# ABOUT THE JOURNAL

**Aims and Scope**

*Cell Death & Differentiation* is published on behalf of CDDpress by Springer Nature.

*Cell Death & Differentiation* is a journal devoted to the cell biology, molecular biology and biochemistry of cell death, survival, stemness and differentiation, both in normal tissue regulation and in disease. To this end, *Cell Death & Differentiation* provides a unified forum for scientists as well as clinicians. It is committed to the rapid publication of high-quality original papers that relate to these subjects, together with topical, usually solicited, reviews and meeting reports. *Cell Death & Differentiation* is fully committed to ensuring the accuracy of the scientific record (see Editorial Policies).

**Journal Details**

**Co-Editors-in-Chief:**
Gerry Melino, University of Rome, Italy
Eric Baehrecke, University of Massachusetts Medical School, USA

**Editorial office:**
cell.death.differ@uniroma2.it

**Impact factor:** 8.000 (2017 Journal Citation Reports, Clarivate Analytics, 2018)

**Frequency:** 12 issues a year

**Abstracted in:**
EBSCO Discovery Service
Google Scholar
OCLC
Medline
Summon by ProQuest
BIOSIS
Current Contents/Life Sciences
Science Citation Index
Science Citation Index Expanded (SciSearch)
SCOPUS
PubMedCentral
EBSCO Academic Search
EBSCO Advanced Placement Source
EBSCO Biomedical Reference Collection
EBSCO STM Source
EBSCO Science & Technology Collection
EBSCO TOC Premier

---

**Table of Contents**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>About the Journal</td>
<td>1</td>
</tr>
<tr>
<td>Article Type Specifications</td>
<td>2</td>
</tr>
<tr>
<td>Preparation of Articles</td>
<td>2</td>
</tr>
<tr>
<td>How to Submit</td>
<td>7</td>
</tr>
<tr>
<td>Post-Acceptance</td>
<td>7</td>
</tr>
<tr>
<td>Costs</td>
<td>8</td>
</tr>
<tr>
<td>Editorial Policies</td>
<td>9</td>
</tr>
<tr>
<td>Further Information</td>
<td>16</td>
</tr>
<tr>
<td>Image Do's &amp; Don'ts</td>
<td>18</td>
</tr>
<tr>
<td>Further Information</td>
<td>1</td>
</tr>
<tr>
<td>Image Do's &amp; Don'ts</td>
<td>8</td>
</tr>
<tr>
<td>Editorial Policies</td>
<td>9</td>
</tr>
<tr>
<td>Further Information</td>
<td>16</td>
</tr>
<tr>
<td>Image Do's &amp; Don'ts</td>
<td>18</td>
</tr>
<tr>
<td>Further Information</td>
<td>1</td>
</tr>
</tbody>
</table>
# ARTICLE TYPE SPECIFICATIONS

<table>
<thead>
<tr>
<th>ARTICLE DESCRIPTION</th>
<th>ABSTRACT</th>
<th>WORD LIMIT</th>
<th>TABLES/FIGURES</th>
<th>REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article</td>
<td>Unstructured abstract, max 300 words</td>
<td>3,500 words max excluding abstract, materials &amp; methods, references, figures and tables.</td>
<td>6-8</td>
<td>Max of 80</td>
</tr>
<tr>
<td>Review Article</td>
<td>Unstructured abstract, max 300 words</td>
<td>5,000 words max excluding abstract, references, figures and tables.</td>
<td>A minimum of 4</td>
<td>Max of 150</td>
</tr>
<tr>
<td>Perspective</td>
<td>Unstructured abstract, max 300 words</td>
<td>2,500 words max excluding references, tables and figures.</td>
<td>Max of 2</td>
<td>Max of 100</td>
</tr>
<tr>
<td>Editorial</td>
<td>No abstract</td>
<td>1,200 words max excluding references, figures and tables.</td>
<td>Max of 1</td>
<td>Max of 15</td>
</tr>
<tr>
<td>Comment</td>
<td>No abstract</td>
<td>1,200 words max excluding references and figures</td>
<td>Max of 1 figure.</td>
<td>No tables</td>
</tr>
<tr>
<td>Meeting Report</td>
<td>No abstract</td>
<td>1,200 words excluding references, figures and tables.</td>
<td>Max of 1</td>
<td>0</td>
</tr>
</tbody>
</table>

## PREPARATION OF ARTICLES

Please note that original articles must contain the following components. Please see below for further details.

- Cover letter
- Title page (excluding acknowledgements)
- Abstract
- Introduction
- Materials (or Subjects) and Methods
- Results
- Discussion
- Acknowledgements (including all funding sources)
- Conflict of Interest
- References
- Figure legends
- Tables
- Figures

Please note that review articles must contain the following components:

- Cover letter
- Title Page (excluding acknowledgements)
- Abstract
- Bullet Points
- Main Text
- Acknowledgements
- Conflict of Interest
- References
- Figure Legends
- Tables
- Figures
Cover Letter
The cover letter must state the material is original research, has not been previously published and has not been submitted for publication elsewhere while under consideration. If the manuscript has been previously considered for publication in another journal, please include the previous reviewer comments, to help expedite the decision by the Editorial team.

Please also include a Conflict of Interest statement, see Editorial Policies for more details.

Group Authorship/Collaborations
Please note that if in the list of authors you wish to include additional authors/collaborators/groups/consortiums that aren’t part of the core list of authors as ‘on behalf of’, ‘for the’ or ‘representing the’ you need to ensure you list the authors correctly within the paper to ensure these are there deposited correctly in PubMed.

- Groups where there is an ‘on behalf of’, or ‘representing the’, or ‘for the’ will appear in the HTML/PDF as follows: Author A, Author B, Author C and Author D on behalf of...
- The list of individual members should then appear in the Acknowledgements section and not under Notes or Appendix

Detailed Attribution of Authorship
The Author Contribution Form must be completed upon submission and uploaded as Supplementary Material along with the rest of the files. The corresponding author must sign the form on behalf of all authors.

This section will contain two independent pieces of information.

1. The contributions of each author should be listed in general terms, for example, JS designed experiments and helped write the manuscript.
2. The author contributions to each figure should be detailed. For example, In Figure 1, JS generated the data and prepared panel A, NS generated the immune-histochemistry data and labelled the image, JS assembled the figure.

