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(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2004/0181056 A1****Sanchez-Ferrer et al.**(43) **Pub. Date: Sep. 16, 2004**(54) **PROCESS FOR PREPARING  
CEPHALOSPORANIC ACID DERIVATIVES  
USING A-KETOACID DERIVATIVES**(75) Inventors: **Alvaro Sanchez-Ferrer**, Murcia (ES);  
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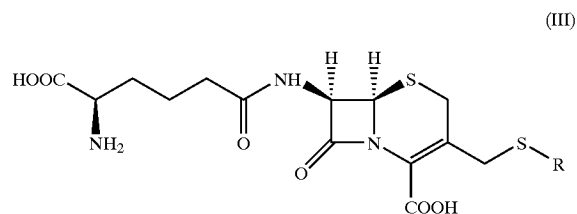
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WASHINGTON, DC 20004 (US)**(73) Assignee: **Bioferma Murcia S.A.**(21) Appl. No.: **10/804,079**(22) Filed: **Mar. 19, 2004****Related U.S. Application Data**(62) Division of application No. 10/125,458, filed on Apr.  
19, 2002, now Pat. No. 6,730,497.(30) **Foreign Application Priority Data**

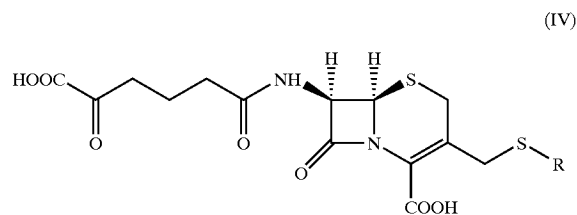
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A process for preparing cephalosporanic acid derivatives comprises the steps of enzymatically converting a 3-thiolated cephalosporin C compound of formula III:—



into a 3-thiolated- $\alpha$ -ketoadipyl-7-aminocephalosporanic acid derivative of formula IV:



wherein R is a heterocyclic group comprising at least a nitrogen atom.

Compounds of formula IV are used in the preparation of cephalosporin C antibiotics and derivatives thereof.