DESCRIPTION

*Orthodontic Waves* is the official journal of the Japanese Orthodontic Society (JOS) from 1965. *Orthodontic Waves* has been published under supervision of the Editorial Board of JOS, which selects all materials submitted for publication. The *Orthodontic Waves* Editorial Board, which holds editorial independence, consists of an Editor-in-Chief, 9 Associate Editors, 11 International Advisory Board members, and 2 Editorial Secretaries.

The aim of *Orthodontic Waves* is to provide a high level of orthodontic services from Asia to the entire world and contribute to researchers, dentists, and other health professionals concerned with orthodontics and/or its related fields. *Orthodontic Waves* seeks to publish (i) Original articles, (ii) Case Reports, (iii) Short Communications and (iv) Review articles. Original articles stand on the scientific basis of orthodontics, and Case Reports and Short Communications covered include all techniques and approaches to treatment planning.

The scope of this journal covers all areas of orthodontics and dentofacial orthopedics including basic and clinical research (e.g., biology, biochemistry histology, physiology, successful diagnostic procedures, treatment planning, growth and development of the maxillofacial skeleton and its clinical implications, all techniques, orthodontic materials, skeletal anchorage devices, biomechanics, TMJ disorders, orthognathic surgery and adult treatment). Submissions and/or accepted papers to *Orthodontic Waves* have originated not only from Japan but also other countries around the world, thus showing an international focus.

Benefits to authors

All submissions are subject to peer review by two or more reviewers, and authors are usually notified within 4 weeks of the initial acknowledgment of whether the manuscript is accepted for publication, rejected, or subject to revision before acceptance. This journal does not charge a submission fee to authors. We also provide many author benefits, such as off-print services, a liberal copyright policy, special discounts on Elsevier publications and much more. Please click here for more information on our author services.

Please see our *Guide for Authors* for information on article submission. If you require any further information or help, please visit our support pages: http://service.elsevier.com/app/home/supporthub/publishing.
ABSTRACTING AND INDEXING

Emerging Sources Citation Index (ESCI)
Embase
Scopus

EDITORIAL BOARD

Editor-in-Chief
Shouichi Miyawaki, DDS PhD, Department of Orthodontics, Field of Developmental Medicine, Health Research Course, Graduate School of Medical and Dental Sciences, Kagoshima University, Kagoshima, Japan

Associate Editors
Takuya Fujiiwara, Department of Orthodontics, Aichi-Gakuin University School of Dentistry, Aichi
Hiroshi Kamioka, DDS PhD, Department of Orthodontics, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University, Okayama, Japan
Kazutaka Kasai, Dept. of Orthodontics, Nihon University School of Dentistry, Matsudo, Chiba, Japan
Noriyuki Kitai, Department of Orthodontics, Oral Structure, Function, and Development, School of Dentistry, Asahi University, Gifu, Japan
Naoyuki Matsumoto, Department of Orthodontics, Osaka Dental University, Osaka, Japan
Takashi Ono, DDS PhD, Department of Orthodontic Science, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan
Naoto Suda, DDS PhD, Division of Orthodontics, Department of Human Development and Fostering, Meikai University School of Dentistry, Tokyo, Japan
Ichiro Takahashi, Fac. of Dental Science, Dept. of Dental Science, Division of Oral Health, Growth and Development, Kyushu University, Fukuoka, Japan
Takahashi Yamashiro, Graduate School of Dentistry, Department of Orthodontics and Dentofacial Orthopedics, Osaka University, Osaka, Japan

