3.1 Introduction

The word antimicrobial was derived from the Greek words anti (against), mikros (little) and bios (life) and refers to all agents that act against microbial organisms.

An antimicrobial is an agent that kills microorganisms or inhibits their growth. Antimicrobial medicines can be grouped according to the microorganisms they act primarily against. For example, antibacterials are used against bacteria and antifungals are used against fungi. They can also be classified according to their function. Agents that kill microbes are called microbicidal, while those that merely inhibit their growth are called biostatic. The use of antimicrobial medicines to treat infection is known as antimicrobial chemotherapy.

An ANTIBIOTIC is a low molecular substance produced by a microorganism that at a low concentration inhibits or kills other microorganisms.

An ANTIMICROBIAL is any substance of natural, semisynthetic or synthetic origin that kills or inhibits the growth of microorganisms but causes little or no damage to the host.

All antibiotics are antimicrobials, but not all antimicrobials are antibiotics.

3.1.1 Journal of antimicrobial Chemotherapy

The Journal of Antimicrobial Chemotherapy is a peer-reviewed medical journal which covers laboratory aspects and clinical use of antimicrobial
agents. It is published by Oxford University Press on behalf of the British Society for Antimicrobial Chemotherapy and was established in 1975. In January 2015 J. Peter Donnelly (Radboud University Nijmegen Medical Centre) became the eighth editor-in-chief replacing Alan P. Johnson (Health Protection Agency, London, United Kingdom). All content is available for free after 12 months while authors also have the option to have their articles published immediately as open access.

The *Journal of Antimicrobial Chemotherapy* is among the foremost international journals in antimicrobial research. The readership includes representatives of academia, industry and health services, and includes those who are influential in formulary decisions.

Published monthly, the Journal features original articles on the laboratory aspects and clinical use of antimicrobials including antibacterial, antiviral, antifungal, and antiprotozoal agents.

In addition to the wealth of primary papers, the journal carries review articles offering in-depth discussion on matters of topical concern. Lively leading articles offer incisive coverage of recent advances and controversies.

Other sections include:

- **For debate**: International comment on contentious issues and ideas
- **Antimicrobial practice**: Articles on practical prescribing and formulary issues
- **Correspondence**: A section for scientists to present early observations of their work and to comment on published articles
- **Book reviews**: Helpful reviews of relevant, newly published titles

Monthly issues can include up to ten informative sections:

- Leading articles
- Reviews
- The Garrod Lecture
- For debate
- Original articles
- Brief reports
- Antimicrobial practice
- Meeting reports
- Correspondence
• Book reviews

The Journal publishes between two and eight supplements each year. These include Working Party reports of the British Society for Antimicrobial Chemotherapy, and original publications on pre-clinical and clinical aspects of drugs in development or the role of established drugs in specific therapeutic areas.

3.1.2 Abstracting and Indexing Services

*The Journal of Antimicrobial Chemotherapy* is covered by the following major indexing services:

Abstracts in Anthropology
Abstracts on Hygiene and Communicable Diseases
Agbiotech News and Information
Agroforestry Abstracts
Animal Breeding Abstracts
Biocontrol News and Information
Biological Abstracts
BIOSIS Previews
Biotechnology and Bioengineering Abstracts
CAB Abstracts
Chemical Abstracts
Current Contents® /Clinical Medicine
Current Contents® /Life Sciences
Dairy Science Abstracts
Derwent Drug File
EMBASE
Environment Index
Environmental Science and Pollution Management
ExcerptaMedica Abstract Journals
Forest Products Abstracts
Forestry Abstracts
Global Health
Helminthology Abstracts
Horticultural Abstracts
IDIS
Index Veterinarius
Journal Citation Reports /Science Edition
Medical & Pharmaceutical Biotechnology Abstracts
Industrial and Applied Microbiology Abstracts
Nutrition Abstracts and Reviews
Pharmacoeconomics and Outcome News
Pig News & Information
Poultry Abstracts
3.1.3 Impact Factor and Ranking

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<th>Year</th>
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<th>Si: Microbiology</th>
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This information is taken from the Journal Citation Reports, published annually as part of the Science Citation Index by ISI.

