

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 August 2007 (09.08.2007)

PCT

(10) International Publication Number
WO 2007/090102 A3

(51) International Patent Classification:
C12N 5/00 (2006.01)

(21) International Application Number:
PCT/US2007/061253

(22) International Filing Date: 29 January 2007 (29.01.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/763,111 27 January 2006 (27.01.2006) US
60/804,350 9 June 2006 (09.06.2006) US
60/861,780 30 November 2006 (30.11.2006) US

(71) Applicant (for all designated States except US): **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; The Office of the President, 1111 Franklin Street, 12th Floor, Oakland, CA 94607-5200 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LI, Song** [CN/US]; 5 Westover Court, Orinda, CA 94563 (US). **PATEL, Shyam** [IN/US]; 270 Perkins Street, #301, Oakland, CA 94610 (US). **HASHI, Craig** [US/US]; 2228 McGee Avenue, Apt. A, Berkeley, CA 94703 (US). **HUANG, Ngan, Fong** [US/US]; 555 W. Middlefield Road, Apt. D304, Mountain

View, CA 94043 (US). **KURPINSKI, Kyle** [US/US]; 2313 Roosevelt Avenue, Apt.6, Berkeley, CA 94703 (US).

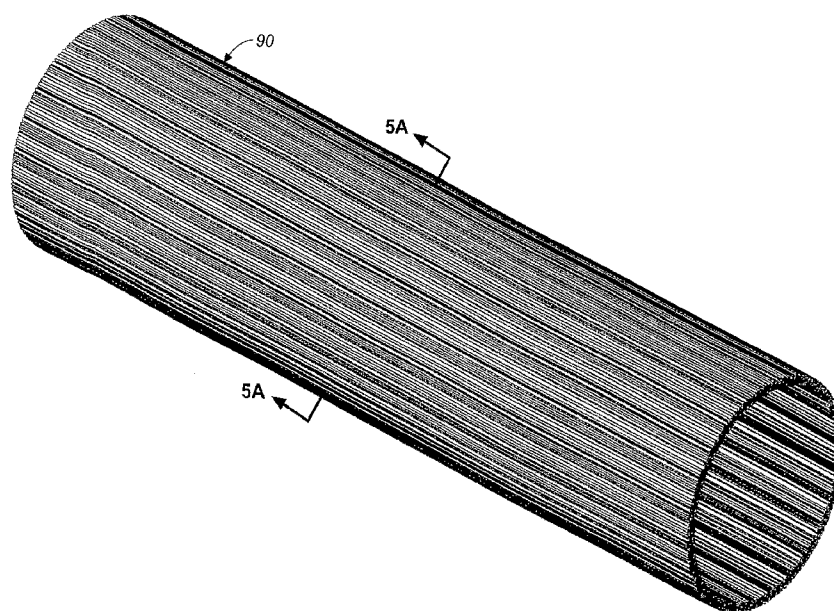
(74) Agents: **ESKER, Todd** et al.; Morgan Lewis & Bockius LLP, 2 Palo Alto Square, 3000 El Camino Real, Suite 700, Palo Alto, CA 94306 (US).

(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, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, 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, 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).

[Continued on next page]

(54) Title: BIOMIMETIC SCAFFOLDS



(57) Abstract: The invention provides a composition comprising a nanofiber polymer in which the fibers of the nanofiber polymer are aligned, and a molecule is covalently attached, either directly or through a linker, to the nanofiber polymer. This molecule is capable of either covalently or non-covalently attaching to a member selected from an extracellular matrix component, a growth factor, and combinations thereof. The invention also provides methods of making the composition and methods of using the compositions to add new tissue to a subject, such as a human.

WO 2007/090102 A3



Published:

— *with international search report*

(88) Date of publication of the international search report:

13 March 2008