TABLE OF CONTENTS

- Description p.1
- Audience p.1
- Abstracting and Indexing p.2
- Editorial Board p.2
- Guide for Authors p.6

DESCRIPTION

*Plant Physiology and Biochemistry* publishes original theoretical, experimental and technical contributions in the various fields of *plant physiology* (*biochemistry, physiology, structure, genetics, plant-microbe interactions*, etc.) at diverse levels of integration (molecular, subcellular, cellular, organ, whole plant, environmental). Opinions expressed in the journal are the sole responsibility of the authors and publication does not imply the editors’ agreement.

Manuscripts describing molecular-genetic and/or gene expression data that are not integrated with biochemical analysis and/or actual measurements of plant physiological processes are not suitable for PPB. Also "Omics" studies (transcriptomics, proteomics, metabolomics, etc.) reporting descriptive analysis without an element of functional validation assays, will not be considered. Similarly, applied agronomic or phytochemical studies that generate no new, fundamental insights in plant physiological and/or biochemical processes are not suitable for publication in PPB.

*Plant Physiology and Biochemistry* publishes several types of articles: Reviews, Papers and Short Papers.

Authors interested in writing a review article should contact one of the review editors in advance by submitting a summary of the intended manuscript. The editor may then send an official letter of invitation with further instructions.

Reviews should not exceed 40 typewritten pages and Short Papers no more than approximately 8 typewritten pages. The fundamental character of *Plant Physiology and Biochemistry* remains that of a journal for original results.

**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

Plant Physiologists.
ABSTRACTING AND INDEXING

Reference Update
PubMed/Medline
Current Contents - Agriculture, Biology & Environmental Sciences
EM Biology
Current Contents - Life Sciences
Chemical Abstracts
Science Citation Index
Web of Science
Research Alert
Biochemistry and Biophysics Citation Index
Engineering Village - GEOBASE
BIOSIS Citation Index
Elsevier BIOBASE
CIAT
Pascal Francis
Scopus

EDITORIAL BOARD

Editors-in-Chief
Zhen-Ying Huang, Chinese Academy of Sciences, Beijing, China
Shivendra V. Sahi, University of the Sciences in Philadelphia, Philadelphia, Pennsylvania, United States of America
Nano-Biotechnology, Plant Physiology, Heavy metal stress in plants

Review Editors
Mario De Tullio, University of Bari, Department of Biology, Bari, Italy
Hiroshi Ezura, University of Tsukuba, Faculty of Life and Environmental Sciences, Tsukuba, Japan
Physiology, genomics, genetics, breeding and biotechnology of Solanaceae and Cucurbitaceae plants

Associate Editors
M. Teresa Sanchez Ballesta, Institute of Science and Technology Food and Nutrition Biotechnology and Postharvest Quality Group, Madrid, Spain
Molecular Biology, Sequencing, Biotechnology, Bioinformatics and Computational Biology, Plant Physiology, Biochemistry, Bioinformatics, Food Quality, Post Harvest Technology, Fruit Quality, Storage, Splicing, Fruit Science, Postharvest Handling, Postharvest Physiology, Postharvest, Fruit Crops Production, Postharvest Biology, Pomology, Ethylene
Luigi Ceci, Institute of Biomembranes Bioenergetics and Molecular Biotechnology National Research Council, Bari, Italy
Plant molecular biology, Gene expression, Genomics, Biotechnologies, Biomembranes and Bioenergetics

Vasileios Fotopoulos, Cyprus University of Technology, Department of Agricultural Sciences Biotechnology and Food Science, Lemesos, Cyprus
Abiotic stress, antioxidants, plant priming, signal transduction, biotechnology

Guojing Li, Inner Mongolia Agricultural University, College of Life Sciences, Hohhot, China
Abiotic stress, Plant physiology, Biochemistry, Gene function, Bioinformatics

Paulo Roberto Ribeiro, Federal University of Bahia Institute of Chemistry, Salvador, Brazil
Abiotic stress, Castor bean, Crop Physiology, Metabolomics, Transcriptomics, Gene Expression, Seed germination and seedling development, Bioinformatics, Pharmacology

