

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
06 April 2023 (06.04.2023)



(10) International Publication Number
WO 2023/056424 A1

(51) International Patent Classification:
C12Q 1/6876 (2018.01) G01N 33/68 (2006.01)

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

(21) International Application Number:
PCT/US2022/077354

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))

(22) International Filing Date:
30 September 2022 (30.09.2022)

(25) Filing Language: English

(26) Publication Language: English

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))

(30) Priority Data:
63/251,028 30 September 2021 (30.09.2021) US
63/293,506 23 December 2021 (23.12.2021) US

(71) Applicant: **VENN BIOSCIENCES CORPORATION**
[US/US]; Two Tower Place, 5th Floor, South San Francisco,
CA 94080 (US).

(72) Inventors: **SERIE, Daniel**; c/o Venn Biosciences Corporation,
Two Tower Place, 5th Floor, South San Francisco,
CA 94080 (US). **XU, Gege**; c/o Venn Biosciences Corporation,
Two Tower Place, 5th Floor, South San Francisco,
CA 94080 (US).

(74) Agent: **SISTRUNK, Melissa**; Norton Rose Fulbright US
LLP, 555 California Street, Suite 3300, San Francisco, CA
94104 (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, 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, 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, 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,

(54) Title: SYSTEMS AND METHODS FOR GLYCOPEPTIDE CONCENTRATION DETERMINATION, NORMALIZED ABUNDANCE DETERMINATION, AND LC/MS RUN SAMPLE PREPARATION

(57) Abstract: Embodiments described herein generally relate to systems and methods for processing mass spectrometry samples. Aspects of the disclosure include systems and methods for processing samples. Additionally, embodiments of the disclosure can also include systems and methods for sample analysis. Various embodiments include data analysis systems and methods for comparing data across samples and sample runs. Data analysis systems can run normalization methods for normalizing raw abundance mass spectrometry data. In some aspects, the normalized data can be used as input for predictive models.



WO 2023/056424 A1