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(71) Applicant *(for all designated States except US):* **UNIVER¬ SITY** OF **MASSACHUSETTS** [US/US]; 225 Franklin Street, 12th Floor, Boston, Massachusetts 02110 (US).

(72) Inventor; and
(75) Inventor/Applicant *(for US only):* **MILLER, Stephen, C.** [US/US]; 142 Pearl St. #3, Cambridge, Massachusetts 02139 (US).

(74) Agents: **FASSE, J. Peter** et al.; Fish & Richardson P.C., P.O. Box 1022, Minneapolis, Minnesota 55440-1022 (US).

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— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(Hi))*

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(54) Title: RED-SHIFTED LUCIFERASE

(57) Abstract: The compositions described herein shift the light output of luciferases to the near-IR by resonance energy transfer to a targetable near-IR fluorophore.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC **CI2Q I/68(** 2006 **0 1),G0IN 33/53(** 2006 **0 1),C07H 21/04(** 2006 **01),C07D 265/38(** 2006 0I),C07K **16/46(** 2006 01)

USPC 435/6,435/7 1,530/391 1,536/24 3,544/103

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U S 435/6, 435/7 1, 530/391 1, 536/24 3, 544/103

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
CAS Online, Medline, EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	US 5,149,807 (Hammond et al) 22 September 1992 (22 09 1992), column 1, 4	1-18
Y	US 2003/0224421 A1 (Herrmann et al) 4 December 2003 (04 12 2003), paragraphs [0012]-[0053], [0070]	
Y	US 2005/0176065 A1 (G T Hanson) 11 August 2005 (11 08 2005), figures 1-17, paragraphs [0009]-[0019], [0136], [01 81], [0194]-[0206]	1-35
Y	US 5,932,474 (Tsien et al) 3 August 1999 (03 08 1999), figures 1-10, column 2, lines 16-40, Examples 1-5	1-35
Y	B A Griffin, S R Adams, R Y Tsien, Specific covalent labeling of recombinant protein molecules inside live cells, Science, 1998, vol 281, pp 269-272	27-31
Y	Y Xu, D W Piston, C H Johnson, A bioluminescence resonance energy transfer (BRET) system Application to interacting circadian clock proteins, Proc Natl Acad Sci USA, January 1999, vol 96, pp 151-156	36-39

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Name and mailing address of the ISA/US
Mail Stop PCT, Attn ISA/US
Commissioner of Patents
P O Box 1450
Alexandria, Virginia 22313-1450
Facsimile No (571) 273-3201

Authorized officer
Yvonne Eyle

Telephone No 571-272-9000

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