3.2 British Society for Antimicrobial Chemotherapy

An inter-professional organisation with over 40 years of experience and achievement in antibiotic education, research and leadership. Dedicated to saving lives through appropriate use and development of antibiotics now and in the future. Communicates effectively about antibiotics and antibiotic usage via workshops, professional guidelines and its own high impact international journal.

Founded in 1971, and with 700 members worldwide, the British Society for Antimicrobial Chemotherapy exists to facilitate the acquisition and dissemination of knowledge in the field of antimicrobial chemotherapy.

At the forefront of the antimicrobial chemotherapy field, the Society meets its aims by setting standards for antimicrobial susceptibility testing and use, both within the UK and overseas, supporting microbiologists in their practice, and the promotion and provision of channels through which its Members can ensure their continuing professional development.

The BSAC publishes the Journal of Antimicrobial Chemotherapy (JAC), which is one of the leading journals in the field and is internationally renowned for its scientific excellence.

The Society collaborates with relevant bodies, both nationally and internationally, and currently leads national programmes of surveillance and susceptibility testing to determine the effectiveness of antimicrobial and chemotherapeutic agents.

Through a series of educational and other initiatives, the Society offers advice to government, its membership, the wider medical profession and the public on issues relating to antimicrobial agents, the appropriate and prudent use of
antibiotics, and the management of community and hospital-acquired infection(s). In addition, scientific excellence is promoted through the awarding of grants for research.

### 3.3 Governance

Council is the governing body of the Society and comprised the Officers of the Society and elected Ordinary Members of Council and meets quarterly in January, April, July and October of each year. Council is supported by a number of standing committees that have delegated authority to carry out work within a remit that is approved by Council.

Memorandum and Articles of Association (MAA) is the statutory instrument that governs the operation of the BSAC. The MAA can only be amended with the approval of the Charity Commission.

The Regulations, which can be amended by Council, further define the MAA and establish operational procedures for BSAC business.

The Register of Interests offers provisions for members, throughout the submission of transparency declarations and voluntary or requested withdrawal from meetings, to ensure that they are not influenced, or appearing to be influenced, by their private interests in the execution of their duties on behalf of the Society. The BSAC Register of Interests is regularly updated and a copy can be provided on receipt of a written request to the Chief Executive Officer.

### 3.4 Council and structure

Council is the governing body of the Society and comprised the Officers of the Society and elected Ordinary Members of Council. Council meets quarterly, usually in January, April, July and October of each year.
Council is supported by a number of standing committees that have delegated authority to carry out work within a remit that is approved by Council. All standing committees report to Council.

3.5 Background and Scope of the Journal

The Journal of Antimicrobial Chemotherapy was founded in 1975 and is owned by the British Society for Antimicrobial Chemotherapy (BSAC), which exists to facilitate the acquisition and dissemination of knowledge in the field of antimicrobial chemotherapy. Any profit generated through the operation of the Journal is used by the BSAC in the furtherance of its objectives. The Journal is published monthly and is among the foremost international journals in antimicrobial research. Our readership includes representatives of academia, industry and health services, and includes those who are influential in formulary decisions. The Journal has an impact factor of 5.439 (2013). Unless authors have elected optional open access publication, journal articles are available only to subscribers for 12 months from the month of publication in print. Thereafter all articles are freely available online. This balances the desire for wide access to research with the need to retain a subscription income for the Journal.

The Journal features articles on the laboratory aspects and clinical use of antimicrobials including antibacterial, antiviral, antifungal, and antiprotozoal agents. In addition to a wealth of primary papers, JAC carries review articles offering in-depth discussion on matters of topical concern, and lively leading articles offer incisive coverage of recent advances and controversies. Other article types include: systematic reviews, antimicrobial practice (articles on practical prescribing and formulary issues) and correspondence (a section for case reports and research letters, as well as letters to the Editor commenting on articles published in the Journal).

The Journal particularly welcomes manuscripts that enhance the practice of evidence-based medicine (clinical trials, systematic reviews and meta-analyses), improve antimicrobial treatment (pharmacokinetics,
pharmacodynamics and prescribing practices) and enhance our understanding of the action of antimicrobial agents and the mechanisms and epidemiology of antimicrobial resistance. For studies on the antimicrobial properties of natural products, authors are strongly discouraged from submitting work on materials that have not been chemically defined. For non-randomized studies evaluating the effectiveness of interventions, the uncontrolled before and after design is generally agreed to be intrinsically weak and this type of study is very unlikely to be judged acceptable for publication unless there are other compelling reasons.

