



The figure illustrates the three pillars of bioenergetics and its evolutionary history up to the present day. Biological energy conversion was born out of necessity imposed by the 2nd law of thermodynamics and Ludwig Boltzmann's statistical interpretation. For the task of absorbing order from the environment, life adopted the specific strategy of chemiosmotic energy conversion based on electrochemical disequilibria as unraveled by Peter Mitchell. The present day diversity of bioenergetics unfolded over billions of years according to the principles of natural selection elaborated for the first time by Charles Darwin and more recently refined on the molecular level through notions such as gene duplication or lateral gene transfer. The image background represents a hydrothermal geyser field in Yellowstone National Park/USA (Photograph by Naomi Nitschke).

Publication information: *Biochimica et Biophysica Acta (Bioenergetics)* (ISSN 0005-2728). For 2013, Volume 1827 (12 issues) is scheduled for publication. Subscription prices are available upon request from the Publisher, from the Elsevier Customer Service Department nearest you, or from this journal's website (<http://www.elsevier.com/locate/bbabo>). Further information is available on this journal and other Elsevier products through Elsevier's website (<http://www.elsevier.com>). Subscriptions are accepted on a prepaid basis only and are entered on a calendar year basis. Issues are sent by standard mail (surface within Europe, air delivery outside Europe). Priority rates are available upon request. Claims for missing issues should be made within six months of the date of dispatch.

Orders, claims, and journal enquiries: please contact the Elsevier Customer Service Department nearest you: **St. Louis:** Elsevier Customer Service Department, 3251 Riverport Lane, Maryland Heights, MO 63043, USA; phone: (877) 8397126 [toll free within the USA]; (+1) (314) 4478878 [outside the USA]; fax: (+1) (314) 4478077; e-mail: JournalCustomerService-usa@elsevier.com.

Oxford: Elsevier Customer Service Department, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK; phone: (+44) (1865) 843434; fax: (+44) (1865) 843970; e-mail: JournalCustomerServiceMEA@elsevier.com.

Tokyo: Elsevier Customer Service Department, 4F Higashi-Azabu, 1-Chome Bldg, 1-9-15 Higashi-Azabu, Minato-ku, Tokyo 106-0044, Japan; phone: (+81) (3) 5561 5037; fax: (+81) (3) 5561 5047; e-mail: JournalCustomerServiceJapan@elsevier.com.

Singapore: Elsevier Customer Service Department, 3 Killiney Road, #08-01 Winsland House I, Singapore 239519; phone: (+65) 63490222; fax: (+65) 67331510; e-mail: JournalCustomerServiceAPAC@elsevier.com

Author enquiries: For enquiries relating to the submission of articles (including electronic submission) please visit this journal's homepage at <http://www.elsevier.com/locate/bbabo>. For detailed instructions on the preparation of electronic artwork, please visit <http://www.elsevier.com/artworkinstructions>.

Contact details for questions arising after acceptance of an article, especially those relating to proofs, will be provided by the publisher. You can track accepted articles at <http://www.elsevier.com/trackarticle>. You can also check our Author FAQs at <http://www.elsevier.com/authorFAQ> and/or contact Customer Support via <http://support.elsevier.com>

Advertising information: If you are interested in advertising or other commercial opportunities please e-mail Commercialsales@elsevier.com and your enquiry will be passed to the correct person who will respond to you within 48 hours.

BIOENERGETICS

Executive Editors: Uli Brandt (Frankfurt, Germany)
Fabrice Rappaport (Paris, France)

Section Editors:

Suleyman Allakhverdiev
(*Pushchino, Russia*)
Eva-Mari Aro (*Turku, Finland*)
Paolo Bernardi (*Padua, Italy*)
Martin D. Brand (*Novato, CA, USA*)
Richard Cogdell (*Glasgow, UK*)
Tom E. DeCoursey (*Chicago, IL, USA*)
Peter Dimroth (*Zurich, Switzerland*)
Jerzy Duszyński (*Warsaw, Poland*)
Masamitsu Futai (*Iwate, Japan*)
Marilyn Gunner (*New York, NY, USA*)
Andrew P. Halestrap (*Bristol, UK*)
Peter Heathcote (*London, UK*)

Jonathan Hosler (*Jackson, MS, USA*)
Carola Hunte (*Freiburg, Germany*)
Nils-Göran Larsson (*Köln, Germany*)
Bernard Lemire (*Edmonton, Canada*)
Fraser MacMillan (*Norwich, UK*)
Christopher C. Moser (*Philadelphia, PA, USA*)
Conrad Mullineaux (*London, UK*)
Richard K. Porter (*Dublin, Ireland*)
Marten H. Vos (*Palaiseau, France*)
Colin A. Wraight (*Urbana, IL, USA*)
Tom Wydrzynski (*Canberra, ACT, Australia*)

Keywords that indicate the expertise of each Editor can be found on the journal homepage at <http://www.elsevier.com/locate/bbabo>

Scientific Editors (*Elsevier, Cambridge, MA, USA*):

Shawwna Buttery
Claudia Montefusco
Laura Wallins
Denise M. Wells (Manager)



ELSEVIER

Amsterdam – Boston – London – New York – Oxford – Paris –
Philadelphia – San Diego – St. Louis