus, Respiratory syncytial virus (RSV), Severe acute respiratory syndrome coronavirus 1 (SARS-CoV-1), Severe
acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and Middle East respiratory syndrome- related coronavirus (MERS-CoV).

WO 2022/101382 A1