DESCRIPTION

Research in Autism Spectrum Disorders (RASD) publishes high quality empirical articles and reviews that contribute to a better understanding of Autism Spectrum Disorders (ASD) at all levels of description; genetic, neurobiological, cognitive, and behavioral. The primary focus of the journal is to bridge the gap between basic research at these levels, and the practical questions and difficulties that are faced by autistic individuals and their families, as well as carers, educators and clinicians. In addition, the journal encourages submissions on topics that remain under-researched in the field. We know shamefully little about the causes and consequences of the significant language and general intellectual impairments that are very common among the autism community. We know even less about the challenges that autistic women face and less still about the needs of autistic individuals as they grow older. Medical and psychological co-morbidities and the complications they bring with them for the diagnosis and treatment of ASD represents another area of relatively little research. At RASD we are committed to promoting high-quality and rigorous research on all of these issues, and we look forward to receiving many excellent submissions.

Benefits to authors
We also provide many author benefits, such as free PDFs, 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 Center

AUDIENCE

Researchers and clinicians with advanced degrees in the areas of mental health, education, communication disorders, rehabilitation and allied disciplines.

ABSTRACTING AND INDEXING

ERIC
EDITORIAL BOARD

Editor-in-Chief
David Beversdorf, University of Missouri, 65211, Columbia, Missouri, United States of America

Associate Editors
Lawrence Fung, Stanford University, Department of Psychiatry and Behavioral Sciences, Palo Alto, California, United States of America
Grace Iarocci, Simon Fraser University, Burnaby, British Columbia, Canada
Ling-Yi Lin, National Cheng Kung University, Department of Occupational Therapy, Tainan, Taiwan
Anna Remington, University College London, London, United Kingdom
Mikle South, Emory University School of Medicine, Atlanta, Georgia, United States of America
Anat Zaidman, Tel Aviv University, Tel Aviv, Israel

Extended Board Members
Anne Mareike Altgassen, Radboud University, Netherlands
Anwesha Banerjee, Emory University, Georgia, United States of America
Gregory Barnes, University of Louisville, Kentucky, United States of America
Armando Bertone, Université McGill, Quebec, Canada
Elina Birmingham, Simon Fraser University, British Columbia, Canada
Lauren Bishop, University of Wisconsin-Madison, Wisconsin, United States of America
Monique Botha, University of Stirling, United Kingdom
Jessica Brian, Holland Bloorview Kids Rehabilitation Hospital, Ontario, Canada
Melissa Carter, University of Colorado, Colorado, United States of America
Alex Jensen, Brigham Young University, Utah, United States of America
Terry Katz, University of Colorado, Colorado, United States of America
Elizabeth Kelley, Queen's University, Ontario, Canada
Lauren Little, Rush University, Illinois, United States of America
Iliana Magiati, The University of Western Australia School of Psychological Science, Western Australia, Australia
Micah O. Mazurek, University of Missouri, Missouri, United States of America
Pat Mirenda, The University of British Columbia, British Columbia, Canada
Matt Mosconi, The University of Kansas, Kansas, United States of America
Brian Reichow, UCONN HEALTH CENTER, Connecticut, United States of America
Amanda Richdale, La Trobe University, Victoria, Australia
Lisa Ruble, University of Kentucky, Kentucky, United States of America
Ailsa Russell, University of Bath, United Kingdom
Rena Shrestha, Tribhuvan University - Padma Kanya Multiple Campus, Nepal
Janine P. Stichter, University of Missouri, Missouri, United States of America
Zohreh Talebizadeh, Children's Mercy Hospital Adele Hall Campus, Missouri, United States of America
David Trembath, Griffith University, Queensland, Australia
Gregory Wallace, The George Washington University, District of Columbia, United States of America
Chongying Wang, Nankai University, China
Carla Willig, City University of London, United Kingdom
Benjamin Yerys, The Children's Hospital of Philadelphia, Pennsylvania, United States of America
Benjamin Hon-kei Yip, The Chinese University of Hong Kong, Hong Kong
GUIDE FOR AUTHORS

Editorial Process
All submissions will first be checked against the Aims and Scope and Guide for Authors by the Editor-in-Chief. Papers found to conform, in principle, to the journal’s remit and standards will be assigned to a handling Editor (an Associate Editor or the Editor-in-Chief) for further evaluation. If a paper meets the journal’s criteria a minimum of two independent reviewers will be invited to comment on the paper’s methodological rigour and significance. Based on these comments and additional opinions if necessary, the handling Editors will make a decision. All accepted papers will therefore have received comments from a minimum of two independent reviewers and be reviewed by one or more editors. Please note that RASD currently operates single-blinded peer review.