Reproducibility Checklist:
As of March 2016, Cell Death & Differentiation requires authors of original research papers that are sent for external review to include in their manuscripts relevant details about several elements of experimental and analytical design. This initiative aims to improve the transparency of reporting and the reproducibility of published results, focusing on elements of methodological information that are frequently poorly reported. Authors being asked to resubmit a manuscript will be asked to confirm that these elements are included by filling out a checklist that will be made available to the editor and reviewers.

Title Page
The title page needs to contain the title of the paper, the full names of all the authors and their affiliations, together with the name, full postal address, telephone and fax numbers and e-mail address of the corresponding author (this information is also asked for on the electronic submission form). The title page must also contain a Conflict of Interest statement (see Editorial Policy section).

- The title should be brief, informative, of 150 characters or less and should not make a statement or conclusion.
- The running title should consist of no more than 50 letters and spaces. It should be as brief as possible, convey the essential message of the paper and not contain any abbreviations. Please note – the running head for a manuscript on all pages after the title page will be the shortened manuscript title followed by an ellipsis.
- Authors should disclose the sources of any support for the work, received in the form of grants and/or equipment and drugs.
- If authors regard it as essential to indicate that two or more co-authors are equal in status, they may be identified by an asterisk symbol with the caption ‘These authors contributed equally to this work’ immediately under the address list.

Abstract
Articles must be prepared with an unstructured abstract designed to summarise the essential features of the paper in a logical and concise sequence.

Introduction
The Introduction should assume that the reader is knowledgeable in the field and should therefore be as brief as possible but can include a short historical review where desirable.

Bullet Points (Reviews only)
The new format of the reviews include (after the Abstract, before the Introduction), a list of “FACTS” (a list of 3 to 5 bullet points highlighting the major queries, debatable facts, that should/could become a major subject of research in the near future). See for example the recent CDD review in the September 2011 issue (Melino et al. p63 is a suppressor of tumorigenesis and metastasis interacting with mutant p53. Cell Death Differ. 2011 Sep; 18(9):1487-99. doi: 10.1038/cdd2011.81).
Methods (Subjects) and Materials
This section should contain sufficient detail, so that all experimental procedures can be reproduced, and include references. Methods, however, that have been published in detail elsewhere should not be described in detail. Authors should provide the name of the manufacturer and their location for any specifically named medical equipment and instruments, and all drugs should be identified by their pharmaceutical names, and by their trade name if relevant.

Results
The Results section should briefly present the experimental data in text, tables or figures. Tables and figures should not be described extensively in the text, either.

Discussion
The Discussion should focus on the interpretation and the significance of the findings with concise objective comments that describe their relation to other work in the area. It should not repeat information in the results. The final paragraph should highlight the main conclusion(s), and provide some indication of the direction future research should take.

Acknowledgements
These should be brief, and should include sources of support including sponsorship (e.g. university, charity, commercial organisation) and sources of material (e.g. novel drugs) not available commercially.

Conflict of Interest
Authors must declare whether or not there are any competing financial interests in relation to the work described. This information must be included at this stage and will be published as part of the paper. Conflict of interest should be noted in the cover letter and also on the title page. Please see the Conflict of Interest documentation in the Editorial Policy section for detailed information.

References
Only papers directly related to the article should be cited. Exhaustive lists should be avoided. References should follow the Vancouver format. In the text they should appear as numbers starting at one and at the end of the paper they should be listed (double-spaced) in numerical order corresponding to the order of citation in the text. Where a reference is to appear next to a number in the text, for example following an equation, chemical formula or biological acronym, citations should be written as (ref. X) and not as superscript.

Example “detectable levels of endogenous Bcl-2 (ref. 3), as confirmed by western blot”

All authors should be listed for papers with up to six authors; for papers with more than six authors, the first six only should be listed, followed by et al. Abbreviations for titles of medical periodicals should conform to those used in the latest edition of Index Medicus. The first and last page numbers for each reference should be provided. Abstracts and letters must be identified as such. Papers in press may be included in the list of references.

Personal communications can be allocated a number and included in the list of references in the usual way or simply referred to in the text; the authors may choose which method to use. In either case authors must obtain permission from the individual concerned to quote his/her unpublished work.

Examples:
Journal article:

Journal article, e-pub ahead of print:

Journal article, in press:

Complete book:

Chapter in book:

Abstract:
Correspondence:

Figure Legends
These should be brief, specific and appear on a separate manuscript page after the References section.

Tables
Tables should only be used to present essential data; they should not duplicate what is written in the text. It is imperative that any tables used are editable, ideally presented in Excel. Each must be uploaded as a separate workbook with a title or caption and be clearly labelled, sequentially. Please make sure each table is cited within the text and in the correct order, e.g. (Table 3). Please save the files with extensions .xls / .xlsx / .ods / or .doc or .docx. Please ensure that you provide a ‘flat’ file, with single values in each cell with no macros or links to other workbooks or worksheets and no calculations or functions.

Figures (See Do’s & Don’ts at end of this document):
Figures and images should be labelled sequentially and cited in the text. Figures should not be embedded within the text but rather uploaded as separate files. Detailed guidelines for submitting artwork can be found by downloading our Artwork Guidelines. The use of three-dimensional histograms is strongly discouraged unless the addition of the third dimension is important for conveying the results.

Please note: composite figures containing more than three individual figures will count as two figures. All parts of a figure should be grouped together.

Where possible large figures and tables should be included as supplementary material.

Artwork Guidelines
Detailed guidelines for submitting artwork can be found by downloading the guidelines PDF. Using the guidelines, please submit production quality artwork with your initial online submission. If you have followed the guidelines, we will not require the artwork to be resubmitted following the peer review process, if your paper is accepted for publication.

Colour on the web
Authors who wish their articles to have FREE colour figures on the web (only available in the HTML (full text) version of manuscripts) must supply separate as supplementary information and authors need to state in the Cover Letter at submission that they would like their figures to appear in colour on the web version of their paper.

Graphs, Histograms and Statistics (See Do’s & Don’ts at end of this document):
• Plotting individual data points is preferred to just showing means, especially where N<10
• If error bars are shown, they must be described in the figure legend
• Axes on graphs should extend to zero, except for log axes
• Statistical analyses (including error bars and p values) should only be shown for independently repeated experiments, and must not be shown for replicates of a single experiment
• The number of times an experiment was repeated (N) must be stated in the legend

Standard abbreviations
Abbreviations should be defined in full at their first usage in the Abstract, and again at their first usage in the body of the manuscript, in the conventional manner. Terms used less than four times should not be abbreviated. It is not advised to use more than five abbreviations in total unless they are extremely common abbreviations.