Valeria Todeschini, University of Eastern Piedmont -, Department of Science and Technological Innovation, Alessandria, Italy
Plant-soil microorganism interactions, Mineral nutrition, Heavy metal phyto remediation, Secondary metabolites, Fruit and crop quality, Photosynthesis

Kees Venema, Zaidin Experimental Station, Granada, Spain
Plant Traffic and Transport

Editorial Advisory Board
Parvaiz Ahmad, King Saud University, Department of Botany and Microbiology, Riyadh, Saudi Arabia
Heavy metals toxicity and Plant Physiology, Hazardous materials (heavy metals), Trace elements in soil, Bioremediation, Oxidative stress, Microplastics and plant health, Ecotoxicology, Nanoparticles, Biochar, Phytohormones, Plant adaptations

Basharat Ali, Khwaja Fareed University of Engineering & Information Technology, Rahim Yar Khan, Pakistan
Plant physiology, Abiotic stress tolerance, Phytoremediation, Cereals, Plant growth regulation

Han Asard, University of Antwerp, Antwerpen, Belgium
Cytochrome, Redox, Oxidative Stress, Abiotic Stress, Temperature, Drought, Blue Light, Plasma membrane, Drought stress, proline concentration, maize, grasslands, legumes

Roberto Barbato, University of Eastern Piemonte Amedeo Avogadro, Department of Science and Technological Innovation, Alessandria, Italy
Photosynthesis, PSI, II etc, Abiotic Stress, Salt Stress

Juan Barcelo, Autonomous University of Barcelona Animal Biology Plants Biology and Ecology Department, Bellaterra, Spain
Plant-soil relationships, plant mineral nutrition, salinity, ion toxicity, trace elements

Balazs Barna, Plant Protection Institute of the Centre for Agricultural Research of the Hungarian Academy of Sciences, Budapest, Hungary
Disease resistance, antioxidants, plant hormones

Sebastien Baud, Institute Jean-Pierre Bourgin, Versailles, France
Fatty acid metabolism, Transcription factors, Seed maturation

Shigeyuki Betsuyaku, University of Tsukuba, Tsukuba, Japan
Plant -microbe interaction, Plant immunity, Imaging

Yurong Bi, Lanzhou University School of Life Sciences, Lanzhou, China
Plant stress adaptation and signal transduction, Plant respiratory, metabolism, Interaction between plants and microorganisms

Stefania Biondi, University of Bologna, Department of Biological and Environmental Geology, Bologna, Italy
Salt, Quinoa, Oxidative stress, heavy metals polyamines secondary metabolites phytohormones plant stress responses

Marián Brestič, Slovak University of Agriculture, Faculty of Agrobiology and Food Resources, Department of Plant Physiology, Nitra, Slovakia
photosynthesis, crop physiology, plant phenotyping, plant stress physiology, drought tolerance, high temperature stress, salinity, heavy metal toxicity, nano-biotechnology, cereals, wheat

Claudia Bustamante, Center of Photosynthetic and Biochemical Studies, Rosario, Argentina
Cell wall, chilling injury, peach, postharvest, tomato

Patricia Conklin, SUNY Cortland, Cortland, New York, United States of America
Ascorbic Acid, ROS, Photooxidative damage, Abiotic stress, UV-B, Arabidopsis, ascorbate, phosphatase, kinase, proteins

Rupali Datta, Michigan Technological University, Houghton, Michigan, United States of America
Phytoremediation, Abiotic stress response, Plant-microbe interactions, Bioavailability

Ian Dodd, Lancaster University, Lancaster, United Kingdom
Drought, Irrigation, ABA, Stomata, Root-Shoot communication, Vertical Farming, Root Soil Structure (Rather buzzy editing his own journal), Plant-soil interaction, root, nutrients

Elena Erofeeva, Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russian Federation
Hormesis, Hormetic trade-offs, Pollutants, Stress memory, Priming

Andreas Fischer, Montana State University, Bozeman, Montana, United States of America
Cereal Senescence, Nitrogen Metabolism, QTL, Transcriptome, NILs, senescence, proteases, nutrient remobilization, nitrogen metabolism