Human and Animal Rights
If the work involves the use of animal or human subjects, the author should ensure that the work described has been carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving humans https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/; EU Directive 2010/63/EU for animal experiments http://ec.europa.eu/environment/chemicals/lab_animals/legislation_en.htm; Uniform Requirements for manuscripts submitted to Biomedical journals http://www.icmje.org. Authors should include a statement in the manuscript that informed consent was obtained for experimentation with human subjects. The privacy rights of human subjects must always be observed. All animal studies need to ensure they comply with the ARRIVE guidelines. More information can be found at http://www.nc3rs.org.uk/page.asp?id=1357

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 anonymized) or the manuscript file (if single anonymized). If there are no interests to declare then please state this: 'Declarations of interest: none'. 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.

Declaration of generative AI in scientific writing
The below guidance only refers to the writing process, and not to the use of AI tools to analyse and draw insights from data as part of the research process.

Authors should disclose in their manuscript the use of generative AI and AI-assisted technologies in the writing process by following the instructions below. A statement will appear in the published work. Please note that authors are ultimately responsible and accountable for the contents of the work.

Disclosure instructions
Authors must disclose the use of generative AI and AI-assisted technologies in the writing process by adding a statement at the end of their manuscript in the core manuscript file, before the References list. The statement should be placed in a new section entitled ‘Declaration of Generative AI and AI-assisted technologies in the writing process’.

Statement: During the preparation of this work the author(s) used [NAME TOOL / SERVICE] in order to [REASON]. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.
This declaration does not apply to the use of basic tools for checking grammar, spelling, references etc. If there is nothing to disclose, there is no need to add a statement.

**Preprint posting on SSRN**
In support of Open Science, this journal offers its authors a free preprint posting service. Preprints provide early registration and dissemination of your research, which facilitates early citations and collaboration.

During submission to Editorial Manager, you can choose to release your manuscript publicly as a preprint on the preprint server SSRN once it enters peer-review with the journal. Your choice will have no effect on the editorial process or outcome with the journal. Please note that the corresponding author is expected to seek approval from all co-authors before agreeing to release the manuscript publicly on SSRN.

You will be notified via email when your preprint is posted online and a Digital Object Identifier (DOI) is assigned. Your preprint will remain globally available free to read whether the journal accepts or rejects your manuscript.

For more information about posting to SSRN, please consult the SSRN Terms of Use and FAQs.

**Use of inclusive language**
Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Content should make no assumptions about the beliefs or commitments of any reader; contain nothing which might imply that one individual is superior to another on the grounds of age, gender, race, ethnicity, culture, sexual orientation, disability or health condition; and use inclusive language throughout. Authors should ensure that writing is free from bias, stereotypes, slang, reference to dominant culture and/or cultural assumptions. We advise to seek gender neutrality by using plural nouns ("clinicians, patients/clients") as default/wherever possible to avoid using "he, she," or "he/she." We recommend avoiding the use of descriptors that refer to personal attributes such as age, gender, race, ethnicity, culture, sexual orientation, disability or health condition unless they are relevant and valid. When coding terminology is used, we recommend to avoid offensive or exclusionary terms such as "master", "slave", "blacklist" and "whitelist". We suggest using alternatives that are more appropriate and (self-) explanatory such as "primary", "secondary", "blocklist" and "allowlist". These guidelines are meant as a point of reference to help identify appropriate language but are by no means exhaustive or definitive.

**Reporting sex- and gender-based analyses**

**Reporting guidance**
For research involving or pertaining to humans, animals or eukaryotic cells, investigators should integrate sex and gender-based analyses (SGBA) into their research design according to funder/sponsor requirements and best practices within a field. Authors should address the sex and/or gender dimensions of their research in their article. In cases where they cannot, they should discuss this as a limitation to their research's generalizability. Importantly, authors should explicitly state what definitions of sex and/or gender they are applying to enhance the precision, rigor and reproducibility of their research and to avoid ambiguity or conflation of terms and the constructs to which they refer (see Definitions section below). Authors can refer to the Sex and Gender Equity in Research (SAGER) guidelines and the SAGER guidelines checklist. These offer systematic approaches to the use and editorial review of sex and gender information in study design, data analysis, outcome reporting and research interpretation - however, please note there is no single, universally agreed-upon set of guidelines for defining sex and gender.

