A novel antibiotic complex...

... was purified from a strain of Streptomyces tendae, isolated from the wall of an ancient cave in southern Italy, shown in the cover picture. These polyketide glycosides, cervimycins A-D, demonstrated potent activity against multi-drug-resistant staphylococci and vancomycin-resistant enterococci. Results of NMR and chemical degredation studies revealed the cervimycins to have a common tetracyclic polyketide core substituted with unusual di- and tetrasaccharide chains (see picture), but with differences in their acetyl and carbamoyl ring substituents, and in the terminal methylmalonyl and dimethylmalonyl residues. For more details, see the Full Paper by



C. Hertweck and co-workers on page 5523 ff.



Plant Glycosyltransferases

In the Concept on page 5486 ff., E.-K. Lim focuses on the current understanding of the chemistry of a family of plant enzymes capable of glycosylating small lipophilic molecules. These enzymes are discussed in terms of their regio- and enantioselective substrate recognition, sugar-donor selectivity, and their utility as biocatalysts in whole-cell systems.

Two-Component Gels

The molecular self-assembly and network formation of small molecule gelators has become one of the most active frontiers of the emergent area of nanochemistry. In their Concept on page 5496 ff., D. K. Smith and A. R. Hirst discuss the key approaches used to control self-assembly by manipulating single molecular-recognition events and illustrate how controlling the transcription of information from the molecular to the macroscopic level by the simple addition of a second component allows complex functional materials to be selectively assembled from simple building blocks.





Deducing the Configuration

In their Full Paper on page 5509 ff., R. Riguera et al. describe how through comparison of the NMR spectra of (R)- and bis-(S)-MPA esters, the absolute configuration of 1,2-diols, formed by a primary and a secondary (chiral) hydroxyl group, can be determined.





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