Early in vitro studies of new compounds must include comparative cytotoxicity data from human or animal cells in tissue culture in order to establish that the compound has selective antimicrobial activity and therefore may be a realistic prospect for future clinical use in humans.

Where authors have identified previously unreported antimicrobial activity relating to a marketed drug, consideration should be given to the clinical relevance of such activity, in particular when taking into account the exposure to the drug that can be safely achieved with clinically acceptable doses.

With increasing submissions to JAC it has become necessary to increase the rejection rate to approximately 80%. Manuscript evaluation time (i.e. time from submission to first decision) is typically 4–6 weeks, and the time from acceptance to publication is approximately 4-6 weeks (papers are published online ahead of print, which greatly reduces publication times).

Papers submitted to JAC should fall within the scope of the Journal, should be scientifically sound, well written and concise, and should make a significant contribution to the field of study. High-quality, important articles that are well written and concise will naturally tend to progress through the system more quickly.
3.6 Optional Open Access

Journal of Antimicrobial Chemotherapy authors have the option to publish their paper under the Oxford Open initiative; whereby, for a charge, their paper will be made freely available online immediately upon publication. This applies to all article types apart from Leading Articles, which are made freely available online immediately upon publication free of charge. After your manuscript is accepted the corresponding author will be required to accept a mandatory license to publish agreement. As part of the licensing process you will be asked to indicate whether or not you wish to pay for open access. If you do not select the open access option, your paper will be published with standard subscription-based access and you will not be charged. Oxford Open articles are published under Creative Commons licences. RCUK/Wellcome Trust funded authors publishing in Journal of Antimicrobial Chemotherapy can use the Creative Commons Attribution license (CC-BY) for their articles.

3.7 Editorial Board

EDITOR-IN-CHIEF:

J. P. Donnelly (Nijmegen, The Netherlands)

Dr Donnelly works for the Department of Haematology of the Radboud University Nijmegen Medical Centre. His main interests are the management and diagnosis of infectious complications in haematological malignancies and stem cell transplantation and he has extensive experience in the design, conduct, analysis and reporting of clinical trials. He has been involved in the Journal of Antimicrobial Chemotherapy for many years.

SENIOR EDITORS

F. K. Gould (Newcastle upon Tyne, UK)

Professor Gould is a Consultant Microbiologist and has been in her present appointment since 1988, working for the NHS Hospital Trust, over two sites within a busy teaching hospital, she is also Regional Microbiologist, Health
Protection Agency, with special interest in Healthcare Associated Diseases. Professor Gould has an interest in the diagnosis and treatment of lower respiratory tract infections, and the management of infection in patients with impaired renal function including the diagnosis and treatment of peritonitis in Continuous Ambulatory Peritoneal Dialysis. In addition she has worked closely with the adult and paediatric thoracic transplant programme and is a member of the Infection Council of the International Society of Heart and Lung Transplantation.

A. P. Johnson (London, UK)

Professor Johnson works for Public Health England (formally UK Health Protection Agency) in London undertaking surveillance of antibiotic resistance. He also teaches on a number of academic courses on aspects of medical microbiology.

L. Leibovici (Petah-Tiqva, Israel)

Leonard Leibovici heads the Department of Medicine at Beilinson Hospital, Rabin Medical Centre, Petah-Tiqva and is the Head of the Medical School and Vice-Dean at the Sackler Faculty of Medicine, Tel-Aviv University, Israel. His main research interests are computerized decision support, antibiotic treatment and evidence-based medicine.

R. L. Murphy (Chicago, USA)

Dr. Rob Murphy is currently the John P. Phair Professor of Infectious Diseases at Northwestern University where he is also Director, Center for Global Health. He holds academic appointments as Visiting Professor of Immunology and Infectious Diseases at Harvard School of Public Health and Professeur Associé de Recherche at the Pierre et Marie Curie Université in Paris.
L. Ostrosky-Zeichner (Houston, USA)

DrOstrosky-Zeichner is currently an associate professor of medicine and epidemiology, associate fellowship program director, and director of the Laboratory of Mycology Research, at the Division of Infectious Diseases of the University of Texas Medical School at Houston. He also serves as medical director for epidemiology for Memorial Hermann Texas Medical Center. He is a fellow of the American College of Physicians and the Infectious Diseases Society of America.

