REVISED VERSION*

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

17 SEP 2002

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : C12N 9/02, 15/54, 15/10, 15/62, C07K 16/28, A23L 1/03, A61K 7/00, F41C 3/00, C12G 1/00, 3/00, F21S 10/00

A3

(11) International Publication Number: **WO 99/49019**

(43) International Publication Date: 30 September 1999 (30.09.99)

(21) International Application Number: PCT/US99/06698

(22) International Filing Date: 26 March 1999 (26.03.99)

(30) Priority Data:

60/079,624	27 March 1998 (27.03.98)	US
60/089,367	15 June 1998 (15.06.98)	US
60/102,939	1 October 1998 (01.10.98)	US

(63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Applications

US	60/079,624 (CIP)
Filed on	27 March 1998 (27.03.98)
US	60/089,367 (CIP)
Filed on	15 June 1998 (15.06.98)
US	60/102,939 (CIP)
Filed on	1 October 1998 (01.10.98)

(71) Applicant *(for all designated States except US)*: PROLUME, LTD. [US/US]; 1085 William Pitt Way, Pittsburgh, PA 15236 (US).

(71)(72) Applicant and Inventor: BRYAN, Bruce, J. [US/US]; 716 N. Arden Drive, Beverly Hills, CA 90210 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: SZENT-GYORGYI, Christopher [US/US]; 719 Duncan Avenue, Pittsburgh, PA 15237 (US).

(74) Agent: SEIDMAN, Stephanie, L.; Heller Ehrman White & McAuliffe, Suite 700, 4250 Executive Square, La Jolla, CA 92037 (US).

(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, 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, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, 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), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published

With a revised version of the international search report.

(88) Date of publication of the international search report: 29 June 2000 (29.06.00)

(88) Date of publication of the revised version of the international search report: 8 September 2000 (08.09.00)

(54) Title: LUCIFERASES, FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE LUCIFERASES AND FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS

(57) Abstract

Isolated and purified nucleic acid molecules that encode a luciferase from *Renilla mulleri*, *Gaussia* and *Pleuromamma*, and the proteins encoded thereby are provided. Isolated and purified nucleic acids encoding green fluorescent proteins from the genus *Renilla* and *Ptilosarcus*, and the green fluorescent proteins encoded thereby are also provided. Compositions and combinations comprising the green fluorescent proteins and/or the luciferase are further provided.



G00002



162162