

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 August 2007 (30.08.2007)

PCT

(10) International Publication Number
WO 2007/098150 A3

(51) International Patent Classification:
C12N 1/12 (2006.01) *C12M 1/02* (2006.01)

(21) International Application Number:
PCT/US2007/004351

(22) International Filing Date:
20 February 2007 (20.02.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/775,174 21 February 2006 (21.02.2006) US
60/799,930 12 May 2006 (12.05.2006) US

(71) Applicant (for all designated States except US): **THE ARIZONA BOARD OF REGENTS, A BODY CORPORATE ACTING on behalf of ARIZONA STATE UNIVERSITY** [US/US]; 699 S. Mill Avenue, The Brickyard, Suite 601, Room 691AA, Tempe, AZ 85281 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HU, Qiang** [CN/US]; 2114 E. Ebony Drive, Chandler, AZ 85249 (US). **SUMMERFELD, Milton** [US/US]; 1840 W. Rockrose Drive, Chandler, AZ 85248 (US).

(74) Agent: **HARPER, David, S.**; McDonnell Boehnen Hulbert & Berghoff LLP, 300 South Wacker Drive, Suite 3100, Chicago, IL 60606 (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).

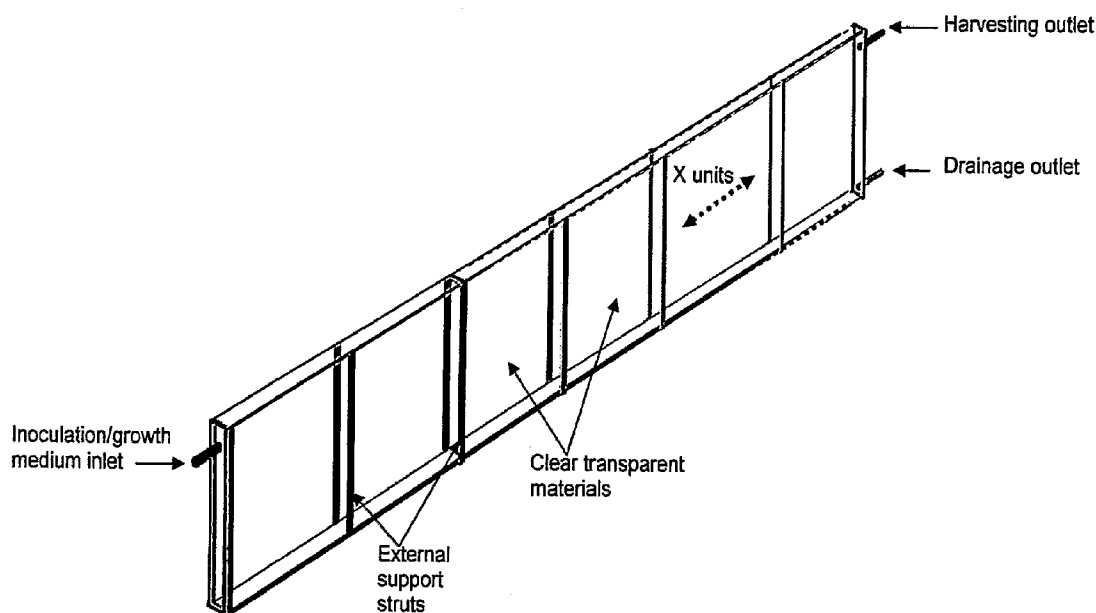
Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
13 December 2007

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.

(54) Title: PHOTOBIOREACTOR AND USES THEREFOR



(57) Abstract: The present invention provides novel photobioreactors, modules thereof, and methods for use in culturing and harvesting algae and cyanobacteria.

WO 2007/098150 A3