Ferenc Fodor, Eötvös Loránd University, Budapest, Hungary
heavy metal toxicity, heavy metal tolerance, iron uptake, iron deficiency, iron chelates, iron reduction, ferric chelate reductase

Mirza Hasanuzzaman, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh
Abiotic stress, Antioxidant defense, Oxidative stress, Nitric oxide, Salt stress, Plant biostimulants, ROS

Shibin He, Henan University, Kaifeng, China
Epigenetics, Chromosome, Cytogenetics, Biotic and abiotic stress, Plant

Éva Hideg, University of Pécs, Pécs, Hungary
UV radiation effects in plants, Responses to UV-B outdoors and in model experiments (growth chambers), Oxidative stress, ROS and antioxidants, Acclimative responses and damage

Yasuhiro Ishiga, University of Tsukuba, Tsukuba, Japan
Plant protection science

Marcel A. K. Jansen, University College Cork, Cork, Ireland
unctional plasticity of plants under stress, including UV-B radiation, salinity, organic pollutants and nano-materials

Yanlun Ju, Northwest A&F University, Yangling, China
Grapevine, Stress tolerance, Secondary metabolites, Genes
Hazem M. Kalaji, Warsaw University of Life Sciences, Institute of Biology, Department of Plant Physiology, Warszawa, Poland
Photosynthesis, Chlorophyll fluorescence, Stress physiology, Plant talk, Machine learning
Nafees Khan, Aligarh Muslim University, Department of Botany, Aligarh, India
Plant hormone signaling, Abiotic stress, Photosynthesis, Sulfur/Nitrogen assimilation
Klara Kosova, Crop Research Institute, Praha, Czechia
Physiology and proteomics of abiotic and biotic stresses in plants with a focus on cereal crops. Stress-responsive proteins, dehydrins.
Sang-Soo Kwak, Korea Research Institute of Bioscience and Biotechnology, Daejeon, South Korea
Abiotic Stress, B-Carotene, Antioxidants, Genetics, HKT, Antiporters, Kinase, Transcriptome, SNP, Metabolic Engineering
José Le Gourrierec-Gentilhomme, University of Angers, Angers, France
Regulatory gene network, Transcription factors, Environment, Plant development, Branching
Aili Li, Chinese Academy of Agricultural Sciences Institute of Crop Sciences, Beijing, China
Wheat, Spike development, Grain development, GWAS, Domestication
Anis Limami, University of Angers, Angers, France
Low Oxygen Stress, Drought stress, Metabolism, Amino Acids, Nitrate Transporters, Legumes
F. Vanessa Loiacono, Max Planck Institute of Molecular Plant Physiology Research Group Organelle Biology and Biotechnology, Germany
Chloroplast, RNA metabolism, transcription, PPR proteins, RNA editing
Qing-Hu Ma, Chinese Academy of Sciences, Beijing, China
Mechanism of lignin metabolism, plant hormone regulation and gene engineering
Reza Maali-Amiri, University of Tehran University College of Agriculture and Natural Resources, Karaj, Iran
Gene expression, Abiotic stresses, Tolerant responses, Protective metabolites
Pedro Martinez-Gómez, Center for Edaphology and Applied Biology of the Segura River, Murcia, Spain
Molecular Markers, Fruits Breeding, Fruit Genomics, Fruit Transcriptomics, Vegetable Breeding, Biotic and Abiotic stresses
Manuel Martinez, Centre for Plant Biotechnology and Genomics, Pozuelo De Alarcon, Spain
Molecular Plant-Pest Interactions, Comparative Genomics, Signaling Networks, Proteases and Protease Inhibitors
Anna Maria Mastrangelo, CREA Research Center Cereals and Industrial Crops, Foggia, Italy
Cereals, Genetics, Genomics, Physiology, Stress
Autar Mattoo, USDA-ARS Beltsville Agricultural Research Center, Beltsville, Maryland, United States of America
Biotic-, abiotic-, environmental stress, antimicrobial peptide, polyamine, metabolomics, seed dormancy, plant hormones, fruit ripening, senescence, photosystem II reaction center proteins, genetically engineered crops, sustainable alternative agriculture
Aradhana Mishra, CSIR-National Botanical Research Institute, Lucknow, India
Green nanotechnology, plant microbe interaction, biotic and abiotic stress
Kenji Miura, University of Tsukuba, Tsukuba, Japan
Plant abiotic stress responses such as cold stress, drought stress and salt stress, Plant biotechnology, Protein expression
Abdallah Oukarroum, Mohammed VI Polytechnic University, Ben Guerir, Morocco
Plant Physiology, Plant stress, Photosynthesis, Chlorophyll a fluorescence, Ecotoxicology
Kirk Overmyer, University of Helsinki, HELSINKI, Finland
Biotic stress, plant immunity, plant-fungal interactions, plant and fungal genomics, fungal pathogenicity, ROS signaling
Jutta Papenbrock, Leibniz University Hannover, Hannover, Germany
Plant Physiology, Plant Environmental Stress Physiology, Abiotic Stress, Stress Tolerance, Enzyme Activity, Halophytes, Phytoremediation
Jose Peralta Videa, The University of Texas at El Paso, El Paso, Texas, United States of America
Environmental Nanotechnology, Plant nanotechnology, Plant physiology, Phytoremediation
Sheo Mohan Prasad, University of Allahabad, Ranjan Plant Physiology and Biochemistry Laboratory, Department of Botany, Prayagraj, India
Abiotic stress, Antioxidants, Photosynthesis, Oxidative stress, Reactive oxygen species
Stamatis Rigas, Agricultural University of Athens, Department of Biotechnology, Athens, Greece
Root development, Organellar proteases, Organellar biogenesis, Plant stress response, Gene expression
Yukui Rui, China Agricultural University, College of Resources and Environmental Sciences, Department of environmental science and Engineering, Beijing, China
Plant physiological effects of nanomaterials, Environmental chemistry, Environmental ecotoxicology
Mauro Santos, Federal University of Pernambuco, RECIFE, Brazil
Abiotic stress, Non-structural carbohydrates, Photosynthesis, Root metabolism, Water relations
Donatella Serafini-Fracassini, University of Bologna, Department of Biological and Environmental Geology, Bologna, Italy
Polyamines, transglutaminase, their role in plant growth, differentiation, senescence, programmed cell death, germination and incompatibility of pollen, and structural organization.

