

INTERNATIONAL JOURNAL OF ANTISEPSIS DISINFECTION STERILIZATION



EISSN - 2528 - 9926

OWNER

On behalf of Society of Disinfection Antisepsis and Sterilization (DAS)

Prof. Murat GÜNAYDIN, MD

President of DAS Society

EDITOR-IN-CHIEF

Murat GÜNAYDIN (Istanbul, Turkey)

DEPUTY EDITORS

Saban ESEN (Samsun, Turkey)

Duygu PERÇİN (Kayseri, Turkey)

Yavuz UYAR (Istanbul, Turkey)

EDITORIAL BOARD

Erdal AKALIN (Ankara, Turkey)

Ramin BAYRAMLI (Baku, Azerbaijan)

Christine DENIS DELEBECQUE (Lille, France)

Bülent GÜRLER (Istanbul, Turkey)

Oğuz KARABAY (Sakarya, Turkey)

Ayşegül KARAHASAN (Istanbul, Turkey)

Hiroyoshi KOBAYASHI (Tokyo, Japan)

Hakan LEBLEBİCİOĞLU (Samsun, Turkey)

Recep ÖZTÜRK (Istanbul, Turkey)

Meral SAĞIROĞLU (Ankara, Turkey)

Edmond PUCA (Tirana, Albania)

Salvatore RUBINO (Sassari, Italy)

Francesco TESSAROLO (Trento, Italy)

TECHNICAL BOARD

Ali CANGÜL (Kare Publishing Ltd, Istanbul)

Z. Metin ATEŞ (LookUs Ltd, Istanbul)

Susan ATWOOD (English Editing, Istanbul)

Salih ERGÖÇEN (Statistical Analysis, Ankara)

Dilek ZENCİROĞLU (DAS Society, Istanbul, Turkey)

ADVISORY BOARD

Hakan ABACIOĞLU (Turkey)

Çagatay ACUNER (Turkey)

Sead AHMETAGIC (BIH)

Alper AKÇALI (Turkey)

Yurdanur AKGÜN (Turkey)

Sebahat AKSARAY (Turkey)

Dilek ARMAN (Turkey)

Turan ASLAN (Turkey)

Lela BAKANIDZE (Georgia)

Nick BEECHING (United Kingdom)

Christina BRADLEY (United Kingdom)

Demet CANYILMAZ (Turkey)

Freddy CAVIN (Switzerland)

Masuet Aumatell CRISTINA (Spain)

Ahmet ÇARHAN (Turkey)

Güven ÇELEBİ (Turkey)

Rıza DURMAZ (Turkey)

Cafer EROĞLU (Turkey)

Mustafa ERTEK (Turkey)

Yasemin ERSOY (Turkey)

Gülden ERSÖZ (Turkey)

Şaban ESEN (Turkey)

Mustafa GÜL (Turkey)

Meral GÜLTEKİN (Turkey)

Rahmet GÜNER (Turkey)

Nezahat GÜRLER (Turkey)

Inge GYSSENS (Netherlands)

Salih HOŞOĞLU (Turkey)

Murat HÖKELEK (Turkey)

Elif DOYUK KARTAL (Turkey)

Esmâ KAYA (Turkey)

Çigdem KAYACAN (Turkey)

Ejaz KHAN (Pakistan)

Nuri KİRAZ (Turkey)

Esra KOÇOĞLU (Turkey)

Safiye KOÇULU (Turkey)

Peter KOZIN (Slovenia)

İftihar KÖKSAL (Turkey)

Behice KURTARAN (Turkey)

Tatjana LEJKO-ZUPANC (Slovenia)

Mark LOBE (Canada)

Ziad MEMISH (Saudi Arabia)

Aziz ÖĞÜTLÜ (Turkey)

Mehmet Ali ÖKTEM (Turkey)

Yekta ÖZER (Turkey)

Mehmet Ali ÖZİNEL (Turkey)

Ayşegül TAYLAN ÖZKAN (Turkey)

Cumhur ÖZKUYUMCU (Turkey)

Aydan ÖZKÜTÜK (Turkey)

Nefise ÖZTOPRAK (Turkey)

Mustafa ÖZYURT (Turkey)

