TABLE OF CONTENTS

- Description p.1  
- Impact Factor p.1  
- Abstracting and Indexing p.1  
- Editorial Board p.2  
- Guide for Authors p.10

DESCRIPTION

Virology publishes papers that provide advances to the understanding of virus biology. We have been publishing the results of basic research in all branches of virology for over 60 years. The journal welcomes submitted articles on virus replication, virus-host biology, viral pathogenesis, immunity to viruses, virus structure, and virus evolution and ecology. Articles should be of broad interest to the community of virologists. We also publish state-of-the-art invited reviews from experts in the field.

No page or color charges Open Archive: free access after 12 months for all articles Free access to reviews and special issues Highlighted Articles & Virology blog to promote your article online Open Access options available for all articles Please see our Guide for Authors for information on article submission. If you require any further information or help, please visit our Support Center

IMPACT FACTOR

2018: 2.657 © Clarivate Analytics Journal Citation Reports 2019

ABSTRACTING AND INDEXING

Scopus  
BIOSIS Citation Index  
Biological Abstracts  
Chemical Abstracts  
Current Contents - Life Sciences and Clinical Medicine  
Embase  
Genetics Abstracts  
Immunology Abstracts  
PubMed/Medline  
Research Alert  
Science Citation Index  
Tropical Diseases Bulletin  
Virology and AIDS abstracts  
Embase
EDITORIAL BOARD

Editor-in-Chief
Richard Kuhn, Purdue University Department of Biological Sciences, 240 S. Martin Jischke Drive, West Lafayette, Indiana, 47907-2054, United States

Reviews Editor
David Knipe, Harvard Medical School Department of Microbiology and Immunobiology, 200 Longwood Avenue, Boston, Massachusetts, 02115-5701, United States

Editors
Martha Alexander-Miller, Wake Forest School of Medicine, Dept. of Microbiology and Immunology, 575 North Patterson Ave., Winston Salem, California, NC 27101, United States
Richard Condit, University of Florida Department of Molecular Genetics and Microbiology, 1600 S.W. Archer Street, P.O.Box 100266, Gainesville, Florida, 32610-0266, United States
Gregory Ebel, Colorado State University College of Veterinary Medicine and Biomedical Sciences, Fort Collins, Colorado, 80523-1601, United States
Alexander Gorbalenya, Ctr. of Infectious Diseases, Dept. of Medical Microbiology, Leids Universitair Medisch Centrum (LUMC), Albinusdreef 2, 2333 ZA, Leiden, Netherlands
Steve Lommel, North Carolina State University Department of Plant Pathology, 2506 Gardner Hall, Raleigh, North Carolina, 27695-7616, United States
Michael Malim, King's College London Department of Infectious Diseases, London Bridge, SE1 9RT, London, United Kingdom
Alison McBride, National Institute of Allergy and Infectious Diseases Laboratory of Viral Diseases, 33 North Drive, Bethesda, Maryland, MD 20892, United States
Ian Molineux, University of Texas at Austin Department of Molecular Biosciences, 2500 Speedway, Austin, Texas, 78712, United States
Peter Sarnow, Stanford University Department of Microbiology and Immunology, 299 Campus Dr, Stanford, California, 94305-5124, United States
Barbara Sherry, North Carolina State University, Dept. of Molecular Biomedical Sciences, 4700 Hillsborough Street, Raleigh, North Carolina, NC 27606, United States
Terrence Tumpey, National Center for Immunization and Respiratory Diseases Influenza Division, 1600 Clifton Rd. NE., Atlanta, Georgia, 30329-4018, United States
Sean Whelan, Harvard Medical School Department of Microbiology and Immunobiology, 200 Longwood Avenue, Boston, Massachusetts, 02115-5701, United States
Lindsay Whitton, Scripps Research Institute Immunology and Microbiology, 10550 North Torrey Pines Road, La Jolla, California, CA 92037, United States