D. S. Reeves (Bristol, UK)

Professor David Reeves retired from the NHS in 1998. After qualifying in medicine, and following posts at the Westminster, Edgware and St Mary’s Hospitals, he was Consultant Medical Microbiologist and Control of Infection Officer of Southmead Hospital for 27 years. He is Honorary Professor of Medical Microbiology, University of Bristol.

He has held a number of positions in the BSAC (founder Council member, Meetings Secretary, General Secretary), and was an Editor of JAC (1985-91), member and chairman of what is now the Editorial Advisory Board (74-96), and Editor-in-Chief (2000-6). He is an Honorary Life member of the BSAC and a former Garrodmedallist.

Professor Reeves has edited many supplements for JAC and also a number of books, and still referees regularly for other journals. He recently published a chapter on aminoglycosides in a standard reference work.

S. Schwarz (Neustadt-Mariensee, Germany)

Prof. Dr. med. vet. Stefan Schwarz works in the Institute of Farm Animal Genetics of the Friedrich-Loeffler-Institut (= Federal Research Institute for Animal Health) in Neustadt-Mariensee, Germany. He heads a research group entitled ‘Molecular Microbiology and Antimicrobial Resistance’ and is involved in both surveillance of antimicrobial resistance and analysis of the molecular genetics of antimicrobial resistance. He also teaches various
academic courses at the University of Veterinary Medicine Hannover.

3.8 Conclusion

The *Journal of Antimicrobial Chemotherapy* is among the foremost international journals in antimicrobial research.

Publishing has changed during the course of time. There are more and more articles that appeal to specialists rather than the general reader of the *Journal of antimicrobial Chemotherapy* and online access means that articles are sought in a different manner. (Editor-in-Chief: Dr Peter Donnelly).

“40th Anniversary of the Journal of Antimicrobial Chemotherapy”

Journal of Antimicrobial Chemotherapy is celebrating the 40th Anniversary of the journal.

The Journal sets out to cater to a broad church of disciplines involved in the development and use of antibiotics and related agents, attracting authors and readers from the BSAC (British Society for Antimicrobial Chemotherapy) and beyond. The Journal’s first editorial was written by the first Editor-in-Chief, J. D. Williams. He was editor in chief during 1975-1980.

Ian Phillips of St Thomas’ Hospital, London takes over as the Journal’s Editor-in-Chief in 1981 and introduces a new section in the first issue of each volume of the Journal, providing detailed guidance to authors. He was editor in chief during 1981-1985.

David Speller of the Bristol Royal Infirmary becomes JAC’s new Editor-in-Chief. He and his team “wish to increase the proportion of articles dealing with well-conducted clinical investigations and to evoke a vigorous correspondence on antimicrobial matters”. He was editor in chief during 1986-1990 and Roger Finch fulfils the role of JAC’s Editor-in-Chief during 1991-1995.

Martin Wood becomes the new Editor-in-Chief of JAC during 1996-2000. JAC welcomes David Reeves as its new Editor-in-Chief in 2001. He was
editor in chief during 2001-2006. Alan Johnson takes over as JAC’s Editor-in-Chief in 2006 and was editor in chief during 2006-2014.

The Journal’s Impact Factor exceeds 5 and reaches to 5.068 in 2011.

The Journal of Antimicrobial Chemotherapy offer evidence-based synthesis of knowledge and data useful for clinical practice, analyse, reflect and comment on the current state of the art and practice, consolidate our knowledge of antimicrobial agents and their use, consider the future of antimicrobial chemotherapy.

The Journal mostly considers publishing articles on new approaches to improving antimicrobial chemotherapy, new compounds provided evidence is offered of selective antimicrobial activity and comparative cytotoxicity data, previously unreported antimicrobial activity relating to a marketed drug product but such studies must take into account the exposure to the drug that can be safely achieved with clinically acceptable doses and articles reporting the activity of bacteriophages.

References: