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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
5 November 2015 (05.11.2015)

WIPO | PCT

(10) International Publication Number
WO 2015/168342 A1

(51) International Patent Classification:
C12N 15/10 (2006.01)

(21) International Application Number:
PCT/US2015/028374

(22) International Filing Date:
29 April 2015 (29.04.2015)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/985,998 29 April 2014 (29.04.2014) US

(71) Applicant: **ACCUDX CORPORATION** [US/US]; 8806 Cliffridge Avenue, La Jolla, California 92037 (US).

(72) Inventor: **POTTATHIL, Raveendran**; c/o AccuDx Corporation, 8806 Cliffridge Avenue, La Jolla, California 92037 (US).

(74) Agents: **MORLEY, Marc T.** et al.; Foley & Lardner LLP, 3000 K Street N.W., Suite 600, Washington, District of Columbia 20007-5109 (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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, 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))*

(54) **Title**: A NOVEL AFFINITY MATRIX AND DEVICES FOR ISOLATION AND PURIFICATION OF RNA AND DNA FOR POINT OF CARE MOLECULAR DEVICES

(57) **Abstract**: The present disclosure relates to nucleic acid extraction and purification methods and devices to accomplish the same. The present disclosure proposes a novel approach to this problem wherein cell isolation and nucleic acid purification can be integrated in a single "step," by using the same solid phase for both cell adsorption and nucleic acid purification. This is achieved by binding the cells to a solid support as a first step. The same solid support is then used under conditions that lyse the bound cells, and then subsequently enable the nucleic acid to bind to the support. Methods of the present disclosure relate to the isolation of nucleic acid, and especially to a method for isolating DNA from cells, biological or environmental samples using antibiotics, which bind nucleic acids.

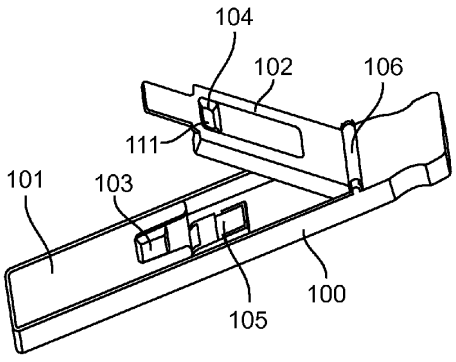


FIG. 1

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