Sergey Shabala, The University of Western Australia, Perth, Western Australia, Australia
Plant stress physiology, Plant membrane transport, Salinity, Waterlogging, Osmotic stress

Huixia Shou, Zhejiang University College of Life Sciences, Hangzhou, China
Crop, Nutrient, Yield, Seed quality

Mona Soliman, Cairo University Botany and Microbiology Department, Giza, Egypt
Plant Biology, Plant Biotechnology, Abiotic Stress Tolerance, Plant Environmental Stress, Physiology

Jan Szopa, Wroclaw University of Science and Technology, Wroclaw, Poland
Plant metabolic engineering, transgenic plant, plant biotechnology, flax biotechnology

Mingpu Tan, Nanjing Agricultural University College of Life Sciences, Nanjing, China
Stress, Molecular physiology, Bioinformatics, Transcription factor, Transporter

Paraskevi Tavladoraki, Roma Tre University, Department of Sciences, Roma, Italy
Polyamine metabolism, Polyamine oxidase, Thermospermine, Root growth, Xylem differentiation, Stomata movement, Hormones, Abiotic stress, Biotic stress, Reactive oxygen species.

Durgesh Kumar Tripathi, Amity University, Amity Institute of Organic Agriculture, Noida, India
Crop Nano Biology, Environmental Nano Biology, Plant nutrition and nano-nutrient delivery in plants, Molecular biology and biotechnology and Molecular stress physiology,

Jason Tzen, National Chung Hsing University, Taichung, Taiwan
Lipids, oleosin

Radomira Vankova, Czech Academy of Sciences, Praha, Czechia
Hormones, Cytokinin, Proline, Salt stress

Mariateresa M. Volpicella, University of Bari, Bari, Italy
Gene expression, Genomics, Metagenomics and functional genomics, Biotechnologies, plant molecular biology; gene expression; genomics; metagenomics and functional genomics; protein expression.

