

---

# Biology Open

The online version of Biology Open is considered to be the version of record

## Editor-in-Chief

Steven Kelly (University of Oxford, UK)

## Deputy Editor-in-Chief

Catherine L. Jackson (Institute Jacques Monod, France)  
Yishi Jin (University of California San Diego, USA)

## Monitoring Editors

Lewis Halsey (University of Roehampton, London, UK)  
Kendra J. Greenlee (North Dakota State University, USA)  
Sjannie Lefevre (University of Oslo, Norway)  
Christopher A. Maher (Washington University School of  
Medicine, USA)  
Jennifer Nichols (University of Cambridge, UK)  
Yong Peng (Sichuan University, Chengdu, China)  
Tristan Rodriguez (Imperial College London, UK)  
Luca Scorrano (University of Padua, Italy)

## Founding Editor-in-Chief

Jordan W. Raff (University of Oxford, UK)

## Managing Editor

Rachel Hackett

## Journal Editorial Coordinators

Laura Tolhurst  
Ania Crowther

## Senior Editorial Administrator

Sue Chamberlain

## About the Publisher

The Company of Biologists is a not-for-profit publishing organisation dedicated to supporting and inspiring the biological community. The Company publishes five specialist peer-reviewed journals: Development, Journal of Cell Science, Journal of Experimental Biology, Disease Models & Mechanisms and Biology Open. It offers further support to the biological community by facilitating scientific meetings, providing travel grants for researchers and supporting research societies.  
[www.biologists.com](http://www.biologists.com)

## Editorial Advisory Board

**M. Madan Babu** (St Jude's Children's Research Hospital, USA)  
**Alexander D. Bershadsky** (Weizmann Institute of Science, Israel and  
Mechanobiology Institute, NUS, Singapore)  
**Wendy Bickmore** (MRC IGMM, University of Edinburgh, UK)  
**Mina Bissell** (Lawrence Berkeley National Laboratory, University of  
California, USA)  
**Julio E. Celis** (Danish Cancer Society Research Center, Copenhagen,  
Denmark)  
**Daniel Durocher** (University of Toronto, Canada)  
**Stephen C. Ekker** (Mayo Clinic, USA)  
**Fanni Gergely** (University of Cambridge, UK)  
**Gillian Griffiths** (University of Cambridge, UK)  
**Anna-Katerina Hadjantonakis** (Memorial Sloan-Kettering Cancer  
Center, New York, USA)  
**Sarah C. Hake** (University of California, Berkeley, USA)  
**Jack P. Hayes** (University of Nevada, USA)  
**James W. Hicks** (University of California, Irvine, USA)  
**Justin P. Kumar** (Indiana University, USA)  
**Jane Langdale** (University of Oxford, UK)  
**Laura Machesky** (The Beatson Institute for Cancer Research,  
Glasgow, UK)  
**Alfonso Martinez-Arias** (University of Cambridge, UK)  
**J. Richard McIntosh** (University of Colorado, Boulder, USA)  
**Ira Mellman** (Genentech, USA)  
**Philip Munday** (James Cook University, Townsville, Australia)  
**Andrea Musacchio** (Max-Planck Institute of Molecular Physiology,  
Dortmund, Germany)  
**Sudipto Roy** (A\*Star Institute of Molecular and Cell Biology, Singapore)  
**Stephen M. Secor** (University of Alabama, USA)  
**Ben Zion Shilo** (Weizmann Institute of Science, Israel)  
**Rick Shine** (University of Sydney, Australia)  
**Kai Simons** (Max-Planck Institute of Molecular Cell Biology and  
Genetics, Dresden, Germany)  
**John R. Speakman** (University of Aberdeen, UK)  
**Claudio Stern** (UCL, London, UK)  
**Pavel Tomancak** (Max-Planck Institute of Molecular Cell Biology and  
Genetics, Dresden, Germany)  
**Miguel Torres** (CNIC, Madrid, Spain)  
**Jessica E. Treisman** (Skirball Institute of Biomolecular Medicine,  
New York, USA)  
**Michael D. Tyers** (University of Edinburgh, UK)  
**Graham Warren** (Max F. Perutz Laboratories, Vienna, Austria)  
**Ting Xie** (Stowers Institute for Medical Research, USA)  
**Yongbiao Xue** (Chinese Academy of Sciences, Beijing, China)

## Biology Open

The Company of Biologists Limited, Bidder Building,  
Station Road, Histon, Cambridge, CB24 9LF, UK.  
Tel: +44 (0)1223 632871  
Fax: +44 (0)1223 632876  
[bio@biologists.com](mailto:bio@biologists.com)