

**Journal of the  
Association of Clinical  
Pathologists**

**President**

W G Simpson

**Vice President**

K Skordilis

**Chairman of Council**

J L Burton

**Honorary Secretary**

T M Reynolds

**Honorary Treasurer**

P J Twomey

**General Administrator**

R Eustace,

189 Dyke Road, Hove,

East Sussex BN3 1TL UK

T: +44 (0)1273 775 700

E: [info@pathologists.org.uk](mailto:info@pathologists.org.uk)

<http://www.pathologists.org.uk>

**acp**

Impact Factor: 2.346

**Disclaimer:** *Journal of Clinical Pathology* is owned and published by the Association of Clinical Pathologists and BMJ Publishing Group Ltd, a wholly owned subsidiary of the British Medical Association. The owners grant editorial freedom to the Editor of *Journal of Clinical Pathology*. *Journal of Clinical Pathology* follows guidelines on editorial independence produced by the World Association of Medical Editors and the code on good publication practice of the Committee on Publication Ethics.

*Journal of Clinical Pathology* is intended for medical professionals and is provided without warranty, express or implied. Statements in the *Journal* are the responsibility of their authors and advertisers and not authors' institutions, the BMJ Publishing Group Ltd or the BMA unless otherwise specified or determined by law. Acceptance of advertising does not imply endorsement.

To the fullest extent permitted by law, the BMJ Publishing Group Ltd shall not be liable for any loss, injury or damage resulting from the use of *Journal of Clinical Pathology* or any information in it whether based on contract, tort or otherwise. Readers are advised to verify any information they choose to rely on.

**Copyright:** © 2019 by the BMJ Publishing Group Ltd & Association of Clinical Pathologists. All rights reserved; no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of *Journal of Clinical Pathology*.

*Journal of Clinical Pathology* is published by BMJ Publishing Group Ltd, typeset by Exeter Premedia Services Private Ltd, Chennai, India and printed in the UK on acid-free paper.

*Journal of Clinical Pathology* (ISSN No: 0021-9746) is published monthly by BMJ Publishing Group and distributed in the USA by Air Business Ltd. Periodicals postage paid at Jamaica NY 11431 POSTMASTER: send address changes to *Journal of Clinical Pathology*, Air Business Ltd, c/o Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA

# Journal of Clinical Pathology

JCP is a core publication for workers in all disciplines of pathology. Clinical pathology is its central theme but the *Journal* also publishes basic science papers with a clear clinical application.

## Editorial Board

### Editor-in-Chief

Tahir S Pillay (South Africa)

### Honorary Editor

Cheok Soon Lee (Australia)

### Editors

Iskander Chaudhry (Virtual Case Editor; UK)

Runjan Chetty (Molecular Pathology, Reviews and Gene of the Month; Canada)

Dhiren Govender (Education and Correspondence, Histopathology; South Africa)

Stephen Jolles (Immunology; UK)

Tony Mazzulli (Microbiology; Canada)

Mary Frances McMullin (Haematology; UK)

Des Richardson (Experimental and Cell Biology and Molecules in Pathogenesis; Australia)

Sumit Sahni (Molecules in Pathogenesis; Australia)

### Best Practice Editor

Newton Wong (UK)

### Statistical Editor

Mario Cortina Borja (UK)

## International Advisory Board

Fahd Al-Mulla (Kuwait)

Sylvia Asa (Canada)

Sunil Badve (USA)

Bizhan Bandarchi (Canada)

Adrian C Bateman (UK)

Mark Catherwood (UK)

Catherine Cargo (UK)

Liang Cheng (USA)

Kumarasen Cooper (USA)

Wendy Cooper (Australia)

Martin Crook (UK)

Gábor Cserni (Hungary)

Brett Delahunt (New Zealand)

Vikram Deshpande (USA)

Richard Drut (Argentina)

Wendy Erber (UK)

Andrew Folpe (USA)

Stephen Fox (UK)

Rousseau Gama (UK)

Danny Ghazarian (Canada)

Antonio Giordano (Italy)

Iain Gosbell (Australia)

Fadil Hannan (UK)

Oi Harada (Japan)

Chao-Cheng Huang (Taiwan)

Pei Hui (USA)

Patric Jansson (Australia)

Kassim Javaid (UK)

Danuta Kalinowski (Australia)

Zaklina Kovacevic (Australia)

Glenn McCluggage (UK)

Ozgur Mete (Canada)