Editorial board
Christophe Aiken, A-5301 Medical Center North, Dept. of Microbiology and Immunology, Vanderbilt University School of Medicine, 1161 21st Ave S, Nashville, Tennessee, 37223-2363, United States
Dong Sung An, University of California Los Angeles AIDS Institute, 615 Charles E. Young Drive South, Los Angeles, California, CA 90095, United States
Rosa Maria del Angel, Center for Research and Advanced Studies of the National Polytechnic Institute Department of Genetics and Molecular Biology, Av. Instituto Politécnico Nacional 2508, C.P 07360, Ciudad de México, Mexico
Michelle Arnold, Louisiana State University Health Sciences Center Department of Microbiology and Immunology, 1501 Kings Highway, Shreveport, Louisiana, LA 71130, United States
Walter Atwood, Dept. of Molecular Biology, Cell Biology & Biochemistry, Div. of Biology and Medicine, Brown University, 70 Ship St., Box G-E434, Providence, Rhode Island, RI 02912, United States
Steven Banchenheimer, University of North Carolina at Chapel Hill Department of Microbiology and Immunology, 837 MEJB CB #7290, Chapel Hill, North Carolina, 27599-7290, United States
Joel Baines, Dept. of Biomedical Science, Coll. of Veterinary Medicine, Cornell University, T4-018 Veterinary Research Tower, Ithaca, New York, NY 14853-6401, United States
Udeni Balasuriya, Louisiana State University School of Veterinary Medicine, 1043 River Road, Baton Rouge, Louisiana, 70803, United States
Lawrence Banks, International Centre for Genetic Engineering and Biotechnology, 34149, Trieste, Italy
Alan Barrett, University of Texas Medical Branch Department of Pathology, 301 University Boulevard, Galveston, Texas, 77555-0133, United States
David Barton, MS8333, Dept. of Immunology and Microbiology, University of Colorado School of Medicine, 12800 East 19th Avenue, Aurora, Colorado, CO 80045-2537, United States
Christopher Basler, Icahn School of Medicine at Mount Sinai Department of Microbiology, Box 1124, 1 Gustave L. Levy Place, New York, New York, 10029-6504, United States
Peter Beard, ISREC Foundation, Chemin des Boveresses 155, CH-1066, Epalinges, Switzerland
David Beasley, UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON
Jessica Belser
Graham J. Belsham, National Veterinary Institute, 4771, Kalvehave, Denmark
Dirk Dittmer, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, 27515, United States
Esteban Domingo, Universidad Autónoma de Madrid, Centro de Biología Molecular "Severo Ochoa", Cantoblanco, 28049, Madrid, Spain
Katie Doores
Marlen e Dreux
Jean Dubuisson, Institut Pasteur de Lille, Bâtiment IBL,,U1019, CNRS UMR8204,INSERM, 1 rue du Professeur Calmette, CS 50447, 59021, Lille Cedex, France
Jaquelin Dudley, University of Texas at Austin Department of Molecular Biosciences, 2500 Speedway, Austin, Texas, TX 78712, United States
Rebecca Dutch
Luis Enjuanes, Dept. of Molecular and Cell Biology,National Center of Biotechnology (CNB),Consejo Superior de Investigaciones Científicas (CSIC), Darwin 3, Cantoblanco, 28049, Madrid, Spain
David Evans, AIDS Vaccine Research Laboratory,Dept. of Pathology & Laboratory Medicine,University of Wisconsin at Madison, 585 Science Drive, Madison, Wisconsin, WI 53711, United States
Matthew Evans
Kay Faaberg, Virus and Prion Research Unit,National Animal Disease Center, USDA, ARS,United States Department of Agriculture USDA), 1920 Dayton Avenue,, Ames, Iowa, IA 50010, United States
Bryce Falk
Bentley Fane
Rachel Fears, Boston University School of Medicine, Boston, Massachusetts, 02118, United States
Matthias Fischer, Max-Planck-Institute for Medical Research Department of Biomolecular Mechanisms, Jahnstrasse 29, 69120, Heidelberg, Germany
Ervin Fodor, Sir William Dunn School of Pathology, South Parks Road, OX1 3RE, Oxford, United Kingdom
Ian Frazer, Translational Research Institute, South Brisbane, 4101, Australia
Matthews Friemann, University of Maryland Department of Microbiology and Immunology, 3-020 Bressler Research Building, Baltimore, Maryland, 21201, United States
D. Paul D. Friesen, R. M. Bock Laboratories,Inst. for Molecular Virology,University of Wisconsin–Madison, 1525 Linden Drive, Madison, Wisconsin, WI 53706, United States
Ilya Frolov, University of Alabama at Birmingham Department of Microbiology, 845 19th Street South, Birmingham, Alabama, 35222-3612, United States
Gabrielle Fuchs, University at Albany Department of Biological Sciences, 1400 Washington Avenue, Albany, New York, 12222-0100, United States
Michael Gale (Jr.), University of Washington Department of Immunology, 750 Republican St., Seattle, Washington, 98109, United States
Thomas Gallagher, Loyola University Chicago Microbiology and Immunology Department, 2160 South First Avenue, Maywood, Illinois, IL 60153, United States
Denise Galloway, Fred Hutchinson Cancer Research Center Human Biology Division, 1100 Fairview Ave N., Seattle, Washington, WA 98109, United States
Guangxia Gao, Institute of Biophysics Chinese Academy of Sciences, 15 Datun Road, Chaoyang District, 100101, Beijing, China
Adolfo Garcia-Sastre, Icahn School of Medicine at Mount Sinai Department of Microbiology, Box 1124, 1 Gustave L. Levy Place, New York, New York, 10029-6504, United States
Adam Geballe, Fred Hutchinson Cancer Research Center, Seattle, Washington, 98109-9024, United States
Benjamin Gewurz
Wade Gibson, Johns Hopkins University Department of Pharmacology and Molecular Sciences, 725 North Wolfe Street, Baltimore, Maryland, MD 21205-2185, United States
Michael Goodin
Heinrich Gottlinger, University of Massachusetts Medical School Program in Gene Function and Expression, Lazare Research Building, Room 526, Worcester, Massachusetts, MA 01605, United States
Eva Gottwein, Northwestern University Department of Microbiology-Immunology, 303 E. Chicago Ave., Chicago, Illinois, IL 60611, United States
Benjamin Greenbaum