David PERRETT (United Kingdom)

Eskild PETERSEN (Denmark)

Nicola PETROSILLO (Italy)

Wim RENDERS (Belgium)

Mustafa SAMASTI (Turkey)

Yesim ÇETİNKAYA ŞARDAN (Turkey)

İrfan ŞENCAN (Turkey)

Aneta SIMONOSKA (Macedonia)

Robert SKOV (Denmark)

Jasenska SKRLIN (Croatia)

Nedim SULTAN (Turkey)

Mustafa SÜN BÜL (Turkey)

Süheyla SÜRÜCÜOĞLU (Turkey)

Yeşim TAŞOVA (Turkey)

Nijaz TIHIC (BIH)

Viktorija TOMIC (Slovenia)

Zeliha TUFAN KOÇAK (Turkey)

Sercan ULUSOY (Turkey)

Gaye USLUER (Turkey)

Serhat ÜNAL (Turkey)

John WAIN (United Kingdom)

Zerrin YULUĞKURAL (Turkey)

CORRESPONDENCE



INTERNATIONAL JOURNAL OF ANTISEPTICS DISINFECTION STERILIZATION

Address: International Journal of Antiseptics Disinfection Sterilization (IJADS)
İstanbul University Cerrahpaşa School of Medicine
Medical Microbiology Laboratory
34098 Fatih, Istanbul, Turkey
Phone: +90 212 414 30 00 (Internal: 23085)
E-mail: ijads-editor@das.org.tr, ijads@ijads.org

DAS



DISINFECTION ANTISEPTICS AND STERILIZATION ASSOCIATION

President: Murat GÜNAYDIN
Vice President: Duygu PERÇİN
Secretary General: Dilek ZENCİROĞLU
Treasurer: Şaban ESEN
Members: Bülent GÜRLER
Recep ÖZTÜRK
Hakan LEBLEBİCİOĞLU

PUBLISHER



KARE PUBLISHING

Address: Altayçeşme Mah., Samanyolu Sok., Mecit Varlı Apt. No: 19/6,
34843 Maltepe, İstanbul, Turkey
Phone: +90 216 550 61 11
Fax: +90 216 550 61 12
Web: <http://www.kareyayincilik.com>
e-mail: kareyayincilik@gmail.com

ONLINE SYSTEMS



LOOKUS

Address: Halk Sk. 29, Golden Plaza C Blok, 34734 Sahrayicedid, İstanbul, Turkey
Phone: +90 216 372 66 44
Fax: +90 216 372 66 48
Web: <http://www.lookus.net>
e-mail: lookus@lookus.net

International Journal of Antiseptics Disinfection Sterilization (IJADS) is a peer-reviewed journal published three times a year.
Materials published in the Journal is covered by copyright ©2016 All rights reserved.



INSTRUCTIONS FOR THE AUTHORS

PUBLISHING POLICY

International Journal of Antisepsis Disinfection Sterilization (IJADS) is a publication of the “Society of Disinfection Antisepsis Sterilization (DAS)” in Turkey. The Journal is published every four months and one volume consists of three issues. The journal publishes disinfection, antisepsis, sterilization, hospital infection, antimicrobial resistance and related subjects in the field of original research, case report, reviews and letters to the editor are published in English.

Articles which are not previously published in another journal or not currently under evaluation elsewhere can be accepted for the journal. Articles approved by the Scientific Committee and Editorial Board are eligible to be released after receiving at least two positive opinions from the Scientific Committee members of the IJADS. Those committees have the authority to make all corrections and abbreviations but not to change the content of the article.

The authors have the all the scientific and legal responsibilities of the manuscripts. The authors must fully obey the ethics of research and publication.

The editorial and publication processes of the journal are shaped in accordance with the guidelines of the International Council of Medical Journal Editors (ICMJE), the World Association of Medical Editors (WAME), the Council of Science Editors (CSE), the Committee on Publication Ethics (COPE), and the European Association of Science Editors (EASE). The journal conforms to the Principles of Transparency and Best Practice in Scholarly Publishing (doaj.org/bestpractice).

COPYRIGHT NOTICE

All published material will become the sole property and will be copyrighted by the Journal. No part of the publication may be used without prior written permission of the publisher.