Reuse of Display Items
See the Editorial Policy section for information on using previously published tables or figures.

Supplementary Information
Supplementary information is material directly relevant to the conclusion of an article that cannot be included in the printed version owing to space or format constraints. The article must be complete and self-explanatory without the Supplementary Information, which is posted on the journal’s website and linked to the article. Supplementary Information may consist of data files, graphics, movies or extensive tables. Please see our Artwork Guidelines for information on accepted file types.

Please note we welcome videos as part of the Supplementary Material. These should be focused on techniques, novel methods, how to do demonstrations or surgical summaries.

Authors should submit supplementary information files in the FINAL format as they are not edited, typeset or changed, and will appear online exactly as submitted. When submitting Supplementary Information, authors are required to:
• Include a text summary (no more than 50 words) to describe the contents of each file.
• Identify the types of files (file formats) submitted.
• Include the text “Supplementary information is available at (journal name)’s website” at the end of the article and before the references.

Please note: We do not allow the resupplying of Supplementary Information files for style reasons after a paper has been exported in production, unless there is a serious error that affects the science and, if by not replacing, it would lead to a formal correction once the paper has been published. In these cases we would make an exception and replace the file; however there are very few instances where a Supplementary Information file would be corrected post-publication.

Availability of Data and Materials
Please see our Editorial Policies for information regarding data, protocols, sequences, or structures.

Subject Ontology
Choosing the most relevant and specific subject terms from our subject ontology will ensure that your article will be more discoverable and will appear on appropriate subject specific pages on nature.com, in addition to the journal’s own pages. Your article should be indexed with at least one, and up to four unique subject terms that describe the key subjects and concepts in your manuscript. Click here for help with this.

House Style

• Text should be double spaced with a wide margin.
• All pages and lines are to be numbered. To add page numbers in MS Word, go to Insert then Page Numbers. To add line numbers go to File, Page Setup, then click the Layout tab. In the Apply to box, select Whole document, click Line Numbers then select the Add line numbering check box, followed by Continuous.
• Do not make rules thinner than 1 pt (0.36mm).
• Use a coarse hatching pattern rather than shading for tints in graphs.
• Colour should be distinct when being used as an identifying tool.
• Spaces, not commas should be used to separate thousands.
• At first mention of a manufacturer, the town (and state if USA) and country should be provided.
• Statistical methods: For normally distributed data, mean (SD) is the preferred summary statistic. Relative risks should be expressed as odds ratios with 95% confidence interval. To compare two methods for measuring a variable the method of Bland & Altman (1986, Lancet 1, 307–310) should be used; for this, calculation of P only is not appropriate.
• Units: Use metric units (SI units) as fully as possible. Preferably give measurements of energy in kiloJoules or MegaJoules with kilocalories in parentheses (1 kcal = 4.186kJ). Use % throughout.
• Abbreviations: On first using an abbreviation place it in parentheses after the full item. Very common abbreviations such as FFA, RNA, need not be defined. Note these abbreviations: gram g; litre l; milligram mg; kilogram kg; kilojoule kJ; megajoule MJ; weight wt; seconds s; minutes min; hours h. Do not add s for plural units.

Language Editing
Cell Death and Differentiation is read by scientists from diverse backgrounds and many are not native English speakers. In addition, the readership of Cell Death and Differentiation is multidisciplinary; therefore authors need to ensure their findings are clearly communicated. Language and concepts that are well known in one subfield may not be well known in another. Thus, technical jargon should be avoided as far as possible and clearly explained where its use is unavoidable. Abbreviations, particularly those that are not standard, should also be kept to a minimum. The background, rationale and main conclusions of the study should be clearly explained and understandable by all working in the field. Titles and abstractions should be written in language that will be readily understood by all readers.

Authors who are not native speakers of English sometimes receive negative comments from referees or editors about the language and grammar usage in their manuscripts, which can contribute to a paper being rejected. To reduce the possibility of such problems, we strongly encourage such authors to take at least one of the following steps.

• Have your manuscript reviewed for clarity by a colleague whose native language is English.
• Visiting the English language tutorial which covers the common mistakes when writing in English.
• Using a professional language editing service where editors will improve the English to ensure that your meaning is clear and identify problems that require your review. Two such services are provided by our affiliates Nature Research Editing Service and American Journal Experts.

Please note that the use of a language editing service is at the author’s own expense and does not guarantee that the article will be selected for peer review or accepted.

HOW TO SUBMIT

Pre-submission Enquiries
Pre-submission enquiries should be directed to the editorial office:
Email: cell.death.differ@uniroma2.it

Revised 11/02/2019
Online Submission
We only accept manuscript submission via our online manuscript submission system. Before submitting a manuscript, authors are encouraged to consult both our Editorial Policies and the Submission Instructions for our online manuscript submission system. If you have not already done so, please register for an account with our online manuscript system. You will be able to monitor the status of your manuscript online throughout the editorial process.

Submission of Revisions
Authors submitting a revised manuscript after review are asked to include the following:

1. A rebuttal letter, indicating point-by-point how you have addressed the comments raised by the reviewers. If you disagree with any of the points raised, please provide adequate justification in your letter.
2. A marked-up version of the manuscript that highlights changes made in response to the reviewers’ comments in order to aid the Editors and reviewers.
3. A ‘clean’ (non-highlighted) version of the manuscript must be submitted at this point.

POST-ACCEPTANCE

Once a manuscript is accepted, the corresponding author must complete and sign a Licence to Publish form on behalf of all authors and return it to the editorial office. Failure to promptly return the form will result in delay of publication.

Springer Nature does not require authors of original research papers to assign copyright of their published contributions. Authors grant Springer Nature an exclusive licence to publish, in return for which they can re-use their papers in their future printed work. Springer Nature’s author licence page provides details of the policy.

Standard Publication

Manuscripts published under the standard method of publication will be behind a paywall. Readers will be able to access manuscripts through their institutional or personal subscriptions or on a pay-per-view basis. Please click here for a copy of the standard Licence to Publish form.

Government employees from the United States, Canada and the UK are required to sign and submit the relevant form below:

- US Government Employee Licence to Publish form
- Crown Government Employee Licence to Publish form

Open Access Publication (gold open access)

Upon acceptance, authors can indicate whether they wish to pay an optional article processing charge (APC) for their article to be made open access online immediately upon publication. Open access articles are published under the CC-BY Creative Commons licence, which allows authors to retain copyright of their work while making it open to readers.