Charles Grose, Howard Hughes Medical Institute - University of Iowa, 200 Hawkins Dr., Iowa City, Iowa, IA 52242-1083, United States
Rahm Gummeluru, Boston University Department of Microbiology, 72 E. Concord St, Boston, Massachusetts, MA 02118, United States
Deyin Guo, Wuhan University, 430072, Wuhan, China
Kurt Gustin
Susan Hafenstein
Biao He, Dept. of Infectious Diseases,College of Veterinary Medicine,University of Georgia Athens, 501 D.W. Brooks Drive, Athens, Georgia, GA 30602, United States
Patrick Hearing, School of Medicine,Dept. of Molecular Genetics and Microbiology,Stony Brook University, Stony Brook, New York, NY 11794-5222, United States
Mark Heise, University of North Carolina at Chapel Hill Division of Infectious Diseases, 99 Manning Drive, Chapel Hill, North Carolina, NC 27599, United States
Ekaterina Heldwein, Tufts University School of Medicine Department Molecular Biology and Microbiology, 136 Harrison Avenue, Boston, Massachusetts, MA 02111, United States
Roger Hendrix, 102 Life Sciences Annex, Dept. of Biological Sciences, University of Pittsburgh, 4249 Fifth Avenue, Pittsburgh, Pennsylvania, PA 15260, United States
Tom Hobman, University of Alberta Faculty of Medicine and Dentistry, 2J2.00 WC Mackenzie Health Sciences Centre, Edmonton, T6G 2R7, Alberta, Canada
Brenda Hogue
Geoffrey Holm
Eddie Holm, Department of Medicine, Dept. of Molecular Genetics & Microbiology, Duke University Medical Center, 213 Research Drive, Box 3053 DUMC, Durham, North Carolina, NC 27710, United States
Curt M. Horvath, Northwestern University Feinberg School of Medicine, 2200 Campus Drive; Pancoe Pavilion Room 4401, Evanston, Illinois, 60208, United States
Yao-Wei Huang, Dept. of Veterinary Medicine, College of Animal Sciences, Zhejiang University, 866 Yuhangtang Road, 310058, Hangzhou, Zhejiang, China
Michael Imperiale, University of Michigan Department of Microbiology and Immunology, 1150 W Med Ctr Drive, Ann Arbor, Michigan, MI 48109-5620, United States
Stuart Isaacs, University of Pennsylvania Division of Infectious Disease, 502 Johnson Pavilion, Philadelphia, Pennsylvania, 19104-6073, United States
William Jackson
Bertram Jacobs, Center for Infectious Diseases and Vaccinology, Biodesign Institute, Arizona State University, Tempe, Arizona, AZ 85287-5401, United States
Eric Jan, The University of British Columbia Department of Biochemistry and Molecular Biology, 2350 Health Sciences Mall, Vancouver, BC V6T 1Z3, British Columbia, Canada
James Jancovich, California State University San Marcos Department of Biological Sciences, 333 S. Twin Oaks Valley Rd, San Marcos, California, CA 92096, United States
Ronald Javier, Baylor College of Medicine Department of Molecular Virology and Microbiology, One Baylor Plaza, Houston, Texas, 77030-3411, United States
Karyn Johnson, University of Queensland School of Biological Sciences, Brisbane, QLD 4072, Queensland, Australia
Marc Johnson
Welkin Johnson, Tufts University School of Medicine, 136 Harrison Avenue, Boston, Massachusetts, MA 02111-1837, United States
Clare Jolly
Clint Jones, Ken Morrison Life Science Research Center, School of Veterinary and Biomedical Sciences, University of Nebraska at Lincoln, Lin coln, Nebraska, NE 68586-0900, United States
Catherine Jopling, University of Nottingham, NG7 2RD, Nottingham, United Kingdom
Sandra Junglen, University Hospital Bonn Institute of Virology, Sigmund-Freud-Str. 25, 53127, Bonn, Germany
Adriana Kajon, Lovelace Respiratory Research Institute Infectious Disease Program, 2425 Ridgecrest Drive SE, Albuquerque, New Mexico, NM 87108, United States
C. Cheng Kao, Indiana University, Dept. of Biochemistry, Bloomington, Indiana, IN 47405, United States
Fatah Kashanchi, George Mason University School of Systems Biology, 10900 University Blvd, Manassas, Virginia, VA 20110, United States
Yoshihiro Kawaoka, University of Wisconsin at Madison, School of Veterinary Medicine; Influenza Research Inst., Dept. of Pathobiological Sciences, 575 Science Drive, Madison, Wisconsin, WI 53711, United States
Shannon Kenney
Baek Kim, Emory University School of Medicine, Atlanta, Georgia, 30303-3073, United States
Scott Kitchen, University of California Los Angeles Division of Hematology-Oncology, Charles E. Young Drive South, Los Angeles, California, CA 90095-7363, United States
Aloysius Klingelhutz, Holden Comprehensive Cancer Center, Dept. of Microbiology, University of Iowa, 375 Newton Road, Iowa City, IA 52242, United States
Kouacou Konan, ALBANY MEDICAL COLLEGE, Albany, New York, 12206, United States
Thomas Kristie
Mart Krupovic, Pasteur Institute Department of Microbiology, 28 rue du dr Roux, 75015, Paris, France
Mark Krystal, University of Texas at Austin Department of Molecular Biosciences, 2500 Speedway, Austin, Texas, TX 78712, United States
Jens Kuhn
Michael Lagunoff, University of Washington Department of Microbiology, 1705 NE Pacific ST, Seattle, Washington, 98195-7735, United States
Laimonis Laimins, Northwestern University Department of Microbiology-Immunology, 303 E. Chicago Ave., Chicago, Illinois, IL 60611, United States
Jean-Francois Laliberté, INRS-Institut Armand-Frappier, Laval, Quebec, Canada
Robert Lamb, Howard Hughes Medical Institute, Dept. of Biochemistry, Molecular Biology and Cell Biology, Northwestern University, 2205 Tech Drive, Evanston, Illinois, IL 60208-3500, United States
Thomas Lane, University of California Irvine Department of Molecular Biology and Biochemistry, 114 Bio Sci II, Irvine, California, 92697, United States
Chris Lauber, Inst. for Medical Informatics and Biometry, Faculty of Medicine Carl Gustav Carus, Technische Universität Dresden, Fetscherstraße 74, 01307, Dresden, Germany
Mansun Law  
**Benhur Lee**, Icahn School of Medicine at Mount Sinai Department of Microbiology, Box 1124, 1 Gustave L. Levy Place, New York, New York, 10029-6504, United States

**Chang Won Lee**  
**Elliot Lefkowitz**  
**Petr Leiman**, Federal Polytechnic School of Lausanne, 1015, Lausanne, Switzerland

**Wenhui Li**, National Institute of Biological Sciences, 7 Science Park Road, 102206, Beijing, China

**Richard Lloyd**, Baylor College of Medicine Department of Molecular Virology and Microbiology, One Baylor Plaza, Houston, Texas, 77030-3411, United States

**Volker Lohmann**, Molecular Virology, Dept. of Infectious Diseases, Ruprecht-Karls-Universität Heidelberg, Im Neuenheimer Feld 345, 69-120, Heidelberg, Germany

**George Lomonossoff**, John Innes Centre, NR4 7UH, Norwich, United Kingdom

**Guangxiang George Luo**  
**Jason Mackenzie**  
**Bernardo A. Mainou**, Dept. of Pediatrics, Emory Children’s Center, Emory University, 2015 Uppergate Drive, Atlanta, Georgia, GA 30322, United States

**Shinji Makino**, UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON, Galveston, Texas, 77550, United States

**Encarnacion Martinez-Salas**  
**Luis Martinez-Sobrido**, University of Rochester Medical Center Department of Microbiology and Immunology, 601 Elmwood Ave, Rochester, New York, NY 14642, United States

**Yoshiharu Matsuura**, Osaka University Research Institute for Microbial Diseases International Research Center for Infectious Diseases, Research Center for Emerging Infectious Diseases 3, 565-0871, Suita, Japan

**Sarah McDonald**, Virginia Tech Carilion Research Institute, 2 Riverside Circle, Roanoke, Virginia, VA24016, United States

**Andrew Mehle**  
**Ulrich Meicher**, Oklahoma State University Department of Biochemistry and Molecular Biology, 246C Noble Research Center, Stillwater, Oklahoma, OK 74078-3035, United States

**Xiang-Jin Meng**, College of Veterinary Medicine, Department of Biomedical Sciences and Pathobiology, Virginia Polytechnic Institute & State University, 1981 Kraft Drive, Blacksburg, Virginia, 24061, United States

**Veronika von Messling**, Bundesministerium für Bildung und Forschung, Research Kapelle-Ufer 1, 10117, Berlin, Germany

**Edward Mocarski**, Stanford University Department of Microbiology and Immunology, 299 Campus Dr, Stanford, California, 94305-5124, United States

**Yasuko Mori**  
**Thomas E. "Tem" Morrison**, University of Colorado Department of Immunology and Microbiology, 12800 East 19th Avenue, Aurora, Colorado, CO 80045, United States

**Martin Muggeridge**, Louisiana State University Health Sciences Center Department of Microbiology and Immunology, 1501 Kings Highway, Shreveport, Louisiana, LA 71130, United States

**Suchetana Mukhopadhyay**  
**Karl Munger**, Brigham and Women’s Hospital Channing Division of Network Medicine, 181 Longwood Avenue, Boston, Massachusetts, MA 02215-5701, United States

**Carsten Munk**, AIDS Research Clinic for Gastroenterology, Hepatology and Infectiology, Heinrich-Heine-University Düsseldorf, Moorenstr. 5, 40225, Düsseldorf, Germany

**Michael P. Murtaugh**, College of Veterinary Medicine, Dept. of Veterinary and Biomedical Sciences, University of Minnesota, 1365 Gortner Avenue, St. Paul, Minnesota, MN 55108, United States

**Peter Nagy**, University of Kentucky Department of Plant Pathology, 201 F Plant Sciences Blgd. 1405 Veterans Drive, Lexington, Kentucky, 40546-0312, United States

**Richard Nelson**, Noble Research Institute Cell Biology and Plant Development, PO Box 2180, 2510 Sam Noble Parkway, Ardmore, Oklahoma, OK 73402-2180, United States

**Glen Nemerow**, Scripps Research Institute Immunology and Microbiology, 10550 North Torrey Pines Road, La Jolla, California, CA 92037, United States

**Max Nibert**, Harvard Medical School Department of Microbiology and Immunology, 200 Longwood Avenue, Boston, Massachusetts, 02115-5701, United States

**Una O’Doherty**  
**David Ornelles**, Wake Forest University Department of Microbiology and Immunology, Medical Center Boulevard, Winston-Salem, North Carolina, 27157-1064, United States

**Nikolaus (Klaus) Osterrieder**, Zentrum für Infektionsmedizin - Robert von Ostertag-Haus, Inst. of Virology, Freie Universität Berlin, Robert von Ostertag-Str. 7-13, 14163, Berlin, Germany

**Melanie Ott**, Gladstone Institute of Virology and Immunology, 1650 Owens St, San Francisco, California, CA 94158-2261, United States

**Jing-Hsiung Ou**, University of Southern California Department of Molecular Microbiology and Immunology, 2011 Zonal Avenue, HMR401, Los Angeles, California, CA 90033, United States

**Michelle Ozbun**, University of New Mexico Department of Molecular Genetics and Microbiology, 915 Camino de Salud NE Room CRF 303, Albuquerque, New Mexico, 87131, United States

