

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
19 July 2018 (19.07.2018)



(10) International Publication Number
WO 2018/132515 A1

(51) International Patent Classification:
A61B 5/15 (2006.01)

(21) International Application Number:
PCT/US2018/013223

(22) International Filing Date:
10 January 2018 (10.01.2018)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/444,764 10 January 2017 (10.01.2017) US
62/468,906 08 March 2017 (08.03.2017) US

(71) Applicant: **DRAWBRIDGE HEALTH, INC.** [US/US];
2882 Sand Hill Road, Suite 240, Menlo Park, California
94025 (US).

(72) Inventors: **BEYERLEIN, Dagmar**; 74 Mountain Spring
Avenue, San Francisco, California 94114 (US). **DREXEL,**

Masao; 149 Kittoe Drive, Unit B, Mountain View, California 94043 (US). **JORDAN, Brett L.**; 1325 Indiana Street, #107, San Francisco, California 94107 (US). **JACKSON, Alicia**; 2882 Sand Hill Road, Suite 240, Menlo Park, California 94025 (US). **JUNEAU, Kara**; 214 Durand Way, Palo Alto, California 90304 (US).

(74) Agent: **AU, Hin**; WILSON SONSINI GOODRICH & ROSATI, 650 Page Mill Road, Palo Alto, California 94304 (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,

(54) Title: DEVICES, SYSTEMS, AND METHODS FOR SAMPLE COLLECTION

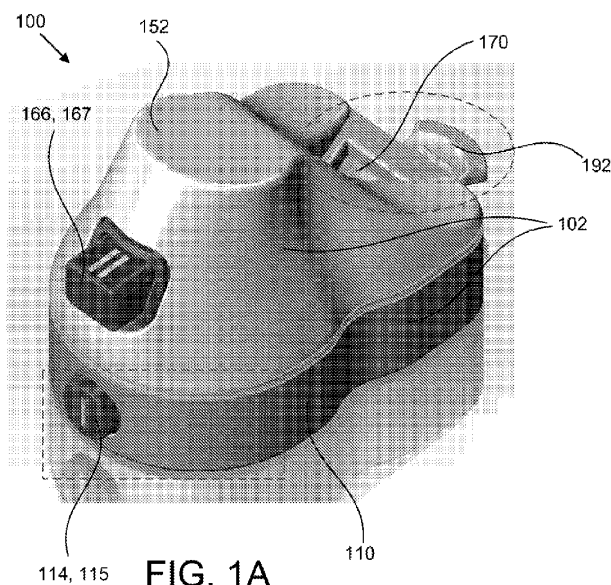


FIG. 1A

(57) Abstract: Disclosed herein are devices, apparatus, systems, methods and kits for collecting and storing a fluid sample from a subject. A device for collecting the fluid sample can include a housing comprising a recess having an opening, a vacuum chamber in the housing and in fluidic communication with the recess, and one or more piercing elements that are extendable through the opening to penetrate skin of the subject. The vacuum chamber can be configured for having a vacuum that draws the skin into the recess. The recess can be configured having a size or shape that enables an increased volume of the fluid sample to be accumulated in the skin drawn into the recess.

[Continued on next page]



WO 2018/132515 A1

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).

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))*