



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁶ : C07C 309/51, 309/47, C07D 213/81, 213/82, A61K 31/185, 31/395, C07D 241/24, 333/38, C07C 311/21</p>	A3	<p>(11) International Publication Number: WO 97/19916</p> <p>(43) International Publication Date: 5 June 1997 (05.06.97)</p>
<p>(21) International Application Number: PCT/JP96/03458</p> <p>(22) International Filing Date: 26 November 1996 (26.11.96)</p> <p>(30) Priority Data: 08/564,443 29 November 1995 (29.11.95) US</p> <p>(71) Applicant: FUJI PHOTO FILM CO., LTD. [JP/JP]; 210, Nakanuma, Minami-Ashigara-shi, Kanagawa-ken 250-01 (JP).</p> <p>(72) Inventors: AOKI, Mario; Fuji Photo Film Co., Ltd., 210, Nakanuma, Minami-Ashigara-shi, Kanagawa-ken 250-01 (JP). NISHIKAWA, Naoyuki; Fuji Photo Film Co., Ltd., 210, Nakanuma, Minami-Ashigara-shi, Kanagawa-ken 250- 01 (JP). WU, Yaming; 14 Callender Street, No. 1, Cambridge, MA 02139 (US).</p> <p>(74) Agents: OGAWA, Nobuo et al.; Shin-Tokyo Building, Room 646, 3-1, Marunouchi 3-chome, Chiyoda-ku, Tokyo 100 (JP).</p>	<p>(81) Designated States: CA, JP, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).</p> <p>Published <i>With international search report.</i></p> <p>(88) Date of publication of the international search report: 21 August 1997 (21.08.97)</p>	
<p>(54) Title: BISAZO COMPOUNDS, INTERMEDIATES THEREOF, PROCESS FOR SYNTHESIZING THE SAME AND THERAPEUTIC AGENT FOR VIRAL INFECTION CONTAINING THE SAME</p>		
<p>(57) Abstract</p> <p>The present invention provides a bisazo compound of formula (A) useful as a therapeutic agent for viral infection such as AIDS, an amidonaphtholsulfonic acid compound useful as an intermediate thereof, a process for synthesizing such a compound and a therapeutic agent for viral infection comprising the bisazo compound. Formula (A): $Ar^1-N=N-(Y^1)-NH-CO-(X^1)-CO-NH-(Y^{1'})-N=N-Ar^{1'}$, wherein Ar^1 and $Ar^{1'}$ represent an aryl group having 15 or less carbon atoms or a 5- or 6-membered ring heteroaryl group, (X^1) represents a naphthylene or biphenylene group having 20 or less carbon atoms, (Y^1) and $(Y^{1'})$ represent a naphthylene group having 15 or less carbon atoms with the proviso that at least 2 sulfo groups or salts thereof are contained in the molecule.</p>		

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/JP 96/03458

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 6 C07C309/51 C07C309/47 C07D213/81 C07D213/82 A61K31/185
 A61K31/395 C07D241/24 C07D333/38 C07C311/21

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)
 IPC 6 C07C C07D C08C

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 practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 716 368 A (FROEHLICH A ET AL) 13 February 1973 see column 45 - column 48; examples 37,38 ---	1,5,9,10
X	US 3 804 630 A (LOEFEEL H ET AL) 16 April 1974 see column 21 - column 24; examples 57,61,62 ---	1,3
X	US 4 084 411 A (MAYFIELD ALFRED B) 18 April 1978 see column 11 - column 12; examples 1-24,1-27 --- -/--	1,5,9

Further documents are listed in the continuation of box C. Patent family members are listed in annex.

* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&" document member of the same patent family</p>
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Date of the actual completion of the international search <p style="text-align: center;">25 February 1997</p>	Date of mailing of the international search report <p style="text-align: center;">0 5. 06. 97</p>
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+ 31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+ 31-70) 340-3016	Authorized officer <p style="text-align: center;">PAUWELS, G</p>
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INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP 96/03458

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 19 00 790 A (CIBA AG.) 11 September 1969 see page 15 - page 18; example A1 see page 20 - page 21; example B see page 25 - page 26; example P see page 28 - page 32; examples A-C,E-G,I-0 ---	1,5
A	US 5 468 469 A (ASZALOS ADORJAN ET AL) 21 November 1995 ---	1-29
X	J. THERM. ANAL., vol. 41, 1994, pages 201-209, XP000618378 G. SIMEONOV ET AL.: "Thermal Analysis of Diazo Pigments II. Derivates of 1,4-bis-(8'-hydroxy-3',6'-disulpho-1'-naphthyl)-benzene-diamide" see page 201 - page 202 see page 202; examples Q,R; table 1 ---	1,5,9
X	J. THERM. ANAL., vol. 36, 1990, pages 721-732, XP000618403 G. SIMEONOV ET AL.: "Thermal Analysis of Disazo Pigments I. Derivates of 1,4-bis-(5'-hydroxy-7'-sulpho-2'-naphthyl)-benzenediamine" see page 721 see page 724; examples H,I; table 1 -----	1,5

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP 96/03458

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Claims 1-14, 16-29 Therapeutic agent for viral infection new compounds
intermediates therefor and preparation of these.

Claim 15 Preparation of a known precursor for the intermediates.

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Claims 1-14, 16-29

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP 96/03458

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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DE 1900790 A	11-09-69	BE 727738 A CH 507532 A FR 2001183 A GB 1242047 A	31-07-69 15-05-71 26-09-69 11-08-71

US 5468469 A	21-11-95	NONE	