**Definitions**
Sex generally refers to a set of biological attributes that are associated with physical and physiological features (e.g., chromosomal genotype, hormonal levels, internal and external anatomy). A binary sex categorization (male/female) is usually designated at birth ("sex assigned at birth"), most often based solely on the visible external anatomy of a newborn. Gender generally refers to socially constructed roles, behaviors, and identities of women, men and gender-diverse people that occur in a historical and cultural context and may vary across societies and over time. Gender influences how people view themselves and each other, how they behave and interact and how power is distributed in society. Sex and gender are often incorrectly portrayed as binary (female/male or woman/man) and unchanging whereas these constructs actually exist along a spectrum and include additional sex categorizations.
and gender identities such as people who are intersex/have differences of sex development (DSD) or identify as non-binary. Moreover, the terms "sex" and "gender" can be ambiguous—thus it is important for authors to define the manner in which they are used. In addition to this definition guidance and the SAGER guidelines, the resources on this page offer further insight around sex and gender in research studies.

**Author contributions**
For transparency, we require corresponding authors to provide co-author contributions to the manuscript using the relevant CRediT roles. The CRediT taxonomy includes 14 different roles describing each contributor’s specific contribution to the scholarly output. The roles are: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; and Writing - review & editing. Note that not all roles may apply to every manuscript, and authors may have contributed through multiple roles. More details and an example.

**Article transfer service**
This journal uses the Elsevier Article Transfer Service to find the best home for your manuscript. This means that if an editor feels your manuscript is more suitable for an alternative journal, you might be asked to consider transferring the manuscript to such a journal. The recommendation might be provided by a Journal Editor, a dedicated Scientific Managing Editor, a tool assisted recommendation, or a combination. If you agree, your manuscript will be transferred, though you will have the opportunity to make changes to the manuscript before the submission is complete. Please note that your manuscript will be independently reviewed by the new journal. More information.

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

**Open access**
Please visit our Open Access page for more information.

**Elsevier Researcher Academy**
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.

**MANUSCRIPT PREPARATION & SUBMISSION**

**Use of word processing software**
Files must be saved in the native format of the word processor and the text should be in 10-point Arial font, single-column format, double spaced, with standard 1 inch page margins (2.54 cm). Please keep the layout of the text as simple as possible, as most formatting codes will be replaced on processing the article. In particular, do not use the options to justify text or hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. Note that source files of figures and text graphics will be required whether or not you embed them in the text. See also the section on Electronic artwork below for details on preparing figures and graphics.

**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 they require support in editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the English Language Editing service available from Elsevier's WebShop (https://webshop.elsevier.com/language-editing-services/language-editing/).

In relation to terminology, we ask that authors carefully consider their choice of wording when describing the patterns of strengths and difficulties that are associated with autism. Specifically, based on a paper by Kenny et al., (2015; http://aut.sagepub.com/content/early/2015/06/10/1362361315588200.abstract) we ask authors not to describe participants as 'low-functioning' or 'high-functioning' but to provide precise information about participants' abilities and areas of difficulty instead, ideally as assessed using relevant standardised tools. Autism should also not be described as a 'disease' or 'illness'. Finally, authors are encouraged to avoid language that inappropriately pathologizes certain characteristics or behaviours of autistic individuals (e.g., 'abnormality', 'impairment', 'deficit' etc) choosing less laden descriptions
instead (e.g., 'difference'; 'tendency', 'preference', etc) - we note, however, that there are contexts where it may be appropriate to describe certain characteristics as, for example, an impairment (e.g., language impairment).

**Types of Articles**

Research in Autism Spectrum Disorders publishes the following types of manuscripts:

**Brief reports:** Papers of no more than 2,500 words that report an original piece of research of limited scope and/or that serve as proof-of-principle for larger-scale studies.

**Regular Articles:** Papers of up to 6,000 words that report a substantive piece of research that makes a significant contribution and has clear implications for practice. Manuscripts reporting the results of randomized trials or interventions must demonstrate adherence to the CONSORT guidelines (http://www.consort-statement.org/) and include the relevant flow diagram and completed checklist.

**Reviews:** Papers of up to 10,000 words that provide a comprehensive overview of a significant area of research. Quantitative (e.g., meta-analyses) and qualitative reviews are welcome as long as they go beyond a mere description of the available literature and synthesise new knowledge with clear implications for future directions and practice. For systematic reviews and meta-analyses, authors must demonstrate adherence to the PRISMA guidelines (www.prisma-statement.org) and include the relevant flow diagram and checklist.

