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(71) Applicant: **PIRAMAL ENTERPRISES LIMITED** [IN/IN]; Piramal Tower, Ganpatrao Kadam Marg, Lower Parel, Mumbai 400 013 (IN).

(72) Inventors: **PARAB, Rajashri, Ramakant**; 1, Nirlon Complex, Off Western Express Highway, Goregaon (East), Mumbai 400063 (IN). **PANSHIKAR, Rajan, Mukund**; 1, Nirlon Complex, Off Western Express Highway, Goregaon (East), Mumbai 400063 (IN). **SHANBHAG, Prashant, Venkatesh**; 1, Nirlon Complex, Off Western Express Highway, Goregaon (East), Mumbai 400063 (IN). **MAHAJAN, Girish, Badrinath**; 1, Nirlon Complex, Off Western Express Highway, Goregaon (East), Mumbai 400063 (IN). **MISHRA, Prabhu, Dutt**; 1, Nirlon Complex, Off Western Express Highway, Goregaon (East), Mumbai 400063 (IN). **RANADIVE, Prafull, Vasant**; 1, Nirlon Complex, Off Western Express Highway, Goregaon (East), Mumbai 400063 (IN).

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Declarations under Rule 4.17:

— *as to the identity of the inventor (Rule 4.17(i))*

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *of inventorship (Rule 4.17(iv))*

Published:

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30 October 2014

(54) Title: ANTHRACYCLINE ANALOGUE AND USES THEREOF

(57) Abstract: The invention relates to purified compound of Formula 1. The invention includes all isomeric forms and tautomeric forms of the compound of Formula 1 and pharmaceutically acceptable salts and derivatives thereof. The present invention further relates to the processes for isolation and production of the compound of Formula 1 by fermentation of the Streptomycetes strain PM1029477/MTCC 5709. The invention also relates to the pharmaceutical compositions containing the novel compound of Formula 1 as an active ingredient and their use in the treatment of cancer.

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INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

C07H 15/252 (2006.01) A61K 31/704 (2006.01) C12P 19/56 (2006.01)

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)

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)

STN: CAplus; Registry: Substructure search of compound of Formula 1

Google Search: Inventor (names)/applicant, anthracycline, trisaccharide, anticancer, antibiotics, aclacinomycin

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	Documents are listed in the continuation of Box C	

[X] Further documents are listed in the continuation of Box C [X] See patent family annex

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"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

"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

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
25 July 2014	25 July 2014
Name and mailing address of the ISA/AU	**Authorised officer**
AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA Email address: pct@ipaustralia.gov.au	Marica Nikac AUSTRALIAN PATENT OFFICE (ISO 9001 Quality Certified Service) Telephone No. 0262832087

INTERNATIONAL SEARCH REPORT C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		International application No. **PCT/IB2014/058075**
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0022574 A1 (SANRAKU-OCEAN CO., LTD.) 21 January 1981 Abstract; Formulae III and IV, pages 14 and 15; lines 11-20 page 7, 12-14; lines 25-26, page 5; pages 20-21	1-19
A	YOSHIMOTO, A. etc al., 'Structure-sensitivity relationship of anthracycline antibiotics to C7-reduction by redox enzymes', Japanese Journal of Antibiotics, 1991, Vol. 44, No. 3, pages 287-295. Abstract; paragraph 1, page 287; Table 4, page 293; Table 1, page 290; page 288	1-19

INTERNATIONAL SEARCH REPORT Information on patent family members	International application No. **PCT/IB2014/058075**

This Annex lists known patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document/s Cited in Search Report		**Patent Family Member/s**	
Publication Number	**Publication Date**	**Publication Number**	**Publication Date**
EP 0022574 A1	21 January 1981	EP 0022574 B1	29 Feb 1984
		CA 1156578 A1	08 Nov 1983
		JP S5615299 A	14 Feb 1981
		JP S6023679 B2	08 Jun 1985
		US 4316011 A	16 Feb 1982

End of Annex

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.