

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
02 July 2020 (02.07.2020)



(10) International Publication Number
WO 2020/140101 A1

(51) International Patent Classification:

C12N 9/72 (2006.01) A61K 38/48 (2006.01)
C12N 15/52 (2006.01) A61K 38/49 (2006.01)
C12N 15/62 (2006.01)

(21) International Application Number:

PCT/US2019/068839

(22) International Filing Date:

27 December 2019 (27.12.2019)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

62/786,302 28 December 2018 (28.12.2018) US

(71) Applicant: CATALYST BIOSCIENCES, INC. [US/US];
611 Gateway Boulevard, Suite 710, South San Francisco,
CA 94080 (US).

(72) Inventors: MADISON, Edwin, L.; 558 48th Avenue, San
Francisco, CA 94121 (US). THANOS, Christopher; 38
Meadow Hill Drive, Tiburon, CA 94920 (US). SOROS,
Vanessa; 1945 Pacific Avenue, #4A, San Francisco, CA
94109 (US). POPKOV, Mikhail; 10812 Charbono Point,
San Diego, CA 92131 (US). TIPTON, Kimberly; 50 West
Broadway, Apt. 618, Boston, MA 02127 (US). TRAY-
LOR, Matthew, John; 2523 Broadway Street, Suite 301,
Boulder, CO 80304 (US). FURFINE, Eric, Steven; 221
Lincoln Road, Lincoln, MA 01773 (US). WAY, Jeffrey,
Charles; 108 Fayerweather Street, Cambridge, MA 02138
(US).

(74) Agent: SEIDMAN, Stephanie, L. et al.; DENTONS US
LLP, 4655 Executive Drive, Suite 700, San Diego, CA
92121 (US).

(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).

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))

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments (Rule 48.2(h))
- with sequence listing part of description (Rule 5.2(a))

(54) Title: MODIFIED UROKINASE-TYPE PLASMINOGEN ACTIVATOR POLYPEPTIDES AND METHODS OF USE

(57) Abstract: Provided are u-PA polypeptides and fusion proteins containing the u-PA polypeptides. The u-PA polypeptides are modified to have altered activity and/or specificity so that they cleave a complement protein, such as complement protein C3, to thereby inhibit complement activation. The modified u-PA polypeptides and fusion proteins that inhibit complement activation can be used for treatment of diseases and conditions that are mediated by complement activation, or in which complement activation plays a role. These disorders include ischemic and reperfusion disorders, including myocardial infarction and stroke, sepsis, autoimmune diseases, diabetic retinopathies, age-related macular degeneration, transplanted organ rejection, inflammatory diseases and diseases with an inflammatory component.



WO 2020/140101 A1