**Commentaries:** We welcome brief commentaries of no more than 1,000 words that offer new insights on papers published in RASD or elsewhere. Commentaries on government policy and/or items in the media are also welcome.

**Registered Reports:** Registered reports are a form of empirical article in which the rationale, methods, and proposed analyses are pre-registered and reviewed prior to research being conducted. This format seeks to neutralise a variety of unhelpful research practices and biases that contribute to the many inconsistencies in findings that currently exist in the autism and wider literature. This format is suitable for novel as well as replication studies and we particularly welcome submissions describing proposed studies involving under-represented groups in research such as the elderly, minority groups and individuals with complex support needs. For further details please click RASD Registered Reports Author Guidelines

NOTE: Word limits do not include the title page, abstract, figure legends, tables and reference list.

**Submission**

Our online submission system guides authors stepwise through the submission process. The system converts article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

Elsevier accepts electronic supplementary material such as supporting applications, high resolution images, background datasets, sound clips and more. These will be published online alongside the electronic version of your article in Elsevier Web products, including ScienceDirect: https://www.sciencedirect.com. For further information, please visit our artwork instruction pages at https://www.elsevier.com/artworkinstructions

To increase the transparency of editorial information within the framework of single/double blind peer review, RASD displays the number of unique reviewer reports received in the first round of review with each published article. This policy will be in place for original research articles submitted from 1 January 2016 that are accepted for publication.

**Queries**

For questions about the editorial process (including the status of manuscripts under review) or for technical support on submissions, please visit our Support Center.

**Manuscript Format**

All manuscripts must include a Title, Abstract and Highlights on separate pages, followed by the main manuscript text. The main manuscript text of brief reports, regular articles and quantitative reviews should include subsections carrying the headings Introduction, Methods, Results, Discussion & Implications. Reviews may deviate from this structure but must include a methods section that provides details on how the relevant literature was searched. The structure of commentaries is at the discretion of authors.

**Essential Title Page Information**

**Title:** Titles must be concise and informative and should have no more than 20 words. 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. Present the author’s affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lowercase 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. 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.

Abstract & Keywords
The abstract page must include a structured abstract of no more than 250 words that includes the following subsections:

Background: A brief summary of the research question and rationale for the study.
Method: A concise description of the methods employed to test the stated hypotheses, including details of the participants where relevant.
Results: A brief description of the main findings.
Conclusions: This section must include a clear statement about the implications of the findings for practice.

Immediately after the abstract, a maximum of 6 keywords should be provided, avoiding general and plural terms and multiple concepts (for example, avoid ‘and’, ‘of’). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible (e.g., ADOS, ASD, etc). These keywords will be used for indexing purposes.

Graphical Abstract
Graphical abstracts are optional but encouraged to draw 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. Please provide an image with a minimum of 531 X 1328 pixels (h X w) or proportionally more. The image should be readable at a size of 5 X13 cm using a regular screen resolution of 96 dpi. Preferred file types include TIFF, EPS, PDF or MS Office files. See https://www.elsevier.com/graphicalabstracts for examples.

Introduction
The introduction should develop a clear rationale for the presented work on the basis of a concise overview of the relevant literature. Detailed literature reviews should be avoided.

Methods
This section will typically include sub-headings for a description of the Participants, Materials & Design, Procedures and Analysis. However, alternative sub-headings may be used to suit particular research approaches (e.g., case-studies, meta-analyses, imaging studies etc.)

The participants section should provide demographic information (age, sex, ethnicity, socio-economic status, etc.), and include details on where and how participants were recruited and how relevant clinical diagnoses were verified. Additional clinical information (e.g., intellectual functioning, co-morbidities, use of medication etc.) is desired and may be necessary for some research designs. Sample sizes should be justified by suitable power calculations although it is appreciated that it is not always feasible to obtain desired numbers of participants.

The materials, design and procedures must be described in sufficient detail for the work to be replicable. Authors must also include a statement confirming that the work was carried out in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Declaration of Helsinki as revised in 2000. In this context confirmation should also be given that participant or guardian informed consent was obtained where appropriate.

The analysis section should provide details of the statistical methods used including information on the significance thresholds and the methods used to correct for multiple comparisons where necessary. Information on inter-rater reliability and any data filtering / transformation that was applied should also be included here.
Results
The results should be set out transparently and in full and should conform to the formatting style of the American Psychological Association (http://www.apastyle.org/). Effect sizes must be reported for all significant and non-significant effects, and sufficient descriptive statistics must be provided for the effect size calculations to be replicated.