Siraj Misbah (UK)

Takeshi Mori (Japan)

Takuya Moriya (Japan)

Tim Reynolds (UK)

Fernando Schmitt (Portugal)

Mallika Sekhar (UK)

Bill Simpson (UK)

Rajendra Singh (USA)

Puay Hoon Tan (Singapore)

Patrick Twomey (UK)

Ian Young (UK)

Jingsong Yuan (USA)

## Contact Details

### Editorial Office

*Journal of Clinical Pathology*, BMJ Journals, BMA House, Tavistock Square, London WC1H 9JR, UK

E: [info.jcp@bmj.com](mailto:info.jcp@bmj.com)

Twitter: [@JClinPath\\_BMJ](https://twitter.com/JClinPath_BMJ)

### Customer Support

For general queries and support with subscriptions:

W: [support.bmj.com](mailto:support.bmj.com)

T: +44 (0)20 7111 1105

E: [support@bmj.com](mailto:support@bmj.com)

### Self-archiving and permissions

W: [bmj.com/company/products-services/rights-and-licensing/](http://bmj.com/company/products-services/rights-and-licensing/)

E: [bmj.permissions@bmj.com](mailto:bmj.permissions@bmj.com)

### Advertising

W: [bmj.com/company/for-advertisers-and-sponsor/](http://bmj.com/company/for-advertisers-and-sponsor/)

E: [bmj.permissions@bmj.com](mailto:bmj.permissions@bmj.com)

E: [bmj.permissions@bmj.com](mailto:bmj.permissions@bmj.com)

### Display Advertising ROW

Sophie Fitzsimmons

T: +44 (0)20 3655 5612

E: [sftzsimmons@bmj.com](mailto:sftzsimmons@bmj.com)

### Online Advertising ROW

Marc Clifford

T: +44 (0)20 3655 5610

E: [mclifford@bmj.com](mailto:mclifford@bmj.com)

### Display & Online Advertising Americas

American Medical Communications (AMC)

T: +1 973 214 4374

E: [rgordon@americanmedicalcomm.com](mailto:rgordon@americanmedicalcomm.com)

### Author Reprints

BMJ Reprints Team

E: [admin.reprints@bmj.com](mailto:admin.reprints@bmj.com)

### Commercial Reprints ROW

Nadia Gurney-Randall

M: +44 (0)7866 262 344

E: [ngurneyrandall@bmj.com](mailto:ngurneyrandall@bmj.com)

### Commercial Reprints Americas

Ray Thibodeau

T: +1 267 895 1758

M: +1 215 933 8484

E: [ray.thibodeau@contentednet.com](mailto:ray.thibodeau@contentednet.com)

### Production Editor

Kate Spencer

E: [production.jcp@bmj.com](mailto:production.jcp@bmj.com)

### For all other JCP journal contacts

<http://jcp.bmj.com/pages/contact-us/>

## JCP Online Archive

The full back archive of *Journal of Clinical Pathology* is now available from 1969 at <http://jcp.bmj.com/>. Users have FREE access to all articles right back to Volume 1, Issue 1 and up to and including Volume 58, Issue 12.\* The online archives were digitised with the help of the US National Library of Medicine.

Personal subscribers must sign in to access this content. Users not covered by an institutional or personal subscription will have to complete a one-time registration that grants access to all archive content, across all our titles.

\*Articles that have been published after this issue require a subscription to access them.

## Subscription Information

*Journal of Clinical Pathology* is published monthly (subscribers have access to all supplements)

### Institutional Rates 2019

#### Print

£948

#### Online

Site licences are priced on FTE basis and allow access by the whole institution.

### Personal Rates 2019

Print (includes online access at no additional cost)  
£364

#### Online only

£183

ISSN: 0021 9746 (print)

ISSN: 1472 4146 (online)

Personal print or online only and institutional print subscriptions may be purchased online at <http://jcp.bmj.com/pages/subscribe/> (payment by Visa/Mastercard only)

Residents of some EC countries must pay VAT; for details, call us or visit <http://www.bmj.com/company/eu-vat-rates/>

## Guidelines for Authors and Reviewers

Full instructions are available online at <http://jcp.bmj.com/pages/authors/>. Articles must be submitted electronically via <https://mc.manuscriptcentral.com/jcp>. Authors retain copyright but are required to grant *Journal of Clinical Pathology* an exclusive licence to publish (<https://jcp.bmj.com/pages/authors/>)