



(12) **CORRECTED EUROPEAN PATENT APPLICATION**

(15) Correction information:
Corrected version no 1 (W1 A2)
Corrections, see
Bibliography INID code(s) 84

(51) Int Cl.:
C12N 9/02 (2006.01) A01H 4/00 (2006.01)

(48) Corrigendum issued on:
02.06.2010 Bulletin 2010/22

(43) Date of publication:
17.06.2009 Bulletin 2009/25

(21) Application number: **08013254.1**

(22) Date of filing: **26.10.1999**

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GR IE IT LI LU MC NL PT SE

(30) Priority: **28.10.1998 GB 9823468**

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
99950990.4 / 1 124 944

(71) Applicant: **Promega Corporation**
Madison, WI 53711-5399 (US)

(72) Inventors:
• **Squirrel, David James**
Salisbury, Wiltshire SP43 0JQ (GB)
• **Murphy, Melenie Jane**
Salisbury, Wiltshire SP4 0JQ (GB)
• **Leslie, Rachel Louise**
Wiltshire SP4 0JQ (GB)
• **Lowe, Christopher Robin**
Cambridge CB2 1QT (GB)

• **White, Peter John**
Salisbury, SP4 0JQ
Wiltshire (GB)
• **Tisi, Laurence Carlo**
Cambridge CB2 4AT (GB)
• **Murray, James Augustus Henry**
Cambridge CB2 4AT (GB)

(74) Representative: **Greaves, Carol Pauline et al**
Greaves Brewster LLP
Indigo House
Cheddar Business Park
Wedmore Road
Cheddar, Somerset BS27 3EB (GB)

Remarks:

- Claims 16 - 30 are deemed to be abandoned due to non-payment of the claims fees (Rule 45(3) EPC).
- This application was filed on 23-07-2008 as a divisional application to the application mentioned under INID code 62.

(54) **Novel enzyme**

(57) A protein having luciferase activity and at least 60% similarity to luciferase from *Photinus pyralis*, *Luciola mingrelica*, *Luciola cruciata* or *Luciola lateralis*, *Hotaria paroula*, *Pyrophorus plagiophthalmus*, *Lampyrus noctiluca*, *Pyrocoelia nayako* or *Photinus pennsylvanicus*, wherein in the sequence of the enzyme, at least one of
(a) the amino acid residue corresponding to residue 214 in *Photinus pyralis* luciferase;
(b) the amino acid residue corresponding to residue 232 in *Photinus pyralis* luciferase;
(c) the amino acid residue corresponding to residue 295 in *Photinus pyralis* luciferase;
(d) the amino acid residue corresponding to amino acid

14 of the *Photinus pyralis* luciferase;
(e) the amino acid residue corresponding to amino acid 35 of the *Photinus pyralis* luciferase;
(f) the amino acid residue corresponding to amino acid residue 105 of the *Photinus pyralis* luciferase;
(g) the amino acid residue corresponding to amino acid residue 234 of the *Photinus pyralis* luciferase;
(h) the amino acid residue corresponding to amino acid residue 420 of the *Photinus pyralis* luciferase;
(i) the amino acid residue corresponding to amino acid residue 310 of the *Photinus pyralis* luciferase;
is different to the amino acid which appears in the corresponding wild type sequence and wherein the luciferase

EP 2 071 023 A8

enzyme has increased thermostability as compared to an enzyme having the amino acid of the corresponding

wild-type luciferase at this position.