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| (51) International Patent Classification <sup>6</sup> :<br><b>C07D 501/04</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>A1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (11) International Publication Number: <b>WO 99/23098</b><br>(43) International Publication Date: <b>14 May 1999 (14.05.99)</b> |
| (21) International Application Number: <b>PCT/US98/21841</b><br>(22) International Filing Date: <b>15 October 1998 (15.10.98)</b><br>(30) Priority Data: <b>60/064,337</b> ✓ <b>30 October 1997 (30.10.97)</b> ✓ <b>US</b> ✓<br>(71) Applicant: <b>BRISTOL-MYERS SQUIBB COMPANY</b> ✓<br>[US/US]; 5 Research Parkway, Wallingford, CT 06492-7660 (US).<br>(72) Inventors: <b>ROMANCIK, Guna</b> , 6103 Thunderhead Lane, Jamesville, NY 13078 (US). <b>USHER, John, J.</b> , 486 Summerhaven Drive, East Syracuse, NY 13057 (US).<br>(74) Agent: <b>ALGIERI, Aldo, A.</b> ; Bristol-Myers Squibb Company, 5 Research Parkway, Wallingford, CT 06492-7660 (US). | (81) Designated States: <b>AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW</b> , ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).<br><br>Published<br>With international search report. ✓<br><br><b>1 PD.</b><br><b>1 appl<sup>n</sup>. (C DW-Delaware)</b><br><b>(follow addn. on PF37)</b><br><b>2 Invs.</b><br><br><b>IPC = C07D 501/04</b><br><b>IPER 14/5/99</b> |                                                                                                                                 |
| (54) Title: <b>CHEMICAL ACETYLATION OF DESACETYL-CEPHALOSPORINS</b> ✓                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                 |
| (57) Abstract<br><br>The present invention is concerned with a chemical acetylation process for the preparation of 3'-acetylated cephalosporin from desacetylcephalosporin. The novel process is carried out with an acetyl donor and an activator or catalyst.                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                 |