International Advisory Board
Hyoung-Seon Baik, DDS, MS, PhD, Emeritus Professor, Orthodontic Dept. College of Dentistry, Yonsei University
Yonsei Baik’s Dental Clinic, The Republic of Korea
M Ali Darendeiler, BDS, PhD, Professor and Chair of the Discipline of Orthodontics, Faculty of Dentistry, The University of Sydney Head, Department of Orthodontics, Sydney Dental Hospital, Australia
Jorge Faber, DDS, MS, PhD, Professor of Orthodontics, University of Brasilia
World Federation of Orthodontists fellow
Diplomate of the Brazilian Board of Orthodontists, Brazil
Stavros Killaridis, DDS, PhD, Professor and Chairman, Dept. of Orthodontics, Dental School, Faculty of Medicine, University of Geneva, Switzerland
Tae-Woo Kim, DDS, MSD, PhD, Professor, Department of Orthodontics, School of Dentistry, Seoul National University
Honorary President of Korean Association of Orthodontists, The Republic of Korea
Hee-Moon Kyung, Dental College, Kyungpook National University, The Republic of Korea
Eric J.W. Liou, Dept. of Orthodontics, Chang Gung Memorial Hospital, Taiwan
Peter Ngan, DMD, Endowed Professor and Chair, Department of Orthodontics, West Virginia University, USA
Peter Ngan, Dept. of Orthodontics, West Virginia University, USA
Somchai Satravaha, DDS, Thai Board of Orthodontics, Clinical Associate Professor, Mahidol University, Bangkok, Thailand
Harold C. Slavkin, DDS, Professor and Dean Emeritus, Center for Craniofacial Molecular Biology, Division of Biomedical Sciences, Ostrow School of Dentistry, University of Southern California, Los Angeles, California, USA
Teruko Takano-Yamamoto, DDS, PhD, Professor and Chair, Division of Orthodontics and Dentofacial Orthopedics, Tohoku University Graduate School of Dentistry, Japan
Grant Townsend, BDS, BScDent, PhD, DDS, Emeritus Professor, Adelaide Dental School, The University of Adelaide, Australia
Michael Woods, DDS, PhD, Diplomate, American Board of Orthodontics, FICD.
Professor, Royal Melbourne Hospital, Australia

Editorial Secretary
Aya Maeda-Iino, Department of Orthodontics, Field of Developmental Medicine, Health Research Course, Graduate School of Medical and Dental Sciences, Kagoshima University, Kagoshima, Japan
Yasuhiko Oga, DDS, PhD, Department of Orthodontics, Field of Developmental Medicine, Health Research Course, Graduate School of Medical and Dental Sciences, Kagoshima University, Kagoshima, Japan
INTRODUCTION

*Orthodontic Waves*, the official journal of the Japanese Orthodontic Society, is published in March, June, September and December of every year under the supervision of the Editorial Board of JOS, which selects all materials submitted for publication. The aim of this journal is to foster the advancement of orthodontic research and practice. Contributions should be concerned with orthodontics and/or its related fields. *Orthodontic Waves* will receive materials prepared and submitted according to these instructions. However, we reserve the right to make any changes necessary to make the contribution conform to the editorial standards of the journal, as deemed by the Editorial Board based on the recommendations of the reviewers. Articles must deal with original research, clinical research, case reports, and short communications, not previously published or being considered for publication elsewhere. Short communications should contain prompt, brief, and definitive information of adequate significance.

Any contributions accepted for publication will become the copyright of this journal. No responsibility is assumed by the Editorial Board for the opinions or the ethics expressed by the contributors. The work shall not be published in any other publication in any language without prior written consent of the publisher.

Submission to *Orthodontic Waves* now proceeds online via Elsevier Editorial System - [http://ees.elsevier.com/odw](http://ees.elsevier.com/odw). Authors will be guided step-by-step through uploading files directly from their computers. Electronic PDF proofs will be automatically generated from uploaded files, and used for subsequent reviewing.

For queries concerning the submission process or journal procedures please visit the Elsevier Support Center. Authors can check the status of their manuscript within the review procedure using Elsevier Editorial System.

Authors submitting hard copy papers will usually be asked to resubmit using Elsevier Editorial System. The Editor-in-Chief may occasionally allow hard copy submissions of some components of an article; please contact him should you consider this necessary, and send any such items to:

**Editor-in-Chief of Orthodontic Waves**
c/o Elsevier Japan, 1-9-15 Higashi-Azabu, Minato-ku, Tokyo 106-0044
Fax: +81-3-3589-6364
E-mail: jp.odw@elsevier.com

**Conflict 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 conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. See also [https://www.elsevier.com/conflictsinterest](https://www.elsevier.com/conflictsinterest). Declare the instances of conflict of interest or its nonexistence just before the References section.

**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').

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

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.

Peer review
This journal operates a double 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.

Double-blind review
This journal uses double-blind review, which means the identities of the authors are concealed from the reviewers, and vice versa. More information is available on our website. To facilitate this, please include the following separately:
Title page (with author details): This should include the title, authors' names, affiliations, acknowledgements and any Declaration of Interest statement, and a complete address for the corresponding author including an e-mail address.
Blinded manuscript (no author details): The main body of the paper (including the references, figures, tables and any acknowledgements) should not include any identifying information, such as the authors’ names or affiliations.