To facilitate self-archiving Springer Nature deposits open access articles in PubMed Central and Europe PubMed Central on publication. Authors are also permitted to post the final, published PDF of their article on a website, institutional repository or other free public server, immediately on publication.

Visit our open research site for further information about licenses, APCs, and our free OA funding support service:

- About Creative Commons licensing
- Creative Commons license options and article processing charges (APCs) for Cell Death & Differentiation
- APC payment FAQs
- Help in identifying funding for APCs
- Editorial process for OA publication in hybrid journals
- Self-archiving and deposition of papers published OA

If authors opt to publish via the open access route then the corresponding author must complete and sign the Article Processing Charge (APC) payment form and an open access License to Publish (LTP) form on behalf of all authors, and return these to the editorial office. These forms will be provided upon acceptance of the article. Failure to promptly return forms will result in delay of publication.

Government employees from the United States, Canada and the UK are required to sign and submit the relevant government open access license to publish form.

Please note with regards to payment that usual credit terms are 30 days from receipt of invoice. Failure to pay your invoice within the stated credit term may result in the Open Access status of the paper being rescinded, with the paper being placed behind the paywall. You may also be subject to such penalties as restrictions on your ability to publish with Springer Nature in the future, involvement of a third party debt collection agency and legal proceedings.
Compliance with open access mandates
Springer Nature’s open access journals allow authors to comply with all funders’ open access policies worldwide. Authors may need to take specific actions to achieve compliance with funder and institutional open access mandates.

Learn more about open access compliance.

Waiver of institutional open access policies
Please note that Harvard University FAS, MIT, Princeton, UCSF, University of Hawaii at Manoa, California Institute of Technology (Caltech) and the Georgia Institute of Technology have enacted Open Access policies that conflict with our own policy for articles published via the subscription route. If any corresponding or contributing authors are from these institutions, you will need to provide a waiver from the institution of every affected author, which can be obtained from the institution. This waiver should be submitted at the same time as the Licence to Publish form. This requirement does not apply to articles published via the open access route.

Self-archiving and manuscript deposition (green open access)
Authors of original research articles are encouraged to submit the author’s version of the accepted paper (the unedited manuscript) to a repository for public release six months after publication. Springer Nature also offers a free, opt-in Manuscript Deposition Service for original research articles in order to help authors fulfil funder and institutional mandates.

Learn more about self-archiving and manuscript deposition

E-Proofs
The Springer Nature e-proofing system is a unique solution that will enable authors to remotely edit/correct your article proofs. The corresponding author will receive an e-mail containing a URL linking to the e-proofing site. Proof corrections must be returned within 48 hours of receipt. Failure to do so may result in delayed publication. Extensive corrections cannot be made at this stage.

For more information and instructions on how to use the e-proofing tool please see here.

Advance Online Publication
The final version of the manuscript is published online in advance of print. AOP represents the official version of the manuscript and will subsequently appear unchanged, in print.

COSTS

Page Charges
After final layout for publication, each page of an article will incur a fixed charge of £158/ $244 per page. This charge is fully inclusive of colour reproduction of all colour images (where deemed appropriate by the Editor) in print, HTML and PDF formats. It covers also a proportion of the costs of processing and producing the article for publication (VAT or local taxes will be added where applicable).

A copy of the page charge form can be found at here
Page charges will not apply to authors who choose to pay an article processing charge to make their paper open access.

Open Access Publication
If the authors choose to publish their manuscript open access, Cell Death & Differentiation levies the following Article-Processing Charges (APC) per article accepted for publication (plus VAT where applicable):

<table>
<thead>
<tr>
<th>LICENCE TYPE</th>
<th>ORIGINAL ARTICLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Commons Attribution 4.0</td>
<td>£2,700 / $3,600 / €2,900</td>
</tr>
<tr>
<td>International Licence</td>
<td></td>
</tr>
</tbody>
</table>

Offprints
Offprints may be ordered upon acceptance of your article, using the form provided by the editorial office. Charges are necessarily higher if orders for offprints are received after the issue has gone to press.

EDITORIAL POLICIES

Researchers should conduct their research – from research proposal to publication – in line with best practices and codes of conduct of relevant professional bodies and/or national and international regulatory bodies.

Springer Nature is committed to upholding the integrity of the scientific record. As a member of the Committee on Publication Ethics (COPE), Cell Death & Differentiation abides by COPE’s principles on how to deal with potential acts of misconduct, which includes formal investigation of all perceived transgressions.

Revised 11/02/2019
Authorship
Requirements for all categories of articles should conform to the “Uniform Requirements for Manuscripts Submitted to Biomedical Journals,” developed by the ICMJE (www.icmje.org).

Each author must have contributed sufficiently to the intellectual content of the submission. The corresponding author should list all authors and their contributions to the work. The corresponding author must confirm that he or she has had full access to the data in the study and final responsibility for the decision to submit for publication.

1. To qualify as a contributing author, one must meet all of the following criteria:
2. Conceived and/or designed the work that led to the submission, acquired data, and/or played an important role in interpreting the results.
3. Drafted or revised the manuscript.
4. Approved the final version.
5. Agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Contributions by individuals who made direct contributions to the work but do not meet all of the above criteria should be noted in the Acknowledgments section of the manuscript. Medical writers and industry employees can be contributors. Their roles, affiliations, and potential conflicts of interest should be included in the author list or noted in the Acknowledgments and/or Contributors section concurrent with their contribution to the work submitted. Signed statements from any medical writers or editors declaring that they have given permission to be named as an author, as a contributor, or in the Acknowledgments section is also required. Failure to acknowledge these contributors can be considered inappropriate, which conflicts with the journal’s editorial policy.

Changes to authorship
It is the corresponding author’s responsibility to ensure that the author list is correct at the point of first submission. Requests to change the authorship (such as to include or exclude an author, change an author’s name or contribution) must be accompanied by a letter signed by all authors to show they concur with the change. New authors must also confirm that they fully comply with the journal’s authorship requirements. Requests for addition or removal of authors as a result of authorship disputes (after acceptance) are honoured after formal notification by the institute or independent body and/or when there is agreement between all authors. Changes to the authorship will not be allowed once the manuscript has been accepted for publication.

Correspondence with the Journal
One author is designated the contact author for matters arising from the manuscript (materials requests, technical comments and so on). It is this author’s responsibility to inform all co-authors of matters arising and to ensure such matters are dealt with promptly. Before submission, the corresponding author ensures that all authors are included in the author list, its order agreed upon by all authors, and are aware that the manuscript was submitted. After acceptance for publication, proofs are e-mailed to this corresponding author who should circulate the proof to all co-authors and coordinate corrections among them.

