

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
19 January 2012 (19.01.2012)

PCT

(10) International Publication Number
WO 2012/009026 A2

(51) International Patent Classification:

G01N 33/68 (2006.01) **C07K 1/00** (2006.01)
G06F 19/16 (2011.01)

(21) International Application Number:

PCT/US2011/027252

(22) International Filing Date:

4 March 2011 (04.03.2011)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/365,216 16 July 2010 (16.07.2010) US

(71) Applicant (for all designated States except US): **BIOAT-LA LLC** [US/US]; 10190 Telesis Court, San Diego, CA 92121-2719 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **SHORT, Jay, M.** [US/US]; 12985 Via Esperia, Del Mar, CA 92014 (US).

(74) Agent: **DUNLEAVY, Kevin, J.**; Knoble Yoshida & Dunleavy, LLC, 1628 John F. Kennedy Boulevard, Eight Penn Center, Suite 1350, Philadelphia, PA 19103 (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, 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, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, 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))
- of inventorship (Rule 4.17(iv))

Published:

- without international search report and to be republished upon receipt of that report (Rule 48.2(g))

(54) Title: NOVEL METHODS OF PROTEIN EVOLUTION

(57) Abstract: The present invention is relevant to proteins and novel methods of protein evolution. The present invention further relates to methods of identifying and mapping mutant polypeptides formed from, or based upon, a template polypeptide.



WO 2012/009026 A2