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(71) Applicant: **Bundesrepublik Deutschland, vertr. d.d. Bundesministerium f. Wirtschaft- und Technologie, dieses vertr. d.d. Präs. d. Phys.-Techn. Bundesanstalt 38116 Braunschweig (DE)**

(72) Inventors:
• **Licha, Kai 14612 Falkensee (DE)**

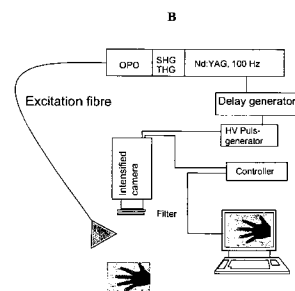
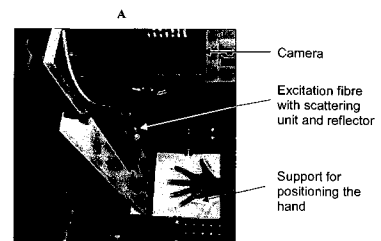
- **Schirner, Michael 14612 Falkensee13158 Berlin (DE)**
- **Vollmer, Sonja 14532 Kleinmachnow (DE)**
- **Fischer, Thomas 12249 Berlin (DE)**
- **Gemeinhardt, Ines 13509 Berlin (DE)**
- **Macdonald, Rainer 13593 Berlin (DE)**
- **Ebert, Bernd 16348 Marienwerder (DE)**
- **Scholz, Matthias 15838 Am Mellensee (DE)**
- **Mory, David 12489 Berlin (DE)**

(74) Representative: **Vossius & Partner et al P.O. Box 86 07 67 81634 München (DE)**

(54) **Optical imaging of rheumatoid arthritis**

(57) The present invention concerns the use of indo-cyanine dyes, in particular indotricyanine dyes for the diagnosis of inflammatory diseases, in particular rheumatoid arthritis, methods of diagnosing inflammatory diseases and an apparatus useful to carry out the method of diagnosing.

Fig. 1



EP 1 745 739 A3



EUROPEAN SEARCH REPORT

Application Number
EP 06 01 9475

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Place of search The Hague		Date of completion of the search 16 March 2009	Examiner Villard, Anne-Laure
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12
EPO FORM 1503 03.82 (P04C01)



EUROPEAN SEARCH REPORT

Application Number
EP 06 01 9475

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EPO FORM 1503 03.82 (F04C01)



EUROPEAN SEARCH REPORT

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Place of search The Hague		Date of completion of the search 16 March 2009	Examiner Villard, Anne-Laure
CATEGORY OF CITED DOCUMENTS 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		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 & : member of the same patent family, corresponding document	

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EPO FORM 1503 03.02 (P04/C01)



EUROPEAN SEARCH REPORT

Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT				
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The present search report has been drawn up for all claims				
Place of search The Hague		Date of completion of the search 16 March 2009	Examiner Villard, Anne-Laure	
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12
EPO FORM 1503 03/82 (P04C01)



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EP 06 01 9475

DOCUMENTS CONSIDERED TO BE RELEVANT			
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A	<p>----- PAROLI M P ET AL: "CHORIORETINOPATHY AND DISCOID PLAQUE-LIKE LESIONS OF THE EYELIDS AS USEFUL INDICATORS OF SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) PROGRESSION" LUPUS, BASINGSTOKE, GB, vol. 10, no. 8, 1 January 2001 (2001-01-01), pages 571-575, XP008055809 ISSN: 0961-2033 * abstract *</p>		
A	<p>----- ACHILEFU S: "OPTICAL IMAGING AGENTS AND POTENTIAL APPLICATION IN THE ASSESSMENT OF PANCREATIC BETA CELLS" CURRENT MEDICINAL CHEMISTRY. IMMUNOLOGY, ENDOCRINE AND METABOLICAGENTS, XX, XX, vol. 4, no. 4, 1 January 2004 (2004-01-01), pages 253-269, XP008055820 ISSN: 1568-0134 * abstract * * page 259, column 1, lines 5,6 * ----- -/--</p>		
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 16 March 2009	Examiner Villard, Anne-Laure
<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 ----- & : member of the same patent family, corresponding document</p>	

12

EPO FORM 1503 03 82 (P04C01)



EUROPEAN SEARCH REPORT

Application Number
EP 06 01 9475

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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T	POGUE ET AL: "Near-Infrared Characterization of Disease via Vascular Permeability Probes<1>" ACADEMIC RADIOLOGY, RESTON, VA, US, vol. 13, no. 1, 1 January 2006 (2006-01-01), pages 1-3, XP025153150 ISSN: 1076-6332 [retrieved on 2006-01-01] * the whole document *	6-31	
			TECHNICAL FIELDS SEARCHED (IPC)
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 16 March 2009	Examiner Villard, Anne-Laure
CATEGORY OF CITED DOCUMENTS 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		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 & : member of the same patent family, corresponding document	

12

EPO FORM 1503 03/02 (P04C01)



Application Number

EP 06 01 9475

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).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

EP 06 01 9475

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: 1-5 and 10,30;6-9,11-29,31 (partially)

1.1. claims: 1-5

device for diagnosing an inflammatory disease

1.2. claims: 10,30;6-9,11-29,31 (partially)

Method of diagnosing arthritis by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of arthritis.