Duplicate & Redundant Publication
Papers must be original and not published or submitted for publication elsewhere. This rule also applies to non-English language publications.

Redundant publication (also described as “salami publishing”) is when one study is split into several parts and submitted to two or more journals. It also includes findings that have previously been published elsewhere without proper cross-referencing, permission or justification. “Self-plagiarism” is considered a form of redundant publication as it concerns recycling or borrowing content from previous work without citation.

Springer Nature allows and encourages prior publication on recognized community preprint servers for review by other scientists before formal submission to a journal. The details of the preprint server concerned and any accession numbers should be included in the cover letter accompanying manuscript submission. This policy does not extend to preprints available to the media or that are otherwise publicized outside the scientific community before or during the submission and consideration process.

Conflict of Interest
Financial relationships are the most easily identifiable conflicts of interest and the most likely to undermine the credibility of the journal, the authors, and science itself. However, conflicts can occur for other reasons, such as personal relationships, academic competition, and intellectual passion.

In the interests of transparency and to help readers form their own judgments of potential bias, authors must declare whether or not there are any competing financial interests in relation to the work described. This information must be included in their cover letter and on the title page of their manuscript. In cases where the authors declare a competing financial interest, a statement to that effect is published as part of the article. If no such conflict exists, the statement will simply read that the authors have nothing to disclose. For the purposes of this statement, competing interests are defined as those of a financial nature that, through their potential influence on behaviour or content, or from perception of such potential influences, could undermine the objectivity, integrity or perceived value of a publication. They can include any of the following:
• Funding: Research support (including salaries, equipment, supplies, reimbursement for attending symposia, and other expenses) by organizations that may gain or lose financially through this publication. The role of the funding body in the design of the study, collection and analysis of data and decision to publish should be stated.
• Employment: Recent (while engaged in the research project), present or anticipated employment by any organization that may gain or lose financially through this publication. This includes positions on an advisory board, board of directors, or other type of management relationship.
• Personal financial interests: Stocks or shares in companies that may gain or lose financially through publication; consultation fees or other forms of remuneration from organisations that may gain or lose financially; patents or patent applications whose value may be affected by publication.
• Patents: Holding, or currently applying for, patents, relating to the content of a manuscript; receiving reimbursement, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript.

It is difficult to specify a threshold at which a financial interest becomes significant, but note that many US universities require faculty members to disclose interests exceeding $10,000 or 5% equity in a company. Any such figure is arbitrary, so we offer as one possible practical alternative guideline: “Declare all interests that could embarrass you were they to become publicly known after your work was published.” We do not consider diversified mutual funds or investment trusts to constitute a competing financial interest.

The statement must contain an explicit and unambiguous statement describing any potential conflict of interest, or lack thereof, for any of the authors as it relates to the subject of the report. Examples include “Dr. Smith receives compensation as a consultant for XYZ Company,” “Dr. Jones and Dr. Smith have financial holdings in ABC Company,” or “Dr. Jones owns a patent on the diagnostic device described in this report.” These statements acknowledging or denying conflicts of interest must be included in the manuscript under the heading Conflict of Interest. The Conflict of Interest disclosure appears in the cover letter, in the manuscript submission process and before the References section in the manuscript.

Following the Conflict of Interest heading, there must be a listing for each author, detailing the professional services relevant to the submission. Neither the precise amount received from each entity nor the aggregate income from these sources needs to be provided. Professional services include any activities for which the individual is, has been, or will be compensated with cash, royalties, fees, stock or stock options in exchange for work performed, advice or counsel provided, or for other services related to the author’s professional knowledge and skills. This would include, but not necessarily be limited to, the identification of organizations from which the author received contracts or in which he or she holds an equity stake if professional services were provided in conjunction with the transaction.

Examples of declarations are:

• **Conflict of interest.**
  The authors declare no conflict of interest.

• **Conflict of interest.**
  Dr. Caron’s work has been funded by the NIH. He has received compensation as a member of the scientific advisory board of Acadia Pharmaceutical and owns stock in the company. He has also consulted for Lundbeck and received compensation. Dr. Rothman and Dr. Jensen declare no potential conflict of interest.

Non-financial interests that authors may like to disclose include:

• a close relationship with, or a strong antipathy to, a person whose interests may be affected by publication of the article,
• an academic link or rivalry with someone whose interests may be affected by publication of the article,
• membership in a political party or special interest group whose interests may be affected by publication of the article, or
• a deep personal or religious conviction that may have affected what the author wrote and that readers should be aware of when reading the article.

Reviewers approached for assessment of submitted articles are also requested to declare conflicts of interest that may impede on their judgment of that article. This specifically includes competing research in the same area that could be negatively affected by publication of the submitted article.

**Clinical Trials**
As defined by the International Committee of Medical Journal Editors (ICMJE), a clinical trial is any research project that prospectively assigns human subjects to intervention and comparison groups to study the cause-and-effect relationship between a medical intervention and a health outcome. A medical intervention is any intervention used to modify a health outcome and includes but is not limited to drugs, surgical procedures, devices, behavioural treatments, and process-of-care changes. A trial must have at least one prospectively assigned concurrent control or comparison group in order to trigger the requirement for registration. Nonrandomized trials are not exempt from the registration requirement if they meet the above criteria.

When reporting experiments on human subjects, authors must indicate whether the procedures were in accordance with the ethical standards of the responsible committee on human experimentation (institutional or regional) or with the Helsinki Declaration of 1975 (as revised in 1983). Include Institutional Review Board or Animal Care and Use Committee approvals.

All clinical trials must be registered in a public registry prior to submission. The journal follows the trials registration policy of the ICMJE (www.icmje.org) and considers only trials that have been appropriately registered before submission, regardless of when the trial closed to enrolment. Acceptable registries must meet the following ICMJE requirements:
• be publicly available, searchable, and open to all prospective registrants
• have a validation mechanism for registration data
• be managed by a not-for-profit organization

Examples of registries that meet these criteria include:

1. the registry sponsored by the United States National Library of Medicine (www.clinicaltrials.gov);
2. the International Standard Randomized Controlled Trial Number Registry (www.controlled-trials.com);
3. the Cochrane Renal Group Registry (http://www.cochrane-renal.org);

The trial registry number must be included in the manuscript and provided on submission.

