

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 00/64988 A1 (MOLECULAR PROBES INC [US]) 2 November 2000 (2000-11-02) * page 27; compound L * * claim 1 *	1,3, 10-15,20	INV. C07D493/10 C07D405/00 C07D491/00 C07D405/14
X	WO 97/39064 A1 (MOLECULAR PROBES INC [US]) 23 October 1997 (1997-10-23) * page 5; claim 17 * * page 36 - page 37; examples 51-55; table 7 *	1,3, 10-20	C07D311/82 C07D311/00 G01N21/64 G01N21/77 G01N33/533
X	US 2005/214807 A1 (JOHNSON IAIN [US] ET AL) 29 September 2005 (2005-09-29) * page 10; claim 1 *	1,3, 10-20	
X	US 2006/293523 A1 (FILOSA MICHAEL P [US] ET AL) 28 December 2006 (2006-12-28) * page 6, paragraph 83 - paragraph 84; examples III-IV *	1,3,11	
X	US 2004/171817 A1 (ALLEN RICHARD M [US] ET AL) 2 September 2004 (2004-09-02) * paragraph [0085]; table III *	1,3,12	TECHNICAL FIELDS SEARCHED (IPC) C07D
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search Munich		Date of completion of the search 4 April 2011	Examiner Lewis, Sara
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

- Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):
- No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:
- The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 3, 16(completely); 1, 10-15, 17-20(partially)

Compounds of formula I where L has formula II and their use  
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2. claims: 4(completely); 1, 10-14, 17-20(partially)

Compounds of formula I where L has formula III and their use  
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3. claims: 5(completely); 1, 2, 10-14, 17-20(partially)

Compounds of formula I where L has formula IV and their use  
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4. claims: 6(completely); 1, 2, 10-14, 17-20(partially)

Compounds of formula I where L has formula V and their use  
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5. claims: 7, 8(completely); 1, 2, 10-15, 17-20(partially)

Compounds of formula I where L has formula VI or XX and  
their use  
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6. claims: 9(completely); 1, 2, 10-12, 14, 17-20(partially)

Compounds of formula I where L has formula XXI and their use  
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The current application relates to six different inventions:-

1. Compounds of formula I where L has formula II and their use (claim 1 (part), 3, 10-15 (part), 16, 17-20 (part));

2. Compounds of formula I where L has formula III and their use (claim 1(part), 4, 10-14 (part), 17-20 (part));

3. Compounds of formula I where L has formula IV and their use (claims 1-2 (part), 5, 10-14 (part), 17-20 (part));

4. Compounds of formula I where L has formula V and their use (claims 1-2 (part), 6, 10-14 (part), 17-20 (part));

5. Compounds of formula I where L has formula VI or formula XX and their use (claims 1-2 (part), 7-8, 10-15 (part), 17-20 (part)); and

6. Compounds of formula I where L has formula XXI and their use (claims 1-2 (part), 9, 10-12 (part), 14 (part), 17-20 (part)).

The present application is directed to substituted xanthene derivatives and their use as luminescence quenchers and/or fluorogenic probes. For the purposes of unity of invention, Article 82 EPC states that a European patent application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept.

However a non-exhaustive preliminary search has revealed that substituted xanthenes of formula I where L has formula V are already known as

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

luminescence quenchers e.g. W000/64988. In view of the said prior art, the problem to be solved by the present application may be seen to be as the provision of further compounds for use as luminescence quenchers and/or fluorogenic probes. Thus the subject matter of the claims offers divergent solutions to this problem. The person skilled in the art may consider the following different approaches:

- a) the provision of compounds of formula I where L has formula II;
  - b) the provision of compounds of formula I where L has formula III;
  - c) the provision of compounds of formula I where L has formula IV;
  - d) the provision of compounds of formula I where L has formula V;
  - e) the provision of compounds of formula I where L has formula VI or XX;
- and

f) the provision of compounds of formula I where L has formula XXI.

The significant structural element shared by the alternatives in claim 1 is that they contain a xanthene ring of formula V. However the said significant structural element cannot be considered as being a special technical feature within the meaning of Rule 44 EPC, since it is already known from e.g. W000/64988 and therefore does not make a contribution to the art. Furthermore the significant structural element shared by formula II and III, namely the spiro ring, cannot be considered as being a special technical feature within the meaning of Rule 44 EPC, since the tautomer IIa is already known from e.g. W000/64988 and therefore does not make a contribution to the art.

As no other technical link can be seen among the different groups of inventions, there is a lack of unity within the meaning of Article 82 EPC and as the inventions do not share a common inventive concept, they have to be formulated as different subjects pursuant to Rule 164(2) EPC.

In accordance with Rule 164(1) EPC the supplementary search report has been drawn up for those parts of the application which relate to the invention, or group of inventions, first mentioned in the claims. The applicant is invited to limit the application to the invention covered by the European supplementary search report. The subject-matter to be excised may be made the subject of one or more divisional applications according to Rule 36 EPC. The divisional applications must be filed with the European Patent Office in Munich, The Hague or Berlin and shall be filed in the language of the proceedings relating to the present application (cf. Article 76(1) and Rule 36(2) EPC). The time limit for filing divisional applications (Rule 36(1) EPC) must be observed.

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 09 72 8917

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-04-2011

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