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(21) International Application Number: PCT/US97/21785 (22) International Filing Date: 21 November 1997 (21.11.97) (30) Priority Data: 60/034,046 27 November 1996 (27.11.96) US (71) Applicant: BRISTOL-MYERS SQUIBB COMPANY [US/US]; 5 Research Parkway, Wallingford, CT 06492-7660 (US). (72) Inventors: SPRINGER, Dane, M. 53 Pearl Street, Meriden, CT 06450 (US). LUH, Bing, Y. 60 Bar Gate Trail, Killingworth, CT 06417 (US). D'ANDREA, Stanley, V. 91 Lisa Lane, Middletown, CT 06457 (US). HUDYMA, Thomas, W. P.O. Box 245, Durham, CT 06422 (US). KIM, Oak, K. 65 Old Route 79, Unit 18, Madison, CT 06443 (US). (74) Agent: MORSE, David, M.; Bristol-Myers Squibb Company, 5 Research Parkway, Wallingford, CT 06492-7660 (US).	(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, 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, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published With international search report.	

(54) Title: **CEPHALOSPORIN DERIVATIVES**

(57) Abstract

Provided are cephem derivatives represented by general formula (I) wherein Q is an optionally substituted pyridinium group connected to the sulfur atom via a ring carbon atom; X is halogen; Y is hydrogen or halogen; L¹ is a furan group, a thiophene group, a C₂-C₁₀ alkyl group, or a C₂-C₁₀ alkyl group interrupted by one or more groups independently selected from vinyl, S, SO, SO₂, SO₂NH, (IIa), (IIb); n is 0 or 1; A is CO₂H, PO₃H₂, SO₃H or tetrazole; and R¹ is hydrogen or a carboxyl-protecting group; and pharmaceutically acceptable salts and/or prodrugs thereof. The derivatives are gram-positive antibacterial agents especially useful in the treatment of diseases caused by methicillin-resistant *Staphylococcus aureus* (MRSA).