Randomised Controlled Trials (RCTs) must adhere to the CONSORT statement, (CONsolidated Standards Of Reporting Trials) and submissions must be accompanied by a completed CONSORT checklist (uploaded as a related manuscript file). Further information can be found at www.consort-statement.org.

Springer Nature endorses the toolkits and guidelines produced by the Committee on Publication Ethics (COPE): http://publicationethics.org/

Research Data Policy
We strongly encourage that all datasets on which the conclusions of the paper rely should be available to readers. We encourage authors to ensure that their datasets are either deposited in publicly available repositories (where available and appropriate) or presented in the main manuscript or additional supporting files whenever possible. Where one does not exist, the information must be made available to referees at submission and to readers promptly upon request. Any restrictions on material availability or other relevant information must be disclosed in the manuscript’s Methods section and should include details of how materials and information may be obtained.

Please see the journal’s guidelines on Research Data policy here.

Reproducibility
As of March 2016, Cell Death & Differentiation requires authors of original research papers that are sent for external review to include in their manuscripts relevant details about several elements of experimental and analytical design. This initiative aims to improve the transparency of reporting and the reproducibility of published results, focusing on elements of methodological information that are frequently poorly reported. Authors being asked to resubmit a manuscript will be asked to confirm that these elements are included by filling out a checklist that will be made available to the editor and reviewers.

Plagiarism
Plagiarism is when an author attempts to pass off someone else’s work as his or her own. Duplicate publication, sometimes called self-plagiarism, occurs when an author reuses substantial parts of his or her own published work without providing the appropriate references. Minor plagiarism without dishonest intent is relatively frequent, for example, when an author reuses parts of an introduction from an earlier paper.

Springer Nature is a member of Similarity Check (formerly CrossCheck), a multi-publisher initiative used to screen published and submitted content for originality. Cell Death & Differentiation uses Similarity Check to detect instances of overlapping and similar text in submitted manuscripts. To find out more about CrossCheck visit https://www.crossref.org/services/similarity-check/

If a case of plagiarism comes to light after a paper is published, the Journal will conduct a preliminary investigation, utilising the guidelines of the Committee on Publication Ethics. If plagiarism is proven, the Journal will contact the author’s institute and funding agencies as appropriate. The paper containing the plagiarism may also be formally retracted or subject to correction.

Permissions
If a table or figure has been published before, the authors must obtain written permission to reproduce the material in both print and electronic formats from the copyright owner and submit it with the manuscript. This follows for illustrations and other materials taken from previously published works not in the public domain. The original source should be cited in the figure caption or table footnote. Permission to reproduce material can usually be obtained through the Copyright Clearance Center.

Informed Consent
Publication of identifiable images from human research participants (or a parent or legal guardian for participants under the age of 16 years) must be accompanied by a statement attesting that the authors have obtained consent to publication of the images. If the participant is deceased, consent must be sought from the next of kin of the participant. In all such instances, all reasonable measures must be taken to protect patient anonymity. Black bars over the eyes are not acceptable means of anonymization. In certain cases, the journal may insist upon obtaining evidence of informed consent from authors. Images without appropriate consent must be removed from publication.

Data Fabrication & Falsification
Falsification is the practice of altering research data with the intention of giving a false impression. This includes, but is not limited to, manipulating images, removing outliers or “inconvenient” results, or changing, adding or omitting data points. Fabrication is the practice of
inventing data or results and recording and/or reporting them in the research record. Data falsification and fabrication call into question the integrity and credibility of data and the data record, and as such, they are among the most serious issues in scientific ethics.

Some manipulation of images is allowed to improve them for readability. Proper technical manipulation includes adjusting the contrast and/or brightness or colour balance if it is applied to the complete digital image (not parts of the image). The author should notify the Editor in the cover letter of any technical manipulation. Improper technical manipulation refers to obscuring, enhancing, deleting and/or introducing new elements into an image. See Image Integrity & Standards below for more details.

Misconduct
Springer Nature takes seriously all allegations of potential misconduct. As a member of the Committee on Publication Ethics (COPE), Cell Death & Differentiation will follow the COPE guidelines outlining how to deal with cases of suspected misconduct. As part of the investigation, the journal may opt to do one or more of the following:

- suspend review or publication of a paper until the issue has been investigated and resolved;
- request additional information from the author, including original data or images or ethics committee or IRB approval;
- make inquiries of other titles believed to be affected;
- forward concerns to the author’s employer or person responsible for research governance at the author’s institution;
- refer the matter to other authorities or regulatory bodies (for example, the Office of Research Integrity in the US or the General Medical Council in the UK); or
- submit the case to COPE in an anonymized form for additional guidance on resolution.

Please note that, in keeping with the journal’s policy of the confidentiality of peer review, if sharing of information with third parties is necessary, disclosure will be made to only those Editors who the Editor believes may have information that is pertinent to the case, and the amount of information will be limited to the minimum required.

Image Integrity and Standards
Images submitted with a manuscript for review should be minimally processed (for instance, to add arrows to a micrograph). Authors should retain their unprocessed data and metadata files, as editors may request them to aid in manuscript evaluation. If unprocessed data is unavailable, manuscript evaluation may be stalled until the issue is resolved.

A certain degree of image processing is acceptable for publication, but the final image must correctly represent the original data and conform to community standards. The guidelines below will aid in accurate data presentation at the image processing level:

- Authors should list all image acquisition tools and image processing software packages used. Authors should document key image-gathering settings and processing manipulations in the Methods section.
- Images gathered at different times or from different locations should not be combined into a single image, unless it is stated that the resultant image is a product of time-averaged data or a time-lapse sequence. If juxtaposing images is essential, the borders should be clearly demarcated in the figure and described in the legend.
- Touch-up tools, such as cloning and healing tools in Photoshop, or any feature that deliberately obscures manipulations, is to be avoided.
- Processing (such as changing brightness and contrast) is appropriate only when it is applied equally across the entire image and is applied equally to controls. Contrast should not be adjusted so that data disappear. Excessive manipulations, such as processing to emphasize one region in the image at the expense of others (for example, through the use of a biased choice of threshold settings), is inappropriate, as is emphasizing experimental data relative to the control.

For gels and blots, positive and negative controls, as well as molecular size markers, should be included on each gel and blot – either in the main figure or an expanded data supplementary figure. The display of cropped gels and blots in the main paper is encouraged if it improves the clarity and conciseness of the presentation. In such cases, the cropping must be mentioned in the figure legend.