Fayuan Wang, Qingdao University of Science and Technology, College of Environment and Safety Engineering, Qingdao, China
Arbuscular mycorrhizae, Ecotoxicology, Emerging contaminants, Environmental stress, Phytoremediation

Wei-Qing Wang, Chinese Academy of Sciences, Beijing, China
Seed physiology and biotechnology group

Lingyun Zhang, Beijing Forestry University College of Forestry, Beijing, China
Fruit development, sugar transport, abiotic stress

Tong Zhang, Pacific Northwest National Laboratory Biological Sciences Division, Richland, Washington, United States of America
Proteomics, Redox, Stomatal guard cell, Pathogen, Kinase

Yuanyuan Zhao, Beijing Forestry University, Beijing, China
Plant Molecular Biology, Secondary growth of Trees

Dao-Xio Zhou, Paris-Saclay University, Gif sur Yvette, France
Epigenetics, Epigenomics, Chromatin dynamics
GUIDE FOR AUTHORS

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

To find out more, please visit the Preparation section below.

INTRODUCTION
Plant Physiology and Biochemistry publishes original theoretical, experimental and technical contributions in the various fields of plant physiology (biochemistry, physiology, structure, genetics, plant-microbe interactions, etc.) at diverse levels of integration (molecular, subcellular, cellular, organ, whole plant, environmental). Opinions expressed in the journal are the sole responsibility of the authors and publication does not imply the editors' agreement.

Types of issues
Alongside the standard issues, the journal publish Virtual special issues. Virtual special issues focus on a specific research topic and are organised by a guest editor.

Types of paper
Plant and Biochemistry publishes several types of articles: Reviews, Papers and Short Papers. Reviews are on invitation only and should not exceed 40 typewritten pages (detailed instructions for review submissions here). Short Papers should have not more than approximately 8 typewritten pages. The fundamental character of Plant Physiology and Biochemistry remains that of a journal for original results. Authors interested in writing a review article should contact one of the review editors in advance by submitting a summary of the intended manuscript. The editor may then send an official letter of invitation with further instructions.

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

Ensure that the following items are present:

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

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

Graphical Abstracts / Highlights files (where applicable)

Supplemental files (where applicable)

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

For further information, visit our Support Center.
BEFORE YOU BEGIN

Ethics in publishing
Please see our information on Ethics in publishing.

Declaration of competing interest
Corresponding authors, on behalf of all the authors of a submission, 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. All authors, including those without competing interests to declare, should provide the relevant information to the corresponding author (which, where relevant, may specify they have nothing to declare). Corresponding authors should then use this tool to create a shared statement and upload to the submission system at the Attach Files step. Please do not convert the .docx template to another file type. Author signatures are not required.

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.

Where authors use generative artificial intelligence (AI) and AI-assisted technologies in the writing process, authors should only use these technologies to improve readability and language. Applying the technology should be done with human oversight and control, and authors should carefully review and edit the result, as AI can generate authoritative-sounding output that can be incorrect, incomplete or biased. AI and AI-assisted technologies should not be listed as an author or co-author, or be cited as an author. Authorship implies responsibilities and tasks that can only be attributed to and performed by humans, as outlined in Elsevier’s AI policy for authors.

Authors should disclose in their manuscript the use of 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.

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 compliance, your article may be checked by Crossref Similarity Check and other originality or duplicate checking software.

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).
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. 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.

**Changes to authorship**

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

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors after the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

**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.

**Copyright**

Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (see more information on this). An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.

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

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

**Author rights**

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

Elsevier supports responsible sharing

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

**Role of the funding source**

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

**Open access**

Please visit our Open Access page for more information.
Language (usage and editing services)  
Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the English Language Editing service available from Elsevier's Author Services.

Submission  
Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your 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.

Submit your article  

PREPARATION

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.