Tables
Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. The formatting of tables should conform to APA guidelines (http://www.apastyle.org/).

Figures & Artwork
General points
• Make sure you use uniform lettering and sizing of your original artwork.
• Embed the used fonts if the application provides that option.
• Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use similar fonts.
• Number the illustrations according to their sequence in the text.
• Use a logical naming convention for your artwork files.
• Provide captions to illustrations separately.
• Size the illustrations close to the desired dimensions of the published version.
• Submit each illustration as a separate file.

For Vector drawings, the recommended file format is EPS or PDF (embed all used fonts).
For all other artwork, please use TIFF or JPEG file formats with the following resolutions:
• Colour or grayscale photographs (halftones): 300 dpi
• Pure black & white line drawings: 1000 dpi
• Combination halftone and black & white: 500dpi

Please do not:
• Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG)
• 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, at no additional charge, that these figures will appear in colour online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in colour in the printed version. For colour reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article. Please indicate your preference for colour: in print or online only. For further information please see https://www.elsevier.com/artworkinstructions.

Video Data
Elsevier accepts video material and animation sequences to support and enhance presentation of 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 files in one of our recommended file formats with a preferred maximum size of 150 MB. Video and animation files will be published online in the electronic version of your article in Elsevier Web products, including ScienceDirect: https://www.sciencedirect.com.
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 at https://www.elsevier.com/artworkinstructions. 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.

3D neuroimaging
You can enrich your online articles by providing 3D neuroimaging data in NIfTI format. This will be visualized for readers using the interactive viewer embedded within your article, and will enable them to: browse through available neuroimaging datasets; zoom, rotate and pan the 3D brain...
reconstruction; cut through the volume; change opacity and colour mapping; switch between 3D and 2D projected views; and download the data. The viewer supports both single (.nii) and dual (.hdr and .img) NIFTI file formats. Recommended size of a single uncompressed dataset is maximum 150 MB. Multiple datasets can be submitted. Each dataset will have to be zipped and uploaded to the online submission system via the '3D neuroimaging data' submission category. Please provide a short informative description for each dataset by filling in the 'Description' field when uploading a dataset. Note: all datasets will be available for downloading from the online article on ScienceDirect. If you have concerns about your data being downloadable, please provide a video instead. For more information see: https://www.elsevier.com/3DNeuroimaging.

Discussion and Implications
The discussion section should draw together the findings and must end with a clear indication of the implications of the findings for practice under a separate subheading (Implications).

Acknowledgements
Collate acknowledgements in a separate section at the end of the main manuscript text and before the references. List here any sources of funding (including grant numbers where relevant) and briefly describe the role of the sponsor(s), if any, in study design; the collection, analysis or interpretation of data; the writing of the report; and the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated.

Conflict of interest
At the end of the main manuscript text and before the references, authors must disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations within three years of beginning the submitted work that could inappropriately influence, or be perceived to influence, their work. If no such conflict of interest exists, this must be clearly stated. For further information and examples of conflict of interest statements please visit the following: https://www.elsevier.com/conflictsinterest https://service.elsevier.com/app/answers/detail/a_id/286/supporthub/publishing A decision may be made by the Journal not to publish on the basis of the declared conflict.

References
In-text citations should conform to the formatting style of the American Psychological Association. 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
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 a standard template available in key reference management packages. This covers packages using the Citation Style Language, such as Mendeley and also others like EndNote and Reference Manager.

Reference to a book:
Reference to a chapter in an edited book:

Cover Letter
All submissions must be accompanied by a cover letter to confirm that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis or as an electronic preprint, see https://www.elsevier.com/sharingpolicy), 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 CrossCheck https://www.elsevier.com/editors/plagdetect
If a submission is to be considered for a special issue, authors are asked to indicate this also in their cover letter.

Submission checklist
The following list will be useful during the final checking of an article prior to sending it to the journal for consideration. Please refer to relevant sections above for guidance if you are not yet in a position to confirm all of the following points.

Ensure that the following items are present:
• The title page is complete, one author has been designated as the corresponding author and contact details are provided (e-mail; full postal address)
• All necessary files have been uploaded and include all necessary sections
• All figures have been uploaded and figure captions are provided separately
• All tables are clear and include relevant captions and footnotes
• The manuscript has been 'spell&checked' and 'grammar–checked' References are in the correct format.
• 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)
• All sources of funding have been acknowledged and the authors have either declared conflicts of interest or confirmed that none exist
• The manuscript gives due consideration to the practical implications of the work, which are clearly stated in the abstract and thoroughly considered in a final section of the discussion

For any further information please visit our customer support site at https://service.elsevier.com.