ONLINE SUBMISSIONS

Registration and login are required to submit items online and to check the status of current submissions.

Users should visit journal's web site (www.ijads.org) and create an account before submitting their manuscripts.

PRIVACY STATEMENT

The names and email addresses entered in this journal site will be used exclusively for the stated purposes of this journal and will not be made available for any other purpose or to any other party.

AUTHOR GUIDELINES

International Journal of Antisepsis Disinfection Sterilization (IJADS) publishes disinfection, antisepsis, sterilization, hospital infection, antimicrobial resistance in the field of original research, case report, reviews and letters to the editor are published in English. Contributions may be in the form of clinical and basic research articles, case reports, personal clinical and technical notes, and letters to the Editor. The Journal also publishes brief reports on original studies or evaluations, book reviews, and proceedings of scientific meetings. Opinions presented in published articles by no means represent the official endorsement of the Society of Disinfection Antisepsis Sterilization (DAS). Articles and illustrations become the property of the Journal after publication. The Editor-in-Chief may request from the authors additional data, information, or complementary material concerning the manuscripts and the authors must comply with such requests.

ETHICAL ISSUES

IJADS expects the authors to comply with the ethics of research and publication. In human research, a statement of the informed consent of those who participated in the study is needed in the section of the “Materials and Methods”.

All studies should be carried out in accordance with the World Medical Association Declaration of Helsinki (<http://www.wma.net/en/30publications/10policies/b3/>), covering the latest revision date. Patient confidentiality must be protected according to the universally accepted guidelines and rules. In case of procedures that will apply to volunteers or patients, it should be stated that the study objects have been informed and given their approval before the study started. In case the authors do not have a local ethics committee, the principles outlined in the “Declaration of Helsinki” should have been followed. Authors

should declare that they have followed the internationally accepted latest guidelines, legislation and other related regulations and should sent “Approval of the Ethics Committee”.

In case animal studies, approval also is needed; it should be stated clearly that the subjects will be prevented as much as possible from pain, suffering and inconvenience.

SUBMISSION AND PEER-REVIEWING

The official language of the Journal is English. Any type of submission and letters in during the review process has to be strictly in English.

EDITORIAL EVALUATION WORKFLOW

All submitted materials undergo a technical check following initial submission. Technical check evaluates existence of required documents, structural consistency of manuscript and supplementary files. In case there's a discordance, manuscript is returned to the corresponding Author for correction.

Following technical check, Editorial Office of IJADS assign a manuscript number and officially start peer-review process. Assigned Vice/or Section Editors execute process on behalf of Editor of IJADS and manuscripts are subject to blind peer review by at least two reviewers. Reviewers are assigned considering the field of the study.

The Editor, who judges and analyzes the entire review process, reaches a final decision to accept or reject a manuscript, or to recommend a revision. The Editor has the right to reject a revised manuscript.

COPYRIGHT - AUTHORS' APPROVAL - CONFLICT OF INTEREST

The authors should disclose all issues concerning financial relationship, conflict of interest, and competing interest that may potentially influence the results of the research or scientific judgment. All financial contributions or sponsorship, financial relations, and areas of conflict of interest should be clearly explained in a separate letter to the editor at the time of submission, with full assurance that any related document will be submitted to the Journal when requested.

Manuscripts should be sent with the Copyright-Authors' Approval-Conflict of Interest Letter signed by the author(s). A copy of this letter can be found at www.ijads.org. Manuscripts will not be accepted for evaluation until the receipt of this document by the Journal.

SUBMITTING A MANUSCRIPT

Submission and tracking of a manuscript can only be made online through the <http://www.ijads.org> web site at <http://www.journalagent.com/ijads>. Corresponding author should register to <http://www.journalagent.com/ijads> web site and login to start a submission process.