- Vertically sliced gels that juxtapose lanes that were not contiguous in the experiment must have a clear separation or a black line delineating the boundary between the gels.
- Cropped gels in the paper must retain important bands.
- Cropped blots in the body of the paper should retain at least six band widths above and below the band.
- High-contrast gels and blots are discouraged, as overexposure may mask additional bands. Authors should strive for exposures with gray backgrounds. Immunoblots should be surrounded by a black line to indicate the borders of the blot, if the background is faint.
- For quantitative comparisons, appropriate reagents, controls and imaging methods with linear signal ranges should be used.

Microscopy adjustments should be applied to the entire image. Threshold manipulation, expansion or contraction of signal ranges and the altering of high signals should be avoided. If ‘pseudo-colouring’ and nonlinear adjustment (for example ‘gamma changes’) are used, this must be disclosed. Adjustments of individual colour channels are sometimes necessary on ‘merged’ images, but this should be noted in the figure legend. We encourage inclusion of the following with the final revised version of the manuscript for publication:

- In the Methods section, specify the type of equipment (microscopes/objective lenses, cameras, detectors, filter model and batch number) and acquisition software used. Although we appreciate that there is some variation between instruments, equipment settings for critical measurements should also be listed.
- The display lookup table (LUT) and the quantitative map between the LUT and the bitmap should be provided, especially when rainbow pseudo-colour is used. It should be stated if the LUT is linear and covers the full range of the data.
• Processing software should be named and manipulations indicated (such as type of deconvolution, three-dimensional reconstructions, surface and volume rendering, ‘gamma changes’, filtering, thresholding and projection).
• Authors should state the measured resolution at which an image was acquired and any downstream processing or averaging that enhances the resolution of the image.

Cell Line Authentication
If human cell lines are used, authors are strongly encouraged to include the following information in their manuscript:

• the source of the cell line, including when and from where it was obtained,
• whether the cell line has recently been authenticated and by what method, and
• whether the cell line has recently been tested for mycoplasma contamination.

Further information is available from the International Cell Line Authentication Committee (ICLAC). We recommend that authors check the NCBI database for misidentification and contamination of human cell lines.

Sequences, Structures and “Oomics”
Papers reporting protein or DNA sequences and molecular structures will not be accepted without an accession number to Genbank/EMBL/GenBank, ProteinDataBank, or other publicly available database in general use in the field that gives free access to researchers from the date of publication.

Authors of papers describing structures of biological macromolecules must provide experimental data upon the request of Editor if they are not already freely accessible in a publicly available database such as ProteinDataBank, Biological Magnetic Resonance Databank, or Nucleic Acid Database.

Human and Other Animal Experiments
Research involving human subjects, human material, or human data must have been performed in accordance with the Declaration of Helsinki and must have been approved by an appropriate ethics committee. A statement detailing this, including the name of the ethics committee and the reference number where appropriate, must appear in all manuscripts reporting such research.

For primary research manuscripts reporting experiments on live vertebrates and/or higher invertebrates, the corresponding author must confirm that all experiments were performed in accordance with relevant guidelines and regulations. The manuscript must include in the Supplementary Information (methods) section (or, if brief, within of the print/online article at an appropriate place), a statement identifying the institutional and/or licensing committee approving the experiments, including any relevant details regarding animal welfare, patient anonymity, drug side effects and informed consent. Sex and other characteristics of animals that may influence results must be described. Details of housing and husbandry must be included where they are likely to influence experimental results. Cell Death & Differentiation recommends following the ARRIVE reporting guidelines when documenting animal studies.

For experiments involving human subjects, authors must identify the committee approving the experiments, and include with their submission a statement confirming that informed consent was obtained from all subjects.

Gene Nomenclature
Authors should use approved nomenclature for gene symbols, and use symbols rather than italicized full names (Ttn, not titin). Please consult the appropriate nomenclature databases for correct gene names and symbols. Approved human gene symbols are provided by HUGO Gene Nomenclature Committee (HGNC), www.genenames.org, mouse symbols are provided by The Jackson Laboratory, www.informatics.jax.org/mgihome/nomen, and other model organism databases (Flybase, Wormbase, Yeast database). For proposed gene names that are not already approved, please submit the gene symbols to the appropriate nomenclature committees as soon as possible, as these must be deposited and approved before publication of an article.

Biosecurity Policy
The Editor may seek advice about submitted papers not only from technical reviewers but also on any aspect of a paper that raises concerns. These may include, for example, ethical issues or issues of data or materials access. Occasionally, concerns may also relate to the implications to society of publishing a paper, including threats to security. In such circumstances, advice will usually be sought simultaneously with the technical peer-review process. As in all publishing decisions, the ultimate decision whether to publish is the responsibility of the editor.

Peer Review
Manuscripts sent out for peer review are evaluated by at least one independent reviewer (often two or more). Authors are welcome to suggest independent reviewers to evaluate their manuscript, as well as request individuals or laboratories. All recommendations are considered, but it is at the Editor’s discretion their choice of reviewers. To expedite the review process, only papers that seem most likely to meet editorial criteria are sent for external review. Papers judged by the editors to be of insufficient general interest or otherwise inappropriate are rejected promptly without external review. The editors then make a decision based on the reviewers’ evaluations:

• Accept, with or without editorial revisions.
• Revise, with the author addressing concerns raised by the reviewers before a final decision is reached.
• Reject, but indicate to the authors that further work might justify a resubmission.
- **Reject outright**, typically on grounds of specialist interest, lack of novelty, insufficient conceptual advance or major technical and/or interpretational problems.

**Anonymity and Confidentiality**

Editors, authors and reviewers are required to keep confidential all details of the editorial and peer review process on submitted manuscripts. Unless otherwise declared as a part of open peer review, the peer review process is confidential and conducted anonymously. All details about submitted manuscripts are kept confidential and no comments are issued to outside parties or organizations about manuscripts under consideration or if they are rejected. Editors are restricted to making public comments on a published article’s content and their evaluation.

Upon accepting an invitation to evaluate a manuscript, reviewers must keep the manuscript and associated data confidential, and not redistribute them without the journal’s permission. If a reviewer asks a colleague to assist in assessing a manuscript, confidentiality must be ensured and their names must be provided with the journal with the final report.

We ask reviewers not to identify themselves to authors without the editor’s knowledge. If they wish to reveal their identities while the manuscript is under consideration, this should be done via the editor; if this is not practicable, we ask authors to inform the editor as soon as possible after the reviewer has revealed their identity. Our own policy is to neither confirm nor deny any speculation about reviewers’ identities, and we encourage reviewers to adopt a similar policy.

