

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
02 November 2023 (02.11.2023)



(10) International Publication Number
WO 2023/209397 A1

(51) International Patent Classification:

C07K 14/47 (2006.01) C07K 1/34 (2006.01)
C07K 1/14 (2006.01) C07K 1/36 (2006.01)
C07K 1/30 (2006.01) C12N 5/00 (2006.01)

(21) International Application Number:

PCT/GB2023/051145

(22) International Filing Date:

28 April 2023 (28.04.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2206352.3 29 April 2022 (29.04.2022) GB

(71) Applicants: **AELIUS BIOTECH LIMITED** [GB/GB];

The Biosphere Draymans Way, Newcastle Helix, Newcastle Helix, Newcastle upon Tyne Tyne and Wear NE4 5BX (GB). **UNIVERSITY OF NEWCASTLE UPON TYNE** [GB/GB]; Kings Gate, Newcastle upon Tyne Tyne and Wear NE1 7RU (GB).

(72) Inventors: **CHATER, Peter**; c/o Aelius Biotech, Biospher,

Helix, Drayman's Way, Newcastle Upon Tyne Tyne and Wear NE4 5BX (GB). **WILCOX, Matthew**; c/o Aelius Biotech, Biospher, Helix, Drayman's Way, Newcastle Upon Tyne Tyne and Wear NE4 5BX (GB). **STANFORTH, Kyle**; c/o Aelius Biotech, Biospher, Helix, Drayman's Way, Newcastle Upon Tyne Tyne and Wear NE4 5BX (GB). **ZAKHOUR, Maria**; c/o Aelius Biotech, Biospher, Helix, Drayman's Way, Newcastle Upon Tyne Tyne and Wear NE4 5BX (GB). **PEARSON, Jeffrey**; c/o Aelius Biotech, Biospher, Helix, Drayman's Way, Newcastle Upon Tyne Tyne and Wear NE4 5BX (GB).

(74) Agent: **HGF LIMITED**; 1 City Walk, Leeds West Yorkshire LS11 9DX (GB).

(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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, 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).

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- of inventorship (Rule 4.17(iv))

Published:

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

(54) Title: PURIFIED MUCUS

(57) Abstract: The present invention relates to a purified, biocompatible mucus, which has the ability to form a gel. The mucus of the invention may be provided in a tissue model, with a cell population. The mucin or tissue model of the invention may be useful in an in vitro model of digestion, mucus permeation and/or epithelial transport.



WO 2023/209397 A1