PREPARATION OF MANUSCRIPT

1. The “Copyright Transfer Form” after being signed by all authors should be uploaded using the article accepting system of the IJADS.
2. The title of article, short title, author name(s), names of institutions and the departments of the authors, full address, telephone numbers (landline and mobile) and e-mail address should be given. The title should be short and written in lower case. In addition, the running title should be written and it should not exceed 40 characters.
3. The microorganism's Latin names of used for the first time in the text have to be written in full. If these names are used later, they should be abbreviated in accordance to international scientific rules. The original Latin names of microorganisms should be written in Italic style: for example, *Staphylococcus aureus*, *S. aureus*. The antibiotics' names should be abbreviated in accordance with international standards and they should be used with generic names.
4. Symbols of the international units mentioned in the text should be according to “The SystAme International (SI).
5. Manuscripts should be written in one of the “past perfect, present perfect and past tenses” and in the passive mode.
6. A4 paper should be used and should have a 2.5 cm margin on each side. Times New Roman font, 12 pt, and double lines space should be used.
7. International Journal of Antisepsis Disinfection Sterilization (IJADS) expects the authors to comply with the ethics of research and publication. In human research, a statement of the informed consent of those who participated in the study is needed in the section of the

INSTRUCTIONS FOR THE AUTHORS

“Materials and Methods”. In case animal studies, approval also is needed. Please, see at: Ethical issue.

8. In Original Articles; Research/Original manuscripts should consist of English abstract.

Introduction, Materials and Methods, Results, Discussion, Acknowledgements (if any), and References sections. These sections should be written in bold capital letters and aligned left. English manuscripts should have a Turkish abstract and title in Turkish (If all authors are from Turkey). If the all of the authors from abroad the manuscript can be write only English language.

- a. Turkish Abstract should consist of the subheadings of Objective (Amaç), Methods (Yöntem), Results (Sonuçlar) and Conclusion (Tartışma) (Structured Abstract). It should be between 300 and 400 words.
- b. English Abstract: The abstract should be structured like the Turkish abstract (Objective, Methods, Results, and Conclusion). It should be between 300 and 400 words.
- c. Key words: The number of keywords should be between 3-6 and the terminology of the Medical Subjects Headings (Index Medicus Medical Subject Headings - MeSH) should be used. Please check at: <https://www.nlm.nih.gov/mesh/MBrowser.html>
- d. Introduction: The aim of the study, and references given to similar studies should be presented briefly and should not exceed more than two pages.
- e. Materials and Methods: The date of the study, institution that performed the study, and materials and methods should be clearly presented. Statistical methods should be clearly stated. All research manuscripts will send to professional statistician for their statistical evaluation by the Editor.Â
- f. Results: The results should be stated clearly and only include the current research.
- g. Conclusions: In this section, the study findings should be compared with the findings of other researchers. Authors should mention their comments in this section.
- h. Acknowledgements: Acknowledgements should be placed at the end of the main text and before the references. In this section, the institutions/departments and person which supported the research should be stated. I) The study supported by a fund or scientific organization must be mentioned in the acknowledgements. II) The study presented in a conference/symposium must be mentioned with the type of presentation in the acknowledgements.
- i. References: Authors are responsible for supply complete and correct references. References should be numbered according to the order used in the text. Numbers should be given in brackets and placed at the end of the sentence. Examples are given below on the use of references. Detailed information can be found in “Uniform Requirements for Manuscripts Submitted to Biomedical Journals” and see at www.nejm.org/general/text/requirements/1.htm. (J Am Med Assoc 1997 277: 927-934)

Periodicals: Author(s) Last Name initial(s) name of author(s) (if there are six or fewer authors, all authors should be written; if the number of authors are seven or more, only the first six of the authors should be written and the rest as “et al”). The title of the article, the abbreviated name of the journal according to the Index Medicus, Year; Volume (Issue): The first and last page numbers.

Pleskova SN, Golubeva IS, Verevkin YK. Bactericidal activity of titanium dioxide ultraviolet-induced films. Mater Sci Eng C Mater Biol Appl 2016;1:807-17.

Books: Surname of the author(s) initial name(s) of author(s). The name of the book. The edition number. Place of publication: Publisher, Publication year.

Example: Murray PR, Baron EJ, Jorgensen JH, Landry ML, Pfaller MA. Manual of clinical microbiology. 9th ed. Washington DC: ASM Pres, 2007.

Book chapters: The author (s) surname of the chapter initial (s) letter of the name. Section title. In: Surname of editor (s) initial (s) letter of first name (s) ed / eds. The name of the book. Edition number. Place of publication: Publisher, year of publication: The first and last page numbers of the chapter.

