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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
16 August 2001 (16.08.2001)

PCT

(10) International Publication Number
WO 01/59085 A1

(51) International Patent Classification[7]: C12N 13/00

(21) International Application Number: PCT/US01/04113

(22) International Filing Date: 8 February 2001 (08.02.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/502,910 11 February 2000 (11.02.2000) US

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(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, 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, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, 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*

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.

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(54) Title: PROTECTING MOLECULES IN BIOLOGICALLY DERIVED COMPOSITIONS WHILE TREATING WITH BROAD-SPECTRUM PULSED LIGHT

(57) Abstract: Methods for protection of a biomolecule of interest in a biologically derived composition to be subjected to illumination with at least one high-intensity, short duration pulse of incoherent polychromatic light in a broad spectrum (BSPL). Such compositions are supplemented with albumin and then illuminated so that, in the resultant treated compositions, biomolecules of interest remain biologically active as a result of the protection provided by albumin, while the BSPL has exerted its desired effect upon the composition. For example, an active pathogen or other toxin content may have been very substantially reduced, or living cells, e.g. tumorous cells or genetically engineered eukaryotic cells, may have been killed, or a photo-activatable protein may have been rendered active. The biologically derived composition can be a product from a genetically engineered cell line or the like, or it may be a fraction of or an isolate from human or animal sera.