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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
2 February 2006 (02.02.2006)

PCT

(10) International Publication Number
WO 2006/012588 A2

(51) International Patent Classification:
C12Q 1/68 (2006.01) *G01N 33/558* (2006.01)
G01N 33/53 (2006.01)

(21) International Application Number:
PCT/US2005/026218

(22) International Filing Date: 25 July 2005 (25.07.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/590,631 23 July 2004 (23.07.2004) US

(71) Applicant *(for all designated States except US)*: **ASPEN-BIO, INC.** [US/US]; 1585 South Perry Street, Castle Rock, CO 80104 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **COLGIN, Mark, A.** [US/US]; 3376 Coyote Hills Way, Castle Rock, CO 80109 (US). **BEALER, John, F.** [US/US]; 9305 Poundstone Place, Englewood, CO 80111 (US). **DONNELLY, Richard** [US/US]; 2838 Garrett Drive, Fort Collins, CO 80526 (US). **NEWMAN, Diane** [US/US]; 1588 Rosemary Court, Castle Rock, CO 80109 (US).

(74) Agents: **WINNER, Ellen, P.** et al.; Greenlee, Winner and Sullivan, P.C., Suite 200, 4875 Pearl East Circle, Boulder, CO 80301 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2006/012588 A2

(54) Title: METHODS AND DEVICES FOR DIAGNOSIS OF APPENDICITIS

(57) Abstract: A method is provided for diagnosing appendicitis in a patient that includes identifying at least one symptom of appendicitis in the patient and identifying the presence of at least one molecule differentially associated with appendicitis in a fluid or tissue sample of said patient. MRP-8/14 and haptoglobin are examples of molecules differentially associated with appendicitis. Devices and kits for performing the appendicitis assays of this invention are also provided. In one embodiment, the device is in a flow-through immunoassay format for testing blood samples. Further, methods for screening for molecules differentially associated with appendicitis are provided that include the use of samples from patients being operated on for suspected appendicitis.