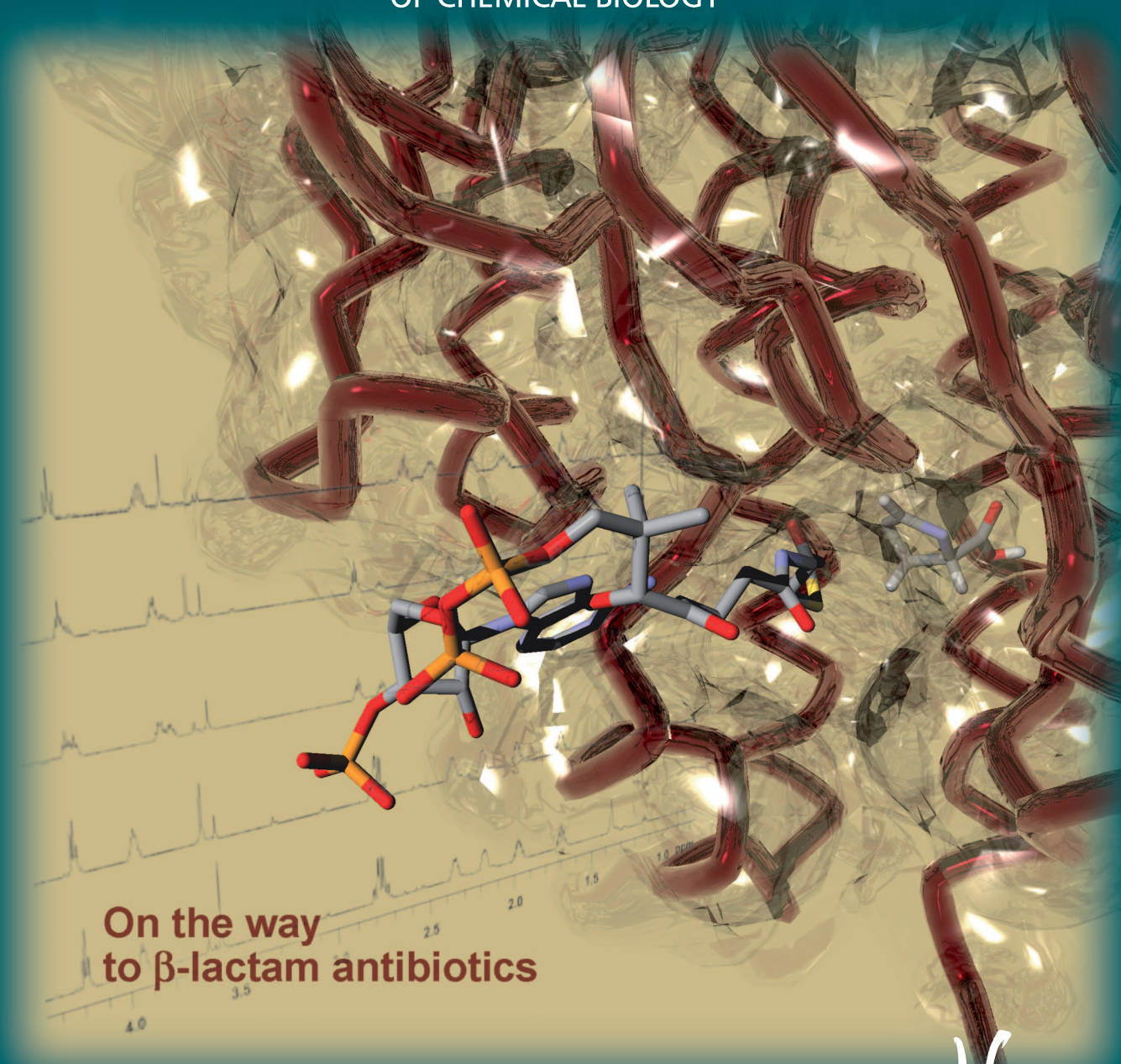


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**CHEM BIOCHEM**

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On the way  
 to  $\beta$ -lactam antibiotics

2/2009

Chemistry & *Life* Sciences



**Minireviews:** Rules of N-Terminal Protein Excision (N. Budisa)  
 Quorum Sensing and Quorum Quenching (S. Uroz)  
**Highlight:** Strigolactones (W. Boland)

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## Cover Picture

Refaat B. Hamed, Edward T. Batchelar, Jasmin Mecinović,  
Timothy D. W. Claridge, and Christopher J. Schofield\*

The cover picture shows a view from a crystal structure of a carboxymethylproline synthase with the malonyl-CoA-derived enolate and pyroline-5-carboxylate modelled into the active site. Carboxymethylproline synthases (e.g. CarB and ThnE from *Pectobacterium carotovorum* and *Streptomyces cattleya*, respectively) catalyse the formation of carboxymethylproline intermediates in the biosynthesis of the clinically important carbapenem subfamily of  $\beta$ -lactam antibiotics. Epimerization reactions enable diversification in the biosynthetic pathways leading to all subfamilies of bicyclic  $\beta$ -lactam antibiotics: penicillins/cephalosporins, carbapenems and clavams. For more information, see the article by C. J. Schofield et al. on p. 246 ff.