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

As part of the Your Paper Your Way service, you may choose to submit your manuscript as a single file to be used in the refereeing process. This can be a PDF file or a Word document, in any format or layout that can be used by referees to evaluate your manuscript. It should contain high enough quality figures for refereeing.

If you prefer to do so, you may still provide all or some of the source files at the initial submission. Please note that individual figure files larger than 10 MB must be uploaded separately.

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

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

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

Divide the article into clearly defined sections.

Figures and tables embedded in text  
Please ensure the figures and the tables included in the single file are placed next to the relevant text in the manuscript, rather than at the bottom or the top of the file. The corresponding caption should be placed directly below the figure or table.

Peer review  
This journal operates a single anonymized 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. Editors are not involved in decisions about papers which they have written themselves or have been written by family members or colleagues or which relate to products or services in which the editor has an interest. Any such submission is subject to all of the journal's usual procedures, with peer review handled independently of the relevant editor and their research groups. More information on types of peer review.
REVISED SUBMISSIONS
Use of word processing software
Regardless of the file format of the original submission, at revision you must provide us with an editable file of the entire article. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). See also the section on Electronic artwork.
To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

Article structure
Subdivisions- numbered sections,
Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to "the text". Any subsection may be given a brief heading. Each heading should appear on its own separate line.

Papers and Short Papers should be organized as follows: Introduction, Methods (divided), Results (divided and possibly subdivided), Discussion (possibly divided), Contributions and Acknowledgements. Contributions is a mandatory section where the authors should specify who did what in the study. An alternative presentation places under one heading Results and Discussion (with possible divisions and subdivisions); in this case, a formal Conclusion (10-15 lines, without bibliographic references) should be added. Reviews should be organized as follows: between an Introduction and a Conclusion, the subject is treated under headings, with possible subdivisions.

Methods should be written in such a way that a reader with experience could repeat the experiment. When the techniques are not original they should be simply indicated by the appropriate reference. The exact taxonomic name (genus, species, authority and cultivar where appropriate) of any material used must be shown (e.g. *Vicia faba* L.). Likewise, enzymes must be identified according to Enzyme Nomenclature, e.g. malate dehydrogenase (L-malate:NAD- oxidoreductase; EC 1.1.1.37). All experimental results must first appear in Results, concisely and without duplication of data between tables and figures. No new results should be presented in the Discussion. However, tables and figures derived from the results (e.g. comparisons, schemes, models) may be introduced in order to aid discussion or to generalize conclusions.

Appendices
If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

Essential title page information
- **Title.** Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
- **Author names and affiliations.** Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.
- **Corresponding author.** Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. **Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.**
- **Present/permanent address.** If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.
Highlights

Highlights are mandatory for this journal as they help 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).

Abstract

Abstract as a single paragraph (maximum: 250 words). The abstract must indicate the object of the work, the material (with full taxonomic name) and the essential results. Any abbreviations must be defined therein. Enzymes are identified with official nomenclature (EC). No references are to be cited.

Graphical abstract

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

Keywords

Keywords (7 maximum) and definition of abbreviations appearing in any part of the manuscript, in alphabetic order. An abbreviation is in part justified by its frequent use; where a term seldom appears in the article, it is preferably written in full even if commonly abbreviated.

Abbreviations

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Acknowledgements

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

Formatting of funding sources

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

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

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

If no funding has been provided for the research, it is recommended to include the following sentence:

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

Nomenclature and units

At its first mention in the main text, and also in the Abstract and Methods, a material or an enzyme must be identified by the official nomenclature. Subsequently a simplified form may be used, e.g. V. faba, malate dehydrogenase (or even MDH if defined under Abbreviations). The 'chapter headings' are numbered according to the international numbering system (1.; 1.1.; 1.1.1.; etc.). 'Tables' with titles and 'figures' with captions should be placed on separate sheets at the end of the manuscript. They should not appear in the text.
Punctuation rules of the English language should be used (semi-colons, colons, question marks and exclamation marks are never preceded by a space in English). Abbreviations are punctuated. There is no space between brackets and the enclosed words, whatever the language. Small capitals should not be used, and normal capitals are accented. Italics for common Latin expressions (in vivo, in vitro, et al., via, etc.) are not to be used.

