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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
15 April 2004 (15.04.2004)

PCT

(10) International Publication Number
WO 2004/031371 A2

(51) International Patent Classification[7]: C12N 5/08, G01N 33/50, A61K 35/12, A61L 27/38

(21) International Application Number: PCT/US2003/030649

(22) International Filing Date: 30 September 2003 (30.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/259,817 30 September 2002 (30.09.2002) US

(71) Applicant *(for all designated States except US)*: **BECTON, DICKINSON AND COMPANY** [US/US]; WAGNER, Jaconda, 1 Becton Drive, Franklin Lakes, NJ 07417 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **ROWLEY, Jon** [US/US]; 220 Finley Forest Drive, Chapel Hill, NC 27517 (US). **HEIDARAN, Mohammad** [US/US]; 207 Painted Fall Way, Cary, NC 27513 (US).

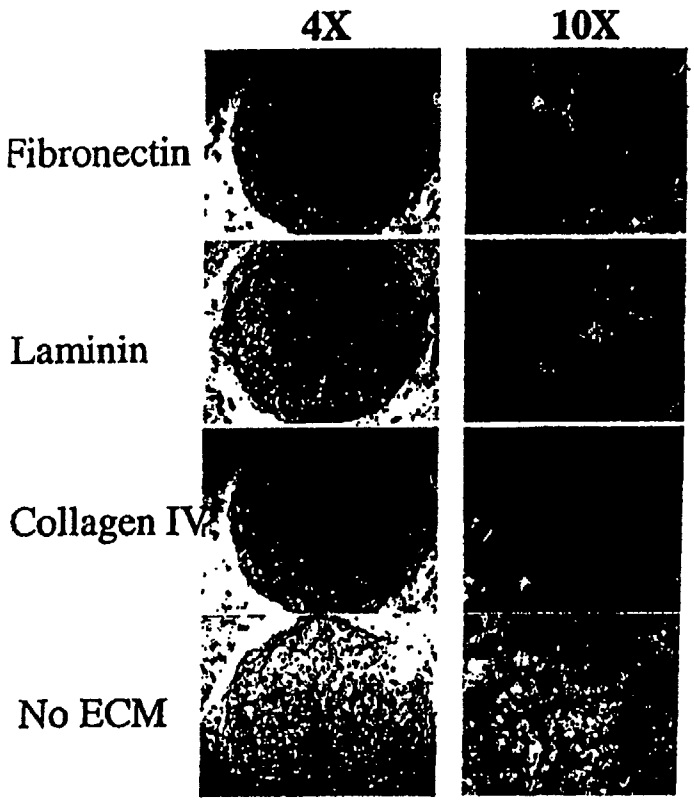
(74) Agent: **PATTON BOGGS LLP**; 8484 Westpark Drive, 9th Floor, McLean, VA 22102 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, 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, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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

[Continued on next page]

(54) Title: PROGRAMMABLE SCAFFOLD AND METHODS FOR MAKING AND USING THE SAME



(57) Abstract: The present invention relates to a programmable scaffold, which is a three-dimensional scaffold having interconnected pores and biologically active molecules physically entrapped therein. The scaffold is a lyophilized hydrogel of a polymer. The scaffold can be used in an array on a platform and loaded with various combinations of biologically active molecules for high throughput and parallel screening, as well as tissue engineering. The present invention also relates to methods for making and modifying the scaffolds.

WO 2004/031371 A2

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.