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 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).

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.

Preprint references
Where a preprint has subsequently become available as a peer-reviewed publication, the formal publication should be used as the reference. If there are preprints that are central to your work or that cover crucial developments in the topic, but are not yet formally published, these may be referenced. Preprints should be clearly marked as such, for example by including the word preprint, or the name of the preprint server, as part of the reference. The preprint DOI should also be provided.

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.

Research data
This journal requires 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, which may also include 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. When sharing data in one of these ways, you are expected 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).

**Research Elements**

This journal enables you to publish research objects related to your original research – such as data, methods, protocols, software and hardware – as an additional paper in a Research Elements journal.

Research Elements is a suite of peer-reviewed, open access journals which make your research objects findable, accessible and reusable. Articles place research objects into context by providing detailed descriptions of objects and their application, and linking to the associated original research articles. Research Elements articles can be prepared by you, or by one of your collaborators.

During submission, you will be alerted to the opportunity to prepare and submit a manuscript to one of the Research Elements journals.

More information can be found on the Research Elements 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**

Following acceptance, 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.
Changes to authorship
This policy concerns the addition, deletion, or rearrangement of author names in the authorship of accepted manuscript. Before the accepted manuscript is published in an online issue: Requests to add or remove an author, or to rearrange the author names, must be sent to the Journal Manager from the corresponding author of the accepted manuscript and must include: (a) the reason the name should be added or removed, or the author names rearranged, and (b) written confirmation (e-mail, fax, 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. Requests that are not sent by the corresponding author will be forwarded by the Journal Manager to the corresponding author, who must follow the procedure as described above. Note that: (1) Journal Managers will inform the Journal Editors of any such requests, and (2) publication of the accepted manuscript in an online issue is suspended until authorship has been agreed.
After the accepted manuscript is published in an online issue: Any requests to add, delete, or rearrange author names in an article published in an online issue will follow the same policies as noted above and result in a corrigendum.

Copyright
Upon acceptance, 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 (for more information on this and copyright, see https://www.elsevier.com/copyright). As an author you (or your employer or institution) have certain rights to reuse your work (see https://www.elsevier.com/copyright).
Subscribers of the journal 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 (please consult https://www.elsevier.com/permissions). 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: please consult https://www.elsevier.com/permissions

Open access
For open access articles authors will be asked to complete an 'Exclusive License Agreement' (for more information see https://www.elsevier.com/OAauthoragreement). An open access publication fee of USD 1800 (excluding taxes) is payable by authors or on their behalf (see https://www.elsevier.com/openaccesspricing).
Permitted third party reuse of open access articles is determined by the author's choice of user license (see https://www.elsevier.com/openaccesslicenses).
Creative Commons Attribution (CC BY) Lets 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 honour or reputation.
Creative Commons Attribution–NonCommercial–NoDerivs (CC BY–NC–ND) For non-commercial purposes, lets 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.

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 green open-access page for further information (https://www.elsevier.com/greenopenaccess). 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 begins from the publication date of the issue your article appears in. This journal has an embargo period of 24 months.
**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 authors may also be reimbursed for associated publication fees. To learn more about existing agreements please visit [https://www.elsevier.com/fundingbodies](https://www.elsevier.com/fundingbodies).

**Use of the Digital Object Identifier**
The Digital Object Identifier (DOI) may be used to cite and link to electronic documents. The DOI consists of a unique alpha-numeric character string which is assigned to a document by the publisher upon the initial electronic publication. The assigned DOI never changes. Therefore, it is an ideal medium for citing a document, particularly 'Articles in press' because they have not yet received their full bibliographic information. Example of a correctly given DOI (in URL format; here an article in the journal Physics Letters B) [http://dx.doi.org/10.1016/j.physletb.2010.09.059](http://dx.doi.org/10.1016/j.physletb.2010.09.059)
When you use a DOI to create links to documents on the web, the DOIs are guaranteed never to change.

**Offprints**
The corresponding author, at no cost, will be provided with a personalized link providing 50 days of free access to the final published version of the article on ScienceDirect. This link can also be used for sharing via email and social networks. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication.

**AUTHOR INQUIRIES**
Visit the [Elsevier Support Center](https://www.elsevier.com) 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](https://www.elsevier.com) or find out when your accepted article will be published.

© Copyright 2018 Elsevier | [https://www.elsevier.com](https://www.elsevier.com)