Example: Major EO, Ryschkewitsch C, Valsamakis A, Hou J. Human

polyomaviruses. In: Murray PR, Baron EJ, Jorgensen JH, Landry ML, Pfaller MA, eds. Manual of clinical microbiology. 9th ed. Washington DC: ASM Pres, 2007: 1612 - 1621.

Web address: If a “web” address is used as the reference address, the web address date should be given in brackets with the address. The DOI (Digital Object Identifier) number must be provided, when a web access article used in the text as a reference.

Example: AB Author, CD Author. Title of document. Retrieved from [http://Web address \(Accession date: aa/bb/2016\)](http://Web address (Accession date: aa/bb/2016)).

Congress papers: Holman KY, Gural ST. Specific Detection of Human BK Polyomavirus in Urine Samples. International Congress of Virology, September, 21-25, Istanbul - Turkey, 2005. Poster Number, Pages.

Thesis: Maden KL. Experimental investigation of the â€¦â€¦. Master Thesis, Health Science Institute of Ankara University, Ankara, 2005.

GenBank / DNA sequence analysis: DNA sequences of genes and heredity numbers should be given as references in the article. For more information, check “National Library of Medicine” and “National Center for Biotechnical Information (NCBI)”.

Figure and Tables: Each table or figure should be printed on a separate sheet, the top and bottom lines and if necessary column lines must be included.

Tables should be numbered like “Table 1.” and the table title should be written above the top line of the table. Explanatory information should be given in footnotes, not in the title and appropriate icons (*,+,++, etc.) should be used.

Photos should be in “JPEG” format. In case the quality of the photos is not good for publication, the originals can be requested.

9. Research articles should have up to 40 references.
10. Reviews: Â Author(s) must have done research and published articles previously on this subject; they should discuss their experience and use as reference in the review. Reviews should have English titles (and Turkish), and abstracts (it should contain minimum 300, maximum 400 words) and key words. Reference numbers for the review should be maximum 60.
11. Case reports should have a maximum of seven pages of text. Case report should have a English title (and Turkish), abstract, keyword(s) and also introduction, case description and discussion sections should be given. Number of references should be maximum 15.
12. Letters to Editor: Written to make criticisms, additions to previously published articles or scientific updates are published after review and assessment of the Editorial Board. Letters should not exceed one page of text and must be supported with up to 10 references.
13. The articles which do not comply with the journal rules are not accepted
14. Authors should keep a copy of the article that they submit.

SUBMISSION PREPARATION CHECKLIST

As part of the submission process, authors are required to check off their submission’s compliance with all of the following items, and submissions may be returned to authors that do not adhere to these guidelines.

- Abstract, 300 words or shorter
- Manuscript without abstract, structured correctly
- References at the end of the manuscript, listed in order of citation
- All figures sent separately and not embedded in the manuscript
- Figure legends included at the end of the manuscript
- All figures and tables are cited in the manuscript
- A letter of copyright transfer, signed by all authors

ADDRESS OF CORRESPONDENCE

Murat GÜNAYDIN, M.D., Prof.

Editor, *International Journal of Antiseptics Disinfection Sterilization*

Istanbul University Cerrahpasa School of Medicine Medical Microbiology Laboratory 34098 Fatih, Istanbul, Turkey

Phone: +90 212 414 30 00 (Internal: 23085)

e-mail: ijads-editor@das.org.tr, ijads@ijads.org

Contents

Volume 1 Issue 1 Year 2016

vii EDITORIAL
Günaydın M

RESEARCH ARTICLES

1 Attitudes of operating theater workers toward patient safety
Susan Özsayın F, Özbayır T

7 Biofilm production and biocidal efficacy in multidrug-resistant *Pseudomonas aeruginosa* and
Acinetobacter baumannii isolates
Sebit B, Aksu B, Karahasan Yağcı A

REVIEWS

13 Dare to change
Renders W

19 Sterilization practices and hospital infections: Is there a relationship?
Perçin D

23 Surgical hand washing: A systematic review
Gök F, Kabu Hergül F, Özbayır T