



nature publishing group



This month, microbial ecologists will gather at the 12th International Society for Microbial Ecology conference in Cairns, Australia, to discuss the microorganisms and microbial processes that are involved in 'Sustaining the Blue Planet'. To highlight the central role of microbial processes in sustainable development, *Nature Reviews Microbiology* and *The ISME Journal* present a specially commissioned set of articles that highlight the importance of microorganisms in climatic processes and the generation of new energy sources. The topics covered include energy conservation by methanogenic archaea and the contributions of soil microorganisms to carbon cycling and global warming. The articles are available free to download for 3 months owing to the generous support of the Department of Energy. An accompanying Web Focus draws together relevant content from across the Nature Publishing Group (<http://www.nature.com/nrmicro/focus/sustainability>).

In microbial communities, interactions between different species are likely to be important. The only mode of quorum sensing that is shared by both Gram-positive and Gram-negative bacteria involves the production of the signalling molecule autoinducer 2 by LuxS. In an Opinion article on page 635, Kim Hardie and Karin Heurlier discuss the difficulty in assigning a role for LuxS in biofilm formation and contend that attributing the effects of LuxS or autoinducer 2 to either a role in quorum sensing or metabolism could resolve some of the current controversies in this field.

This month, we also publish the second in a series of articles on Systems Microbiology. On page 592, a team of authors led by Jim Fredrickson and James Tiedje describe how systems-biology approaches are being developed for the *shewanellae*, a genus of metabolic acrobats that are important in global carbon cycles, bioremediation and the generation of bioelectricity.



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