**Cara Pager**
Andrew White, York University Department of Biology, 4700 Keele Street, Downsview, ON - M3J 1P3, Ontario, Canada
Jason Whitmire, 9024 Burnett-Womack, CB#7292, Dept. of Genetics and Microbiology & Immunology, UNC School of Medicine - Chapel Hill, 101 Manning Drive, Chapel Hill, North Carolina, NC 27599, United States
Michael Whitt, Health Science Center, Dept. of Microbiology, Immunology and Biochemistry, University of Tennessee at Memphis, 858 Madison Ave., Memphis, Tennessee, TN 38163, United States
Joyce Wilson, University of Saskatchewan Department of Microbiology and Immunology, 107 Wiggins Road, Saskatoon, S7N 5E5, Saskatchewan, Canada
Zhongguo Xiong, School of Plant Sciences, Div. of Plant Pathology & Microbiology, University of Arizona, Forbes 303, P.O. box 210036, Tucson, Arizona, AZ 85721-0036, United States
Dongwan Yoo
Jerome Zack, UCLA Department of Microbiology Immunology and Molecular Genetics, 615 charles E. Young Drive South, Los Angeles, California, CA 90095, United States
Allan Zajac, University of Alabama at Birmingham Department of Microbiology, 845 19th Street South, Birmingham, Alabama, 35222-3612, United States
Ingeborg Zehbe
Francisco Zerbini, Federal University of Viçosa Department of Plant Pathology, Avenida Peter Henry Rolfs, s/n, MG 36570-000, VICOSA, Brazil
Yong-Zhen Zhang, National Institute for Communicable Disease Control and Prevention Department of Zoonoses, Beijing, China
Xue-Ping Zhou, Zhejiang University, 310058, Hangzhou, China
Michael Zwick, Scripps Research Institute Immunology and Microbiology, 10550 North Torrey Pines Road, La Jolla, California, CA 92037, United States
GUIDE FOR AUTHORS

Your Paper Your Way
We now differentiate between the requirements for new and revised submissions. You may choose to submit your manuscript as a single Word or PDF file to be used in the refereeing process. Only when your paper is at the revision stage, will you be requested to put your paper in to a "correct format" for acceptance and provide the items required for the publication of your article.
To find out more, please visit the Preparation section below.

INTRODUCTION
Virology publishes papers that provide advances to the understanding of virus biology. We have been publishing the results of basic research in all branches of virology for over 60 years. The journal welcomes submitted articles on virus replication, virus-host biology, viral pathogenesis, immunity to viruses, virus structure, and virus evolution and ecology. Articles should be of broad interest to the community of virologists. We also publish state-of-the-art invited reviews from experts in the field.

Types of paper
Virology publishes three forms of manuscripts: (a) regular manuscripts (b) brief communications consisting of short but complete studies; and (c) invited reviews.

Regular manuscripts present the results of original basic research in all areas of virology described above that break new ground and serve as a valuable addition to the literature in the field.

Brief Communications are short self-contained studies of significant and timely findings. Brief communications should have a maximum of 4 presentation items (combination of figures and tables). The organization of a Brief Communication is the same as that of a Regular manuscript. It is expected that the review of a Brief Communication will take into account the nature of its more limited scope. Manuscripts describing viral sequences without a significant advance in virus biology are not appropriate as Brief Communications

Invited Reviews describe cutting-edge developments and themes of interest to virologists. The goal of a review is to focus on a sharply defined topic and to make the information accessible to researchers who work in other areas of virology. Reviews should not cover the field in question comprehensively but rather address fundamental concepts, recent findings, and important unresolved issues. We welcome submission of proposals for reviews. All review submissions should be pre-approved by invitation either by an editor or by sending a pre-submission inquiry to the Editor-in-chief or another editor of Virology with a proposed review outline.

Papers will be published in Virology under one of the following subheadings:

- Virus Replication/Gene Expression
- Virus Structure and Assembly
- Virus-Cell Biology
- Gene Therapy/Viral Vectors
- Emerging Viruses
- Unconventional Agents
- Viral Pathogenesis
- Immunity
- Technological Advances
- Genomes and Evolution

Authors should understand that space limitations make it impossible to publish manuscripts that describe work that does not break new ground conceptually, particularly if the work merely mirrors work done on a closely related virus without adding significant new knowledge, such as partial sequences of related viruses, evolutionary studies based on partial sequences, or descriptions of antigenic relationships and epitopes. Exceptions will be made, however, if these data reveal new insights into the fundamental properties of the virus.

Contact details for submission
The editors and their areas of responsibility are given here
Peer Review Process: Each editor is responsible for having manuscripts reviewed and for making the final decision concerning the disposition. Each manuscript is reviewed by at least two reviewers. All manuscripts are reviewed as rapidly as possible, and an editorial decision is usually reached within 4 to 5 weeks of the manuscript's submission.

Submission checklist
You can use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details.

Ensure that the following items are present:

One author has been designated as the corresponding author with contact details:
- E-mail address
- Full postal address

All necessary files have been uploaded:

Manuscript:
- Include keywords
- All figures (include relevant captions)
- All tables (including titles, description, footnotes)
- Ensure all figure and table citations in the text match the files provided
- Indicate clearly if color should be used for any figures in print

Graphical Abstracts / Highlights files (where applicable)

Supplemental files (where applicable)

Further considerations:
- Manuscript has been 'spell checked' and 'grammar checked'
- All references mentioned in the Reference List are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Internet)
- A competing interests statement is provided, even if the authors have no competing interests to declare
- Journal policies detailed in this guide have been reviewed
- Referee suggestions and contact details provided, based on journal requirements

For further information, visit our Support Center.

BEFORE YOU BEGIN

Additional Information
Virology strongly encourages the correct usage and uniformity of virus names as defined by the International Committee on Taxonomy of Viruses (ICTV). The ICTV rules of orthography should be consulted at the ICTV website http://www.ictvonline.org/virusorthography.asp. Requirements for deposition of structural data
For papers describing structures of biological macromolecules from electron microscopy experiments, the 3D map should be deposited at either the EMBL-EBI (UK) or RCSB (USA) EMDB deposition site (http://www.emdatabank.org/). Once the map has been deposited, any fitted atomic coordinates should be deposited with the Protein Data Bank (PDB) by following the link provided from the EMDB deposition session. The EMDB and PDB IDs should be included in the manuscript. Both the map and the coordinate data will be made public when the associated article is published.

Ethics in publishing
Please see our information pages on Ethics in publishing and Ethical guidelines for journal publication.

