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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
22 February 2007 (22.02.2007)

PCT

(10) International Publication Number
WO 2007/020643 A2

(51) International Patent Classification:
A61B 6/00 (2006.01)

(21) International Application Number:
PCT/IL2006/000954

(22) International Filing Date: 16 July 2006 (16.07.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/708,389 16 August 2005 (16.08.2005) US

(71) Applicant *(for all designated States except US)*: **PASSIVE IMAGING MEDICAL SYSTEMS ENGINEERING LTD.** [IL/IL]; 10 Dubnov St., 67300 Tel Aviv (IL).

(71) Applicant and
(72) Inventor: **SMOLIAK, Yafim** [IL/IL]; 49/30 Tzahal St., 55451 Kiriat Ono (IL).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **ZILBERMAN, Arkadii** [IL/IL]; 36 Zalman Aranne St., 84789 Beer Sheba (IL). **BLAUNSHTEIN, Nathan** [IL/IL]; 17/30 Alfassi, 84751 Beer Sheva (IL). **DEKEL, Ben Zion** [IL/IL]; 11 Levitas St., 38494 Hadera (IL). **YARKONY, Avraham** [IL/IL]; 19 Ehud St., 84234 Beer Sheba (IL).

(74) Agent: **FRIEDMAN, Mark**; 7 Jabotinsky St., 52520 Ramat Gan (IL).

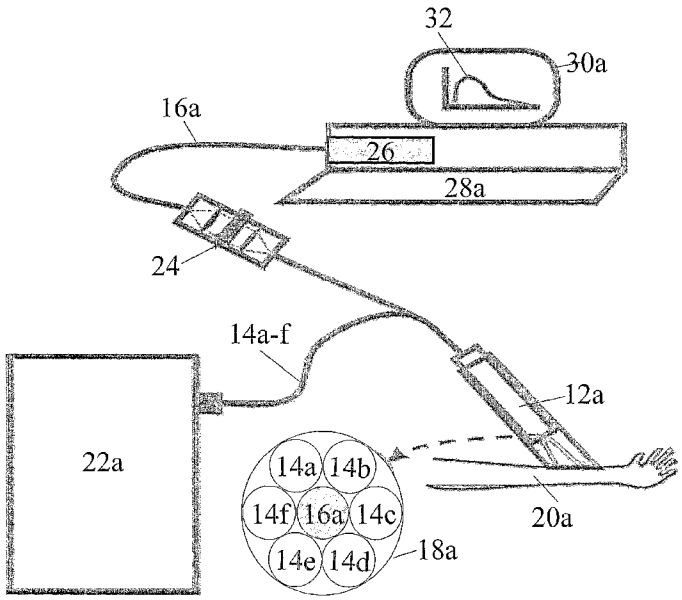
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, 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:
— *without international search report and to be republished upon receipt of that report*

[Continued on next page]

(54) **Title:** COMBINED VISUAL-OPTIC AND PASSIVE INFRA-RED TECHNOLOGIES AND THE CORRESPONDING SYSTEM FOR DETECTION AND IDENTIFICATION OF SKIN CANCER PRECURSORS, NEVI AND TUMORS FOR EARLY DIAGNOSIS



(57) **Abstract:** A device and method to non-invasively identify pathological skin lesions. The method and device detect and identify of different kinds of skin nevi, tumors, lesions and cancers (namely, melanoma) by combined analyses of visible and infra-red optical signals based on integral and spectral regimes for detection and imaging leading earlier warning and treatment of potentially dangerous conditions.

WO 2007/020643 A2

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.