Do not begin a sentence with a number, or if necessary, spell it out. Begin all paragraphs with an indent.

Write buffers: 0.3 M phosphate buffer (pH 7.2). Write ions: Ca$^{2+}$ and not Ca$^{++}$.
Write mixtures: methanol/chloroform/water (12/5/4, v/v/v).
Structural formulae of organic chemicals generally have to be drawn and so constitute figures.

Use throughout the form: μL.h$^{-1}$.mg$^{-1}$ rather than the ambiguous notations μL/h.mg or μL/h/mg.
Use absolute units, choosing dimensions that obviate power of 10; for instance 5 mM rather than 5 X 10$^{-3}$ M; 0.5 mg.g$^{-1}$ (or 500 mg.kg$^{-1}$) rather than 50 mg/100 g. Do not confuse quantity [mole, micromole (mol, μmol)] with concentration [molar, micromolar (M, μM)] and weight [gram (g)] with force due to centrifugation [gravity (x g)].

Certain current abbreviations may be used without definition, e.g. ATP, NAD, DNA. In other cases (e.g. CAM, IAA, EDTA, GA) define the abbreviations (on the third page of the manuscript) in order to avoid ambiguity.

The SI units and their derivatives are to be applied over former terms [Pa and bar and not atm (100 kPa = 1 bar)]; Bq replaces Ci (1 Ci = 3.7 10$^{10}$ Bq); J replaces cal (1 cal = 4185 J); kat (conversion of one mole of substrate per second) replaces IU (1 IU = 16.7 nkat).

Authors are free to choose whether to use relative molecular mass (a pure number), or molar mass (g.mol$^{-1}$), or molecular mass (Da), with the same unit in each case. Unit abbreviations neither take a full stop nor change in the plural.

**Math formulae**
Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

**Footnotes**
Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article.

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

A detailed guide on electronic artwork is available.

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

**Formats**
Regardless of the application used, when your electronic artwork is finalized, please 'save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):
- EPS (or PDF): Vector drawings. Embed the font or save the text as 'graphics'.
- TIFF (or JPEG): Color or grayscale photographs (halftones): always use a minimum of 300 dpi.
- TIFF (or JPEG): Bitmapped line drawings: use a minimum of 1000 dpi.
- TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale): a minimum of 500 dpi is required.
Please do not:

- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); the resolution is too low.
- Supply files that are too low in resolution.
- Submit graphics that are disproportionately large for the content.

Color artwork
Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF), or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. For color reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article. Please indicate your preference for color: in print or online only. Further information on the preparation of electronic artwork.

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

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. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

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

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

Data references
This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.


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.

References in a special issue
Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.
Reference management software

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

Reference formatting

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

Reference Style

All citations in the text should refer to:
1. Single author: the author's name (without initials, unless there is ambiguity) and the year of publication;
2. Two authors: both authors' names and the year of publication;
3. Three or more authors: first author's name followed by "et al." and the year of publication.

Citations may be made directly (or parenthetically). Groups of references should be listed first alphabetically, then chronologically.

Examples: "as demonstrated (Allan, 1996a, 1996b, 1999; Allan and Jones, 1995). Kramer et al. (2000) have recently shown ...."

List: References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters "a", "b", "c", etc., placed after the year of publication.

Examples:

Reference to a journal publication:

Reference to a book:

Papers should contain no more than 40 references, and Reviews no more than 80.

Video

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

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

**Research data**
This journal 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).

**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. Before submitting your article, you can deposit the relevant datasets to Mendeley Data. Please include the DOI of the deposited dataset(s) in your main manuscript file. 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.

**AFTER ACCEPTANCE**

**Online proof correction**
To ensure a fast publication process of the article, we kindly ask authors to provide us with their proof corrections within two days. Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors.
If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.

We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

**Offprints**

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

**AUTHOR INQUIRIES**

Visit the Elsevier Support Center to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch.

You can also check the status of your submitted article or find out when your accepted article will be published.