Policy and ethics
Publication of a research article in Virology is taken to imply that the authors are prepared to distribute freely to academic researchers for their own use any materials (e.g., viruses, cells, DNA clones, antibodies) used in the published experiments. Prior to publication, nucleotide sequences and protein sequences must be deposited with GenBank (Web site: http://www.ncbi.nlm.nih.gov/Genbank/) and an accession number obtained for publication in the manuscript. X-ray crystallographic coordinates must be deposited with the Protein Data Bank (Web site: http://www.rcsb.org/pdb/).
DUAL USE RESEARCH OF CONCERN. Authors and reviewers must notify the editor-in-chief if a manuscript reports potential dual use research of concern. The editor-in-chief will evaluate potential dual use research of concern papers and, if necessary, will consult additional reviewers.

Declaration of interest
All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential competing interests include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors must disclose any interests in two places: 1. A summary declaration of interest statement in the title page file (if double-blind) or the manuscript file (if single-blind). If there are no interests to declare then please state this: 'Declarations of interest: none'. This summary statement will be ultimately published if the article is accepted. 2. Detailed disclosures as part of a separate Declaration of Interest form, which forms part of the journal's official records. It is important for potential interests to be declared in both places and that the information matches. More information.

Please note that online publication of a submitted article prior to acceptance (i.e. under revision) is also strictly forbidden without the written consent of the copyright holder.

Submission declaration and verification
Submission of an article implies that the work described has not been published previously (except in the form of an abstract, a published lecture or academic thesis, see 'Multiple, redundant or concurrent publication' for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify originality, your article may be checked by the originality detection service Crossref Similarity Check.

Preprints
Please note that preprints can be shared anywhere at any time, in line with Elsevier's sharing policy. Sharing your preprints e.g. on a preprint server will not count as prior publication (see 'Multiple, redundant or concurrent publication' for more information).

Use of inclusive language
Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Articles should make no assumptions about the beliefs or commitments of any reader, should contain nothing which might imply that one individual is superior to another on the grounds of race, sex, culture or any other characteristic, and should use inclusive language throughout. Authors should ensure that writing is free from bias, for instance by using 'he or she', 'his/her' instead of 'he' or 'his', and by making use of job titles that are free of stereotyping (e.g. 'chairperson' instead of 'chairman' and 'flight attendant' instead of 'stewardess').

Changes to authorship
Authors are expected to consider carefully the list and order of authors before submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only before the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the corresponding author: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors after the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.
Copyright
Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (see more information on this). An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. Permission of the Publisher is required for resale or distribution outside the institution and for all other derivative works, including compilations and translations. If excerpts from other copyrighted works are included, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has preprinted forms for use by authors in these cases.

For gold open access articles: Upon acceptance of an article, authors will be asked to complete an 'Exclusive License Agreement' (more information). Permitted third party reuse of gold open access articles is determined by the author's choice of user license.

Author rights
As an author you (or your employer or institution) have certain rights to reuse your work. More information.

Elsevier supports responsible sharing
Find out how you can share your research published in Elsevier journals.

Role of the funding source
You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated.

Funding body agreements and policies
Elsevier has established a number of agreements with funding bodies which allow authors to comply with their funder's open access policies. Some funding bodies will reimburse the author for the gold open access publication fee. Details of existing agreements are available online.

Open access
This journal offers authors a choice in publishing their research:

Subscription
• Articles are made available to subscribers as well as developing countries and patient groups through our universal access programs.
• No open access publication fee payable by authors.
• The Author is entitled to post the accepted manuscript in their institution's repository and make this public after an embargo period (known as green Open Access). The published journal article cannot be shared publicly, for example on ResearchGate or Academia.edu, to ensure the sustainability of peer-reviewed research in journal publications. The embargo period for this journal can be found below.

Gold open access
• Articles are freely available to both subscribers and the wider public with permitted reuse.
• A gold open access publication fee is payable by authors or on their behalf, e.g. by their research funder or institution.

Regardless of how you choose to publish your article, the journal will apply the same peer review criteria and acceptance standards.

For gold open access articles, permitted third party (re)use is defined by the following Creative Commons user licenses:
Creative Commons Attribution (CC BY)
Let's others distribute and copy the article, create extracts, abstracts, and other revised versions, adaptations or derivative works of or from an article (such as a translation), include in a collective work (such as an anthology), text or data mine the article, even for commercial purposes, as long as they credit the author(s), do not represent the author as endorsing their adaptation of the article, and do not modify the article in such a way as to damage the author's honor or reputation.

Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)
For non-commercial purposes, let's others distribute and copy the article, and to include in a collective work (such as an anthology), as long as they credit the author(s) and provided they do not alter or modify the article.

The gold open access publication fee for this journal is **USD 2400**, excluding taxes. Learn more about Elsevier's pricing policy: [https://www.elsevier.com/openaccesspricing](https://www.elsevier.com/openaccesspricing).

Green open access
Authors can share their research in a variety of different ways and Elsevier has a number of green open access options available. We recommend authors see our [open access page](https://www.elsevier.com/openaccess) for further information. Authors can also self-archive their manuscripts immediately and enable public access from their institution's repository after an embargo period. This is the version that has been accepted for publication and which typically includes author-incorporated changes suggested during submission, peer review and in editor-author communications. Embargo period: For subscription articles, an appropriate amount of time is needed for journals to deliver value to subscribing customers before an article becomes freely available to the public. This is the embargo period and it begins from the date the article is formally published online in its final and fully citable form. [Find out more](https://www.elsevier.com/openaccess).

This journal has an embargo period of 12 months.

Elsevier Researcher Academy
[Researcher Academy](https://www.elsevier.com/researcher-academy) is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide you through the process of writing for research and going through peer review. Feel free to use these free resources to improve your submission and navigate the publication process with ease.

