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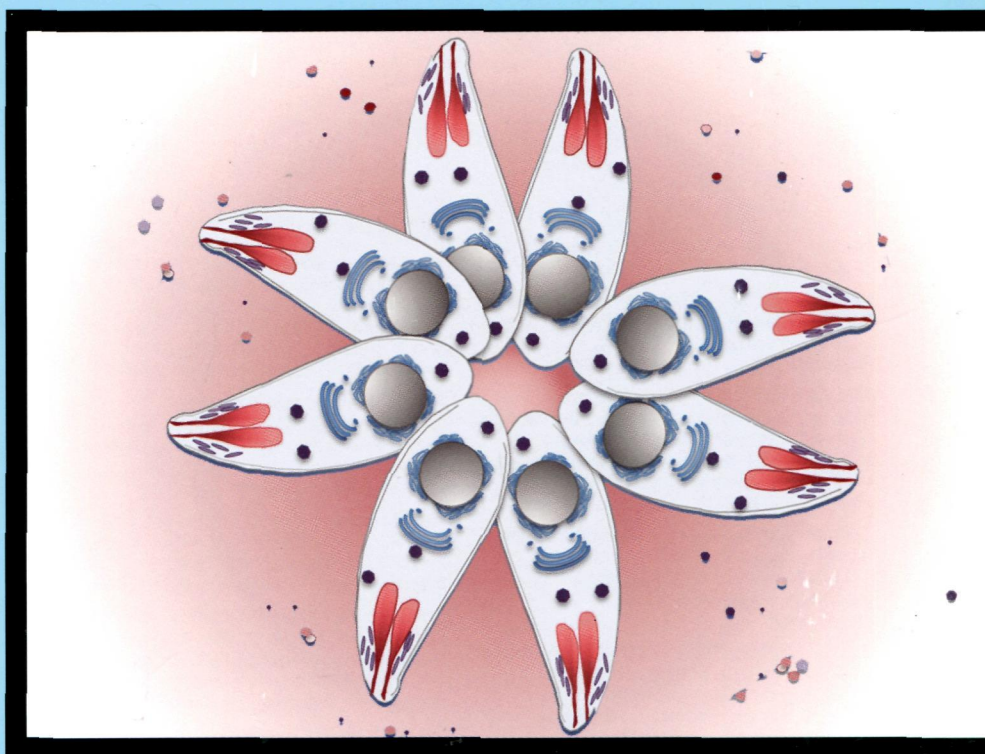
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FEMS Microbiology Reviews***March 2013***

Volume 37, Issue 2

Pages 111–284

Editorial***Editorial (page 111)***

Alain Filloux

Review Articles***Insights into the resistance and resilience of the soil microbial community (pages 112–129)***

Bryan S. Griffiths and Laurent Philippot

Interactions between soil physico-chemical properties and microbial species functional characteristics are key determinants of soil biological stability (resistance and resilience).

***Acinetobacter baumannii*: human infections, factors contributing to pathogenesis and animal models (pages 130–155)**

Michael J. McConnell, Luis Actis and Jerónimo Pachón

This review describes the characteristics of *Acinetobacter baumannii* that have contributed to its emergence as a medically important human pathogen and the animal model systems that have been developed for studying this organism.

AI-2-mediated signalling in bacteria (pages 156–181)

Catarina S. Pereira, Jessica A. Thompson and Karina B. Xavier

Since the discovery of autoinducer-2 (AI-2), the first interspecies communication molecule in bacteria, an explosion of research that characterizes this signal, the mechanisms for its synthesis, detection, and its physiological role, has been carried out; here we comprehensively review all aspects of this story, the current developments and the future possibilities for quorum quenching, and manipulation of bacterial behaviours through this single molecule.

The modular respiratory complexes involved in hydrogen and sulfur metabolism by heterotrophic hyperthermophilic archaea and their evolutionary implications (pages 182–203)

Gerrit J. Schut, Eric S. Boyd, John W. Peters and Michael W.W. Adams

The membrane-bound [NiFe]-hydrogenase of the hyperthermophilic archaea, which in some species is associated with modules that catalyze the oxidation of formate, carbon monoxide or NAD(P)H, evolves hydrogen gas and conserves energy in the form of an ion gradient thereby representing a simple respiratory system within a single complex that phylogenetic analyses show is ancestral to [NiFe]-hydrogenases in general and complex I of the aerobic respiratory chain.

Immunoglobulin domains in Escherichia coli and other enterobacteria: from pathogenesis to applications in antibody technologies (pages 204–250)

Gustavo Bodelón, Carmen Palomino and Luis Ángel Fernández

This review describes the proteins containing Ig-like domains in *E. coli* and other enterobacterial species and the expression of heterologous Ig domains of antibody fragments and full-length IgGs in this microorganism.

P_{II} signal transduction proteins: nitrogen regulation and beyond (pages 251–283)

Luciano F. Huergo, Govind Chandra and Mike Merrick

Article first published online: 28 AUG 2012 | DOI: 10.1111/j.1574-6976.2012.00351.x

P_{II} proteins are one of the most widely distributed families of signal transduction proteins in prokaryotes and in this review we summarize major advances in our understanding of their biology over the last decade.

Addendum

Microalgae in the postgenomic era: a blooming reservoir for new natural products (page 284)

Severin Sasso, Georg Pohnert, Martin Lohr, Maria Mittag and Christian Hertweck

This article corrects:

Microalgae in the postgenomic era: a blooming reservoir for new natural products

Vol. 36, Issue 4, 761–785, Article first published online: 27 SEP 2011