



(11)

EP 3 514 173 B8

(12) **CORRECTED EUROPEAN PATENT SPECIFICATION**

(15) Correction information:
Corrected version no 1 (W1 B1)
Corrections, see
Bibliography INID code(s) 73

(51) Int Cl.:
C07K 16/18 ^(2006.01) **A61K 39/00** ^(2006.01)

(48) Corrigendum issued on:
04.08.2021 Bulletin 2021/31

(45) Date of publication and mention
of the grant of the patent:
23.06.2021 Bulletin 2021/25

(21) Application number: **19156509.2**

(22) Date of filing: **06.04.2010**

(54) **DKK-1 ANTIBODIES**
DKK-1-ANTIKÖRPER
ANTICORPS CONTRE DKK-1

(84) Designated Contracting 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 MK MT NL NO PL
PT RO SE SI SK SM TR
Designated Extension States:
AL BA ME RS

(30) Priority: **10.04.2009 US 16841109 P**

(43) Date of publication of application:
24.07.2019 Bulletin 2019/30

(62) Document number(s) of the earlier application(s) in
accordance with Art. 76 EPC:
15159780.4 / 2 930 184
10712681.5 / 2 417 158

(73) Proprietor: **ELI LILLY AND COMPANY**
Indianapolis, IN 46285 (US)

(72) Inventors:
• **Chedid, Marcio**
Indianapolis, IN 46206-6288 (US)
• **Darling, Ryan James**
Indianapolis, IN 46206-6288 (US)
• **Galvin, Rachelle Jeanette**
Indianapolis, IN 46206-6288 (US)

• **Swanson, Barbara Anne**
Indianapolis, IN 46206-6288 (US)

(74) Representative: **Kent, Lindsey Ruth**
Eli Lilly and Company Limited
8 Arlington Square West Downshire Way
Bracknell, Berkshire RG12 1PU (GB)

(56) References cited:
WO-A1-2008/097510 WO-A1-2010/129752
WO-A2-2006/015373 WO-A2-2007/084344

• **FULCINITI MARIATERESA ET AL: "Anti-DKK1**
mAb (BHQ880) as a potential therapeutic agent
for multiple myeloma", BLOOD, AMERICAN
SOCIETY OF HEMATOLOGY, UNITED STATES
LNKD-DOI:10.1182/BLOOD-2008-11-191577, vol.
114, no. 2, 9 July 2009 (2009-07-09), pages
371-379, XP009134332, ISSN: 1528-0020
[retrieved on 2009-05-05]
• **GAVRIATOPOULOU MARIA ET AL: "Dickkopf-1:**
a suitable target for the management of myeloma
bone disease.", EXPERT OPINION ON
THERAPEUTIC TARGETS JUL 2009 LNKD-
PUBMED:19530987, vol. 13, no. 7, July 2009
(2009-07), pages 839-848, XP009134320, ISSN:
1744-7631

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

EP 3 514 173 B8

- YACCOBY SHMUEL ET AL: "Antibody-based inhibition of DKK1 suppresses tumor-induced bone resorption and multiple myeloma growth in vivo", BLOOD, AMERICAN SOCIETY OF HEMATOLOGY, US LNKD- DOI:10.1182/BLOOD-2006-09-047712, vol. 109, no. 5, 1 March 2007 (2007-03-01), pages 2106-2111, XP002486200, ISSN: 0006-4971 [retrieved on 2006-10-26]
- ETTEBERG SETH A ET AL: "BHQ880, a novel anti-DKK1 neutralizing antibody, inhibits tumor-induced osteolytic bone disease", PROCEEDINGS OF THE ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH, NEW YORK, NY, US, vol. 49, 1 April 2008 (2008-04-01), page 947, XP009134334, ISSN: 0197-016X
- HEATH DEBORAH J ET AL: "Inhibiting Dickkopf-1 (Dkk1) removes suppression of bone formation and prevents the development of osteolytic bone disease in multiple myeloma", JOURNAL OF BONE AND MINERAL RESEARCH, AMERICAN SOCIETY FOR BONE AND MINERAL RESEARCH, NEW YORK, NY, US LNKD- DOI:10.1359/JBMR.081104, vol. 24, no. 3, 1 March 2009 (2009-03-01), pages 425-436, XP009134333, ISSN: 0884-0431 [retrieved on 2009-12-04]
- FILIPPO CARACI ET AL: "The Wnt Antagonist, Dickkopf-1, as a Target for the Treatment of Neurodegenerative Disorders", NEUROCHEMICAL RESEARCH, KLUWER ACADEMIC PUBLISHERS-PLENUM PUBLISHERS, NE LNKD- DOI:10.1007/S11064-008-9710-0, vol. 33, no. 12, 22 April 2008 (2008-04-22), pages 2401-2406, XP019647587, ISSN: 1573-6903
- HALL CHRISTOPHER L ET AL: "Dickkopf-1 expression increases early in prostate cancer development and decreases during progression from primary tumor to metastasis", PROSTATE, WILEY-LISS, NEW YORK, NY, US LNKD- DOI:10.1002/PROS.20805, vol. 68, no. 13, 15 September 2008 (2008-09-15), pages 1396-1404, XP009134318, ISSN: 0270-4137 [retrieved on 2008-06-16]
- TERPOS E: "Antibodies to dickkopf-1 protein", EXPERT OPINION ON THERAPEUTIC PATENTS, INFORMA HEALTHCARE, GB LNKD- DOI:10.1517/13543776.16.10.1453, vol. 16, no. 10, 1 October 2006 (2006-10-01), pages 1453-1458, XP002486202, ISSN: 1354-3776
- ZHOU XIAO-LEI ET AL: "Downregulation of Dickkopf-1 is responsible for high proliferation of breast cancer cells via losing control of Wnt/beta-catenin signaling", ACTA PHARMACOLOGICA SINICA, vol. 31, no. 2, February 2010 (2010-02), pages 202-210, XP009134321,
- KRAJ MARIA: "Multiple myeloma bone disease and novel anti-myeloma agents", ACTA HAEMATOLOGICA POLONICA, vol. 39, no. 2, 2008, pages 163-178, XP009134337, ISSN: 0001-5814
- DIARRA DANIELLE ET AL: "Dickkopf-1 is a master regulator of joint remodeling", NATURE MEDICINE, NATURE PUBLISHING GROUP, NEW YORK, NY, US LNKD- DOI:10.1038/NM1538, vol. 13, no. 2, 1 February 2007 (2007-02-01), pages 156-163, XP002486201, ISSN: 1078-8956 [retrieved on 2007-01-21]
- MELODY MAZON ET AL: "Modulating Dickkopf-1: A Strategy to Monitor or Treat Cancer?", CANCERS, vol. 8, no. 7, 28 June 2016 (2016-06-28), page 62, XP55329263, DOI: 10.3390/cancers8070062