Language (usage and editing services)
Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the [English Language Editing service](https://www.elsevier.com/languageediting) available from Elsevier's Author Services.

Authors are required to submit the names and e-mail addresses of a minimum of four potential referees who are not current Editors of the journal.

Additional information

Special Subject Repositories
Certain repositories such as PubMed Central ("PMC") are authorized under special arrangement with Elsevier to process and post certain articles such as those funded by the National Institutes of Health under its Public Access policy (see [https://www.elsevier.com/about/open-science/open-access/agreements](https://www.elsevier.com/about/open-science/open-access/agreements) for more details on our policy and specific arrangements with various funding bodies, including NIH).

As an author you retain certain rights such as making copies (print or electronic) of the article for your own personal use, including for your own classroom teaching use. See [https://www.elsevier.com/copyright](https://www.elsevier.com/copyright) for an overview of all of these rights, as well as those of your employer or institution.

Language Polishing. Authors who require information about language editing and copyediting services pre- and post-submission please visit [http://webshop.elsevier.com/languageservices](http://webshop.elsevier.com/languageservices) or visit our [Support Center](https://www.elsevier.com/support) for more information. Please note Elsevier neither endorses nor takes responsibility for any products, goods or services offered by outside vendors through our services or in any advertising. For more information please refer to our Terms & Conditions [https://www.elsevier.com/legal/elsevier-website-terms-and-conditions](https://www.elsevier.com/legal/elsevier-website-terms-and-conditions).
PREPARATION

NEW SUBMISSIONS

Submission to this journal proceeds totally online and you will be guided stepwise through the creation and uploading of your files. The system automatically converts your files to a single PDF file, which is used in the peer-review process.

As part of the Your Paper Your Way service, you may choose to submit your manuscript as a single file to be used in the refereeing process. This can be a PDF file or a Word document, in any format or layout that can be used by referees to evaluate your manuscript. It should contain high enough quality figures for refereeing. If you prefer to do so, you may still provide all or some of the source files at the initial submission. Please note that individual figure files larger than 10 MB must be uploaded separately.

Streamline Reviews

If you have a manuscript that has been reviewed and rejected from a high impact journal (Impact Factor over 8 such as Nature, Science, PNAS, Cell Host Microbe, or PLOS Pathogens), you can send us the original reviews, your rebuttal, and a revised manuscript. You should include these extra items as part of your cover letter. We will consider the manuscript based on these reviews. We reserve the option of sending it for an additional assessment, in which case the additional reviewer(s) will also have access to your previous reviews. However, either way it will save you time as you don't need to start the review process all over again with new reviews. This option works best for manuscripts rejected from a high impact journal for perceived reasons of impact, novelty, or significance.

References

There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the article number or pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct.

Formatting requirements

There are no strict formatting requirements but all manuscripts must contain the essential elements needed to convey your manuscript, for example Abstract, Keywords, Introduction, Materials and Methods, Results, Conclusions, Artwork and Tables with Captions.

If your article includes any Videos and/or other Supplementary material, this should be included in your initial submission for peer review purposes.

Divide the article into clearly defined sections.

Material and methods

Materials and methods should provide sufficient information to permit the work to be repeated and should be kept concise by referring to previously published procedures. With increasing studies on pathogenicity of viruses, it is important that the provenance of viruses be stated clearly.

Keywords

Immediately after the abstract, provide a maximum of 10 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, "and", "of"). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abstract must not exceed 150 words

Follow internationally accepted rules and conventions: use the international system of units (SI). If other quantities are mentioned, give their equivalent in SI. For virus nomenclature, you are urged to consult the International Committee for the Taxonomy of Viruses (ICTV): http://www.ncbi.nlm.nih.gov/. Commonly used vernacular names may be used after viruses are first correctly identified. Genetic loci should be italicized; protein products of the loci are not italicized.

Please note that the instructions related to Graphical abstract still apply to all new submissions.
**Peer review**

This journal operates a single blind review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. More information on types of peer review.

**REVISED SUBMISSIONS**

*Use of word processing software*

Regardless of the file format of the original submission, at revision you must provide us with an editable file of the entire article. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

**Article structure**

*Subdivision - unnumbered sections*

Divide your article into clearly defined sections. Each subsection is given a brief heading. Each heading should appear on its own separate line. Subsections should be used as much as possible when cross-referencing text: refer to the subsection by heading as opposed to simply 'the text'.

**Introduction**

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

**Results**

Results should be clear and concise.

**Discussion**

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

**Conclusions**

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

**Essential title page information**

*Title.* Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.

*Author names and affiliations.* Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.

*Corresponding author.* Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. **Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.**

*Present/permanent address.* If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

**Highlights**

Highlights are optional yet highly encouraged for this journal, as they increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the novel results of your research as well as new methods that were used during the study (if any). Please have a look at the examples here: example Highlights.
Highlights should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point).

**Graphical abstract**

Although a graphical abstract is optional, its use is encouraged as it draws more attention to the online article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: Please provide an image with a minimum of 531 × 1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5 × 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. You can view [Example Graphical Abstracts](#) on our information site.

Authors can make use of Elsevier's [Illustration Services](#) to ensure the best presentation of their images and in accordance with all technical requirements.

**Acknowledgements**

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

**Formatting of funding sources**

List funding sources in this standard way to facilitate compliance to funder's requirements:

**Funding:** This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, please include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

**Database linking**

Elsevier encourages authors to connect articles with external databases, giving their readers one-click access to relevant databases that help to build a better understanding of the described research. Please refer to relevant database identifiers using the following format in your article: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

For papers describing experimentally determined structures of biological macromolecules, the atomic coordinates and related experimental data (structure factor amplitudes/intensities and/or NMR restraints and chemical shifts) must be deposited in the PDB at a member site of the Worldwide Protein Data Bank ([wwPDB.org](http://wwPDB.org)). The wwPDB validation report for each structure should be provided upon manuscript submission.