Manuscript Format
Manuscripts should be written clearly in English. All manuscripts must be covered with a title page including the title (within 25 words), type of article and three to five key words. The authors' full and complete names, degrees, and institutions should be given on the title page, as well as full postal address, telephone/fax numbers, and e-mail address for correspondence. The pledge statement attached to this journal must be accompanied with manuscript. The model release and permission form should be accompanied (if any).

Full-Length Article (Original article)
In the case of full-length articles, the following format is recommended. The manuscript must not exceed a maximum of 3500 words (including title, abstract, references, and figure legends).

Abstract
A “structured abstract” should be typed on the next page and should not exceed 250 words. It should be organized under the headings: Purpose, Materials and methods, Results, Conclusion.

Introduction
Clearly and briefly describe the background and the rational objective of the study, with a review of earlier publications. It is recommended that the previous studies described only be the most relevant. Avoid exhaustive review of the literature.

Materials and Methods/Case Histories
Clearly describe the subjects and sample size, the experimental procedures and apparatus (manufacturer's name and address) used in the study. In the case of experiments on human or animal subjects, give an account that the methods were regarded as ethically sound. In the event of an original design, the details should be provided. Otherwise, references accompanied by sufficient information for interdisciplinary evaluation will suffice. The type of statistical analysis used must be
stated in this section as well as the commercial software. Do not include discussion in this section. Demonstrate precisely all drugs and chemicals used, including generic names, doses, and routes of administration.

**Results**
Present the essential results in the text in a clear and concise manner. Use tables and figures to compare and contrast the findings. Do not repeat in the text all the detailed data in the tables or figures. Do not include discussion in this section. In describing the statistical analysis, please define the probability values and prove that the differences reported were found to be statistically significant.

**Discussion**
Demonstrate the objective reliability of the results as well as the propriety and limitations of the experimental procedures and subjects used. Point out the significance and the limitations of the study, including implications for future research. Describe and evaluate the results with a scientifically critical view, and discuss your findings in the context of other publications, including opposing views. The introduction or the details of the results should not be repeated in this section. Subjective comments can be made only in this section, however, speculation must be identified as such. Link the conclusions with the objectives of the study, as stated in the introduction.

**Acknowledgments**
Acknowledgments, the scientific meeting at which the data has already been presented, the sources of funding for the study, and/or any other special mention may be stated before the References section.

**References**
All publications cited in the text should be presented in a list of references following the text of the manuscript. References should be numbered consecutively in the order in which they are first mentioned. In the text they should be cited with Arabic numerals between square brackets. For listing references, follow the JAMA style, abbreviating names of journals according to Index Medicus. List all authors/editors but if there are more than six, list the first six plus et al.

**Examples:**

**Tables**
Tables should be submitted online as a separate file, bear a concise title, and be numbered with Arabic numerals. Tables should be cited in the text. Column headings should be brief, but sufficiently explanatory. Standard abbreviations of units of measurement should be added between parentheses. Vertical lines should not be used to separate columns.

**Figures**
The number of figures used to present data essential to illustrate or prove a point should be kept to a minimum Reference should be made in the text to each illustration. Figures will be reduced to fit to the size of one column (8.5 cm) or two columns (17.5 cm), and any lettering should be large enough to allow this reduction without becoming illegible Each figure should be accompanied by a title and an explanatory legend on a separate page called Legends to Figures. There should be sufficient experimental details in the legend to make the figure intelligible without reference to the text Legends to Figures should be typed double-spaced, in numerical order, on a separate page Photographs should be as high in contrast as possible Indicate the magnification of photomicrographs in bar scales on the illustration itself instead of numerical magnification factors Make sure you use uniform lettering and sizing of your original artwork Save text in illustrations as "graphics" or enclose the font Only use the following fonts in your illustrations: Arial, Courier, Helvetica, Times, Symbol Number the illustrations according to their sequence in the text Use a logical naming convention for your artwork files Provide all illustrations as separate files Provide captions to illustrations separately Produce images near to the desired size of the printed version

A detailed guide on electronic artwork is available on our website: https://www.elsevier.com/artworkinstructions 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 finalised, 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**: Vector drawings. Embed the font or save the text as "graphics".
- **TIFF**: Colour or greyscale photographs (halftones): always use a minimum of 300 dpi.
- **TIFF**: Bitmapped line drawings: use a minimum of 1000 dpi.
- **TIFF**: Combinations bitmapped line/half-tone (colour or greyscale): a minimum of 500 dpi is required.
- **DOC, XLS or PPT**: If your electronic artwork is created in any of these Microsoft Office applications please supply "as is".

