



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| <b>(51) International Patent Classification <sup>6</sup>:</b><br><b>C07D 213/61, C07B 37/02</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>A1</b> | <b>(11) International Publication Number:</b> <b>WO 99/09010</b><br><b>(43) International Publication Date:</b> 25 February 1999 (25.02.99)                                                                                                                                                                                                            |
| <b>(21) International Application Number:</b> PCT/US98/16584<br><b>(22) International Filing Date:</b> 11 August 1998 (11.08.98)<br><br><b>(30) Priority Data:</b><br>60/080,223           14 August 1997 (14.08.97)       US<br>60/077,395           10 March 1998 (10.03.98)       US<br><br><b>(71) Applicant:</b> DU PONT PHARMACEUTICALS COMPANY<br>[US/US]; 974 Centre Road, WR-1ST18, Wilmington, DE<br>19807 (US).<br><br><b>(72) Inventors:</b> PESTI, Jaan, A.; 605 Country Club Drive, Wilm-<br>ington, DE 19803 (US). FORTUNAK, Joseph, M.; 19 Som-<br>erset Lane, Newark, DE 19711 (US). HUH, George, F.;<br>10 Gershwin Circle, Newark, DE 19702 (US). MAURIN,<br>Michael; 28 Country Gates Drive, Wilmington, DE 19810<br>(US). YIN, Janguo; 19 Signal Hill Drive, Hockessin, DE<br>19708 (US).<br><br><b>(74) Agent:</b> VANCE, David, H.; E.I. du Pont de Nemours and<br>Company, Legal Patent Records Center, 1007 Market Street,<br>Wilmington, DE 19898 (US). |           | <b>(81) Designated States:</b> AU, BR, CA, CN, CZ, EE, HU, IL, JP,<br>KR, LT, LV, MX, NO, NZ, PL, RO, SG, SI, SK, UA, VN,<br>Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),<br>European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR,<br>GB, GR, IE, IT, LU, MC, NL, PT, SE).<br><br><b>Published</b><br><i>With international search report.</i> |
| <b>(54) Title:</b> CRYSTALLINE 10,10-BIS((2-FLUORO-4-PYRIDINYL)METHYL)-9(10H)-ANTHRACENONE AND AN IMPROVED<br>PROCESS FOR PREPARING THE SAME<br><br><b>(57) Abstract</b><br><br>The present invention relates to processes for the synthesis of a crystalline polymorph of<br>10,10-Bis((2-fluoro-4-pyridinyl)methyl)-9(10H)-Anthracenone in high purity. The product is useful in the synthesis of phar-<br>maceutical compounds for the reduction of cholinergic system dysfunction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |                                                                                                                                                                                                                                                                                                                                                        |