

(19)



(11)

EP 4 253 446 B8

(12)

CORRECTED EUROPEAN PATENT SPECIFICATION

(15) Correction information:

Corrected version no 1 (W1 B1)**Corrections, see****Bibliography INID code(s) 73**

(51) International Patent Classification (IPC):

C08G 65/334 ^(2006.01) **C08F 293/00** ^(2006.01)**C09D 171/02** ^(2006.01) **C12M 3/00** ^(2006.01)**C12N 5/0775** ^(2010.01) **C08B 37/16** ^(2006.01)

(48) Corrigendum issued on:

05.03.2025 Bulletin 2025/10

(52) Cooperative Patent Classification (CPC):

C08B 37/0015; C08F 293/005; C08G 65/3318;**C08G 65/334; C08G 65/3346; C08G 83/007;****C08L 5/16; C09D 105/16; C09D 171/02;****C12N 5/0653; C08F 2438/03; C12N 2506/1346;****C12N 2533/30**

(45) Date of publication and mention

of the grant of the patent:

29.01.2025 Bulletin 2025/05(21) Application number: **21897913.6**

(86) International application number:

PCT/JP2021/042821(22) Date of filing: **22.11.2021**

(87) International publication number:

WO 2022/113940 (02.06.2022 Gazette 2022/22)(54) **POLYROTAXANE HAVING AMINO GROUP**

POLYROTAXAN MIT AMINOGRUPPE

POLYROTAXANE POSSÉDANT UN GROUPE AMINO

(84) Designated Contracting States:

**AL 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 RS SE SI SK SM TR**

• YODA, Tetsuya

Tokyo 113-8510 (JP)

• HAKARIYA, Masahiro

Tokyo 113-8510 (JP)

• MASUDA, Hiroki

Tokyo 113-8510 (JP)

(30) Priority: **26.11.2020 JP 2020196319**

(43) Date of publication of application:

04.10.2023 Bulletin 2023/40(74) Representative: **Gulde & Partner****Patent- und Rechtsanwaltskanzlei mbB****Berliner Freiheit 2****10785 Berlin (DE)**

(73) Proprietors:

• **Denka Company Limited****Tokyo 103-8338 (JP)**• **Institute of Science Tokyo****Tokyo 152-8550 (JP)**

(56) References cited:

EP-A1- 1 419 791**WO-A1-03/074099****WO-A1-2017/039294****WO-A1-2017/191827****JP-A- 2006 094 799**

(72) Inventors:

• **AOYAMA SEKIYA, Ruriko****Tokyo 103-8338 (JP)**• **ARISAKA, Yoshinori****Tokyo 113-8510 (JP)**• **YUI, Nobuhiko****Tokyo 113-8510 (JP)**• **IWATA, Takanori****Tokyo 113-8510 (JP)**

• **ATSUSHI TAMURA ET AL: "Supramolecular flower micelle formation of polyrotaxane-containing triblock copolymers prepared from macro-chain transfer agents bearing molecular hooks", POLYMER CHEMISTRY, vol. 5, no. 15, 1 January 2014 (2014-01-01), Cambridge, pages 4511, XP055363882, ISSN: 1759-9954, DOI: 10.1039/c4py00379a**

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 4 253 446 B8

- ARISAKA YOSHINORI ET AL: "Tethered bone morphogenetic protein-2 onto sulfonated-polyrotaxane based surfaces promotes osteogenic differentiation of MC3T3-E1 cells", JOURNAL OF BIOMATERIALS SCIENCE. POLYMER EDITION, VSP, UTRECHT, NL, vol. 28, no. 10-12, 13 August 2017 (2017-08-13), pages 974 - 985, XP009536866, ISSN: 0920-5063, DOI: 10.1080/09205063.2017.1319095
- RAJENDRAN ARUN KUMAR ET AL: "Sulfonated Polyrotaxane Surfaces with Basic Fibroblast Growth Factor Alter the Osteogenic Potential of Human Mesenchymal Stem Cells in Short-Term Culture", HHS AUTHOR MANUSCRIPTS, vol. 5, no. 11, 11 November 2019 (2019-11-11), US, pages 5652 - 5659, XP055869712, Retrieved from the Internet <URL:<https://pubs.acs.org/doi/pdf/10.1021/acsbiomaterials.8b01343>> DOI: 10.1021/acsbiomaterials.8b01343
- MASUDA HIROKI ET AL: "Biological Effects of Polyrotaxane Surfaces on Cellular Responses of Fibroblast, Preosteoblast and Preadipocyte Cell Lines", POLYMERS, vol. 12, no. 4, 16 April 2020 (2020-04-16), pages 924, XP055929406, Retrieved from the Internet <URL:<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7240480/pdf/polymers-12-00924.pdf>> DOI: 10.3390/polym12040924
- RAJENDRAN ARUN KUMAR, ARISAKA YOSHINORI, ISEKI SACHIKO, YUI NOBUHIKO: "Sulfonated Polyrotaxane Surfaces with Basic Fibroblast Growth Factor Alter the Osteogenic Potential of Human Mesenchymal Stem Cells in Short-Term Culture", HHS AUTHOR MANUSCRIPTS, NIH- NATIONAL LIBRARY OF MEDICINE, US, vol. 5, no. 11, 11 November 2019 (2019-11-11), US, pages 5652 - 5659, XP055869712, DOI: 10.1021/acsbiomaterials.8b01343