2. claims: 6-9,11-29,31 (partially)

Method of diagnosing inflammatory bowel disease by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of inflammatory bowel disease.

3. claims: 6-9,11-29,31 (partially)

Method of diagnosing septic shock by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of septic shock.

4. claims: 6-9,11-29,31 (partially)

Method of diagnosing osteoporosis by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of osteoporosis.

5. claims: 6-9,11-29,31 (partially)

Method of diagnosing neuropathic pain by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of neuropathic pain.

6. claims: 6-9,11-29,31 (partially)



LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 06 01 9475

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:

Method of diagnosing viral infection by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of viral infection.

7. claims: 6-9,11-29,31 (partially)

Method of diagnosing bacterial infection by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of bacterial infection.

8. claims: 6-9,11-29,31 (partially)

Method of diagnosing insulin-dependent diabetes by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of insulin-dependent diabetes.

9. claims: 6-9,11-29,31 (partially)

Method of diagnosing non insulin-dependent diabetes by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of non insulin-dependent diabetes.

10. claims: 6-9,11-29,31 (partially)

Method of diagnosing periodontal disease by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of periodontal disease.

11. claims: 6-9,11-29,31 (partially)

Method of diagnosing restenosis by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of restenosis.

12. claims: 6-9,11-29,31 (partially)

Method of diagnosing alopecia areata by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of alopecia areata.



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

EP 06 01 9475

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:

13. claims: 6-9,11-29,31 (partially)

Method of diagnosing psoriasis by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of psoriasis.

14. claims: 6-9,11-29,31 (partially)

Method of diagnosing acute pancreatitis by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of acute pancreatitis.

15. claims: 6-9,11-29,31 (partially)

Method of diagnosing allograft rejection by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of allograft rejection.

16. claims: 6-9,11-29,31 (partially)

Method of diagnosing allergies by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of allergies.

17. claims: 6-9,11-29,31 (partially)

Method of diagnosing allergic inflammation in the lung by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of allergic inflammation in the lung.

18. claims: 6-9,11-29,31 (partially)

Method of diagnosing atherosclerosis by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of atherosclerosis.

19. claims: 6-9,11-29,31 (partially)



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

EP 06 01 9475

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:

Method of diagnosing multiple sclerosis by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of multiple sclerosis.

20. claims: 6-9,11-29,31 (partially)

Method of diagnosing cachexia by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of cachexia.

21. claims: 6-9,11-29,31 (partially)

Method of diagnosing Alzheimer's disease by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of Alzheimer's disease.

22. claims: 6-9,11-29,31 (partially)

Method of diagnosing stroke by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of stroke.

23. claims: 6-9,11-29,31 (partially)

Method of diagnosing Crohn's disease by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of Crohn's disease.

24. claims: 6-9,11-29,31 (partially)

Method of diagnosing ischemia by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of ischemia.

25. claims: 6-9,11-29,31 (partially)

Method of diagnosing congestive heart failure by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of congestive heart failure.



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

EP 06 01 9475

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:

26. claims: 6-9,11-29,31 (partially)

Method of diagnosing pulmonary fibrosis by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of pulmonary fibrosis.

27. claims: 6-9,11-29,31 (partially)

Method of diagnosing hepatitis by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of hepatitis.

28. claims: 6-9,11-29,31 (partially)

Method of diagnosing Guillain-Barre Syndrome by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of Guillain-Barre Syndrome.

29. claims: 6-9,11-29,31 (partially)

Method of diagnosing systemic lupus erythematosus by fluorescence using an indocarbocyanine dye; use of an indocarbocyanine dye for the manufacture of a medicament for the diagnosis of systemic lupus erythematosus.

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

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

EP 06 01 9475

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	类风湿性关节炎的光学成像		
公开(公告)号	EP1745739A3	公开(公告)日	2009-04-22
申请号	EP2006019475	申请日	2005-07-14
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当前申请(专利权)人(译)	德意志联邦共和国, VERTR. D. D.联邦F.经济技术, 这VERTR. D. D. PRES. D.物理TECHN.慕尼黑 Bundesanstalt		
[标]发明人	LICHA KAI SCHIRNER MICHAEL VOLLMER SONJA FISCHER THOMAS GEMEINHARDT INES MACDONALD RAINER EBERT BERND SCHOLZ MATTHIAS MORY DAVID		
发明人	LICHA, KAI SCHIRNER, MICHAEL VOLLMER, SONJA FISCHER, THOMAS GEMEINHARDT, INES MACDONALD, RAINER EBERT, BERND SCHOLZ, MATTHIAS MORY, DAVID		
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摘要(译)

本发明涉及吲哚菁染料,特别是吲哚菁染料用于诊断炎性疾病,特别是类风湿性关节炎,诊断炎性疾病的方法和用于实施诊断方法的装置的用途。

Fig. 1