For papers describing structures of biological macromolecules from electron microscopy experiments (all averaging methods, including sub-tomogram averaging), the 3D map should be deposited in EM Data Bank ([EMDB: emdatabank.org](http://emdatabank.org)). Any fitted atomic coordinates should be deposited with the Protein Data Bank (PDB). For electron tomographic studies with no averaging, deposition of one or more representative tomograms in EMDB is strongly recommended. The EMDB and PDB IDs should be included in the manuscript, together with a brief descriptive title for each accession. In cases where PDB models have been fitted into EMDB maps, the correspondences between them should be clearly stated. Both the map and the coordinate data must be made public when the associated article is published.

See [https://www.elsevier.com/databaselinking](https://www.elsevier.com/databaselinking) for more information and a full list of supported databases.

**Artwork**
Electronic artwork

General points
- Make sure you use uniform lettering and sizing of your original artwork.
- Preferred fonts: Arial (or Helvetica), Times New Roman (or Times), Symbol, Courier.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Indicate per figure if it is a single, 1.5 or 2-column fitting image.
- For Word submissions only, you may still provide figures and their captions, and tables within a single file at the revision stage.
- Please note that individual figure files larger than 10 MB must be provided in separate source files. A detailed guide on electronic artwork is available.

You are urged to visit this site; some excerpts from the detailed information are given here.

Formats
Regardless of the application used, when your electronic artwork is finalized, please 'save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):
- EPS (or PDF): Vector drawings. Embed the font or save the text as 'graphics'.
- TIFF (or JPG): Color or grayscale photographs (halftones): always use a minimum of 300 dpi.
- TIFF (or JPG): Bitmapped line drawings: use a minimum of 1000 dpi.
- TIFF (or JPG): Combinations bitmapped line/half-tone (color or grayscale): a minimum of 500 dpi is required.

Please do not:
- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); the resolution is too low.
- Supply files that are too low in resolution.
- Submit graphics that are disproportionately large for the content.

Color artwork
Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF) or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) in addition to color reproduction in print. Further information on the preparation of electronic artwork.

Figure captions
Ensure that each illustration has a caption. A caption should comprise a brief title (not on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

References

Citation in text
Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Web references
As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

Data references
This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.
References in a special issue
Please ensure that the words ‘this issue’ are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

Reference management software
Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support Citation Style Language styles, such as Mendeley. Using citation plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal’s style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide. If you use reference management software, please ensure that you remove all field codes before submitting the electronic manuscript. More information on how to remove field codes from different reference management software.

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link:
http://open.mendeley.com/use-citation-style/virology
When preparing your manuscript, you will then be able to select this style using the Mendeley plug-ins for Microsoft Word or LibreOffice.

Free Reference Style
There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct. If you do wish to format the references yourself they should be arranged according to the following examples:


Journal abbreviations source
Journal names should be abbreviated according to the List of Title Word Abbreviations.

Video
Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the file in one of our recommended file formats with a preferred maximum size of 150 MB per file, 1 GB in total. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including ScienceDirect. Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our video instruction pages. Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

Data visualization
Include interactive data visualizations in your publication and let your readers interact and engage more closely with your research. Follow the instructions here to find out about available data visualization options and how to include them with your article.

Supplementary material
Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to
supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

**Research data**
This journal encourages and enables you to share data that supports your research publication where appropriate, and enables you to interlink the data with your published articles. Research data refers to the results of observations or experimentation that validate research findings. To facilitate reproducibility and data reuse, this journal also encourages you to share your software, code, models, algorithms, protocols, methods and other useful materials related to the project.

Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If you are sharing data in one of these ways, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the research data page.

**Data linking**
If you have made your research data available in a data repository, you can link your article directly to the dataset. Elsevier collaborates with a number of repositories to link articles on ScienceDirect with relevant repositories, giving readers access to underlying data that gives them a better understanding of the research described.

There are different ways to link your datasets to your article. When available, you can directly link your dataset to your article by providing the relevant information in the submission system. For more information, visit the database linking page.

For supported data repositories a repository banner will automatically appear next to your published article on ScienceDirect.

In addition, you can link to relevant data or entities through identifiers within the text of your manuscript, using the following format: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

**Mendeley Data**
This journal supports Mendeley Data, enabling you to deposit any research data (including raw and processed data, video, code, software, algorithms, protocols, and methods) associated with your manuscript in a free-to-use, open access repository. During the submission process, after uploading your manuscript, you will have the opportunity to upload your relevant datasets directly to Mendeley Data. The datasets will be listed and directly accessible to readers next to your published article online.

For more information, visit the Mendeley Data for journals page.

**Data statement**
To foster transparency, we encourage you to state the availability of your data in your submission. This may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you will have the opportunity to indicate why during the submission process, for example by stating that the research data is confidential. The statement will appear with your published article on ScienceDirect. For more information, visit the Data Statement page.

**AFTER ACCEPTANCE**

**Online proof correction**
Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors.
If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.
We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

**Offprints**
The corresponding author will, at no cost, receive a customized Share Link providing 50 days free access to the final published version of the article on ScienceDirect. The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Both corresponding and co-authors may order offprints at any time via Elsevier's Author Services. Corresponding authors who have published their article gold open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

**AUTHOR INQUIRIES**
Visit the Elsevier Support Center to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch. You can also check the status of your submitted article or find out when your accepted article will be published.

© Copyright 2018 Elsevier | https://www.elsevier.com