

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
10 April 2025 (10.04.2025)



(10) International Publication Number
WO 2025/076292 A1

(51) International Patent Classification:
G01N 33/566 (2006.01) *G01N 33/68* (2006.01)
C12Q 1/6883 (2018.01)

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

(21) International Application Number:
PCT/US2024/049885

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))

(22) International Filing Date:
04 October 2024 (04.10.2024)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/587,779 04 October 2023 (04.10.2023) US

(71) Applicant: **BIOAGE LABS, INC.** [US/US]; 1445A South
50th Street, Richmond, California 94804 (US).

(72) Inventors: **HUGHES, Robert**; 1402 Edith Street, Berkeley, California 94703 (US). **HARTMAN, George H.**; 1529 Tennis Circle, Lansdale, Pennsylvania 19446 (US). **HUMPHRIES, Paul**; 2087 Sharon Road, Menlo Park, California 94025 (US). **HO, Andrew**; 9904 Keeler Ave., Berkeley, California 94708 (US). **WILHELMSEN, Kevin Edward Leif**; c/o Bioage Labs, Inc., 1445A South 50th Street, Richmond, California 94804 (US). **COLL, Rebecca**; 311 Ormeau Road, Apartment 138, Belfast Antrim BT7 3GA (GB).

(74) Agent: **TRINQUE, Brian**; Lathrop GPM LLP, 28 State Street, Boston, Massachusetts 02109 (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, 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,

(54) Title: NLRP3 VARIANTS & LIBRARY SCREEN FOR NLRP3 INHIBITORS WITH THE SAME

(57) Abstract: The present invention relates to a NLRP3 variant comprising at least a partial deletion of the PYD. The present invention further relates to a method of screening for a compound that inhibits the NLRP3 inflammasome. The present invention further provides a method comprising the step of administering a compound identified by such a screening method to a subject with a NLRP3-associated inflammatory disorder.

WO 2025/076292 A1