**Please do not:** Supply embedded graphics in your wordprocessor (spreadsheet, presentation) document Supply files that are optimised for screen use (like 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

If, together with your accepted article, you submit usable colour figures, Elsevier will ensure that these figures will appear in colour completely free-of-charge in the electronic version of your paper, regardless of whether or not these illustrations are reproduced in colour in the printed version. Colour illustrations can only be included in print if the additional cost of reproduction (EUR 272 for the first page, and EUR 182 for the second and subsequent pages) is contributed by the author: you will receive information regarding the costs from Elsevier after receipt of your accepted article. Please note that because of technical complications which may arise by converting colour figures to 'grey scale' (for the printed version, should you not opt for colour in print), you should submit in addition usable black and white prints corresponding to all the colour illustrations.

**Short Communications**
They may be no more than four printed pages following the format mentioned in the section of Full-Length Article. The manuscripts must be within 2200 words of the text (including title, abstract, references, and figure legends) and no more than 15 references. There may be a maximum of four illustrations.

**Case Reports**
Case Reports should include materials from the beginning and the end of active treatment and at the completion of orthodontic treatment (at least two years after the end of active treatment). The number of authors should not exceed four. The text should begin with the Title followed by Abstract (not to exceed 250 words), Introduction, History, Treatment plan and progress, Discussion, References and Figure Legends. The text including title, abstract, references, and figure legends must not exceed a maximum of 3000 words.

**Systematic Review (Meta-Analysis)**
For Systematic reviews and Meta-analysis, please use the PRISMA guidelines: (http://www.prisma-statement.org/documents/PRISMA%202009%20checklist.pdf). Abstract should not exceed a maximum of 300 words. Manuscript should not exceed a maximum of 4000 words (including title, abstract, references, and figure legends).

**Reader's Opinion**
Reader's Opinion should be no more than one printed page. The manuscript must be within 600 words of the text including reference but no Abstract and illustrations. The Editorial Board will determine whether any "Reader's Opinion" submitted is adequate for publication in Orthodontic Waves based on the recommendations of the editors.

**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.
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.

Human and Animal Experiments
Manuscripts reporting the use of human subjects must include a statement that the protocol was approved by an appropriate Institutional Review Board according to the Declaration of Helsinki. A separate signed statement must be obtained for all images that contain identifiable patients or human subjects. For research involving the use of animals, it is necessary to indicate that the protocol was approved by the author's institutional experimentation committee.

Correspondence
All contributions and all communications relating to the publication should be addressed to:
Editor-in-Chief of Orthodontic Waves
c/o Elsevier Japan, 1-9-15 Higashi-Azabu, Minato-ku, Tokyo 106-0044
Fax: +81-3-3589-6364
E-mail: jp.odw@elsevier.com

Author rights
As an author you (or your employer or institution) may do the following:
• make copies (print or electronic) of the article for your own personal use, including for your own classroom teaching use
• make copies and distribute such copies (including through e-mail) of the article to research colleagues, for the personal use by such colleagues (but not commercially or systematically, e.g., via an e-mail list or list server)
• post a pre-print version of the article on Internet websites including electronic pre-print servers, and to retain indefinitely such version on such servers or sites
• post a revised personal version of the final text of the article (to reflect changes made in the peer review and editing process) on your personal or institutional website or server, with a link to the journal homepage (on elsevier.com)
• present the article at a meeting or conference and to distribute copies of the article to the delegates attending such a meeting
• for your employer, if the article is a 'work for hire', made within the scope of your employment, your employer may use all or part of the information in the article for other intra-company use (e.g., training)
• retain patent and trademark rights and rights to any processes or procedure described in the article
• include the article in full or in part in a thesis or dissertation (provided that this is not to be published commercially)
• use the article or any part thereof in a printed compilation of your works, such as collected writings or lecture notes (subsequent to publication of your article in the journal)
• prepare other derivative works, to extend the article into book-length form, or to otherwise re-use portions or excerpts in other works, with full acknowledgement of its original publication in the journal

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 25 free paper offprints, or alternatively 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 Webshop. 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.

Orthodontic Waves does not have page charges.