We deplore any attempt by authors to confront reviewers or try to determine their identities. Reviewers should be aware that it is our policy to keep their names confidential and that we do our utmost to ensure this confidentiality. We cannot, however, guarantee to maintain this confidentiality in the face of a successful legal action to disclose identity.

Regardless of whether a submitted manuscript is eventually published, correspondence with the journal, referees’ reports, and other confidential material must not be published, disclosed, or otherwise publicised without prior written consent.

**Selecting Peer Reviewers**

Reviewer selection is critical to the publication process, and we base our choice on many factors, based on expertise, reputation, and specific recommendations. A reviewer may decline the invitation to evaluate a manuscript where there is a perceived conflict of interest (financial or otherwise).

**Communication with the Media**

Material submitted must not be discussed with the media. We reserve the right to halt the consideration or publication of a paper if this condition is broken. If a paper is particularly newsworthy, the press release will be sent to our list of journalists in advance of publication with an embargo that forbids any coverage of the manuscript, or the findings of the manuscript, until the time and date clearly stated. Authors whose papers are scheduled for publication may also arrange their own publicity (for instance through their institution’s press offices), but they must strictly adhere to our press embargo and are advised to coordinate their own publicity with our press office.

**Communication Between Scientists**

We do not wish to hinder communication between scientists. We ask you to communicate with other researchers as much as you wish, whether on a recognized community preprint server, by discussion at scientific meetings or by online collaborative sites such as wikis, but we do not encourage premature publication by discussion with the press (beyond a formal presentation, if at a conference).

**Content Sharing**

In order to aid the dissemination of research swiftly and legally to the broader community, we are providing all authors with the ability to generate a unique shareable link that will allow anyone to read the published article. If you have selected an Open Access option for your paper, or where an individual can view content via a personal or institutional subscription, recipients of the link will also be able to download and print the PDF.

As soon as your article is published, you can generate your shareable link by entering the DOI of your article here: [http://authors.springernature.com/share](http://authors.springernature.com/share)

We encourage you to forward this link to your co-authors, as sharing your paper is a great way to improve the visibility of your work. There are no restrictions on the number of people you may share this link with, how many times they can view the linked article or where you can post the link online. More information on Springer Nature’s commitment to content sharing is available [here](http://authors.springernature.com/share).

**Pre- and Post-Submissions**

Authors are welcome to post pre-submission versions or the original submitted version of the manuscript on a personal blog, a collaborative wiki or a recognized preprint server (such as [ArXiv](http://arxiv.org) or [bioRxiv](http://biorxiv.org)).

Preprint posting is not considered prior publication and will not jeopardize consideration at *Cell Death & Differentiation*. Preprints will not be considered when determining the conceptual advance provided by a study under consideration at *Cell Death & Differentiation*. Authors posting preprints are asked to respect our policy on communications with the media.

Our policy on posting and citation of preprints of primary research manuscripts is summarized below:

- The original submitted version of the manuscript (the version that has not undergone peer review) may be posted at any time. Authors should disclose details of preprint posting, including DOI, upon submission of the manuscript to the journal.

Revised 11/02/2019
• For subscription journals, the Author’s Accepted Manuscript (authors’ accepted version of the manuscript) of the manuscript may only be posted 6 months after the paper is published, consistent with our self-archiving embargo. Please note that the Author’s Accepted Manuscript may not be released under a Creative Commons license. For our Terms of Reuse of archived manuscripts please click here.

• For subscription journals, the published PDF must not be posted on a preprint server or any other website. However, authors are encouraged to obtain a free SharedIt link of their paper, which can be posted online and allows read-only access. SharedIt links can be obtained by submitting the published article DOI at http://authors.springernature.com/share

• Preprints may be cited in the reference list as below:


If you have posted a preprint on any preprint server, please ensure that the preprint details are updated with a publication reference, including the DOI and a URL to the published version of the article on the journal website.

For subscribed content, the author accepted version of the manuscript, following the review process, may only be posted 6 months after the paper is published in a Springer Nature journal, consistent with our self-archiving policy. A publication reference and URL to the published version on the journal website must be provided on the first page of the postprint. The published version — copyedited and in the individual Springer Nature journal format — may not be posted on any website or preprint server.

For open access content published under a creative commons license, authors can replace the submitted version with the final published version at publication as long as a publication reference and URL to the published version on the journal website are provided.

**Correction and Retraction Policy**

Corrections to published articles should be requested directly through the Editorial Office at cell.death.differentiation@uniroma2.it. All requests for corrections will be assessed to our Editors to see if they qualify based on the following two criteria: 1) if the error impacts the indexing of the article; and 2) if the error impacts the scientific integrity of the article. Decisions about corrections are made by the Editor (sometimes with peer-reviewers’ advice) and this sometimes involves author consultation. Requests to make corrections that do not affect the paper in a significant way or impair the reader’s understanding of the contribution (a spelling mistake or grammatical error, for example) are not considered. Corrections will appear as a new article (with its own DOI) and will bi-directionally link to the original article. Updates to the original article are only allowed in exceptional cases.

Content published as Advance Online Publication (AOP) is final and cannot be amended. The online and print versions are both part of the published record hence the original version must be preserved and changes to the paper should be made as a formal correction. If an error is noticed in an AOP article, a correction should accompany the article when it publishes in print. An HTML (or full-text) version of the correction will also be created and linked to the original article. If the error is found in an article after print publication the correction will be published online and in the next available print issue.

Please note the following categories of corrections to print and online versions of peer reviewed content:

- **Correction.** Notification of an important error made by the journal or by the author that affects the publication record or the scientific integrity of the paper, or the reputation of the authors, or of the journal.

- **Retraction.** Notification of invalid results. Where a paper is retracted, a statement will be published that includes a full justification for the retraction. The original article will be marked as retracted, but remain available to readers.

- **Editorial Note of Concern:** Where significant issues have been raised, but the outcome of an official investigation is delayed, the editors may publish a note of concern to alert readers.

In cases where co-authors disagree about a correction/retraction, the editors will take advice from independent peer-reviewers and impose the appropriate correction, noting the dissenting author(s) in the text of the published version.

**Authorship Corrections**

Any changes to the author list after submission, such as a change in the order of the authors or the deletion or addition of authors, must be approved by all authors and a Change of Authorship form is required. Journal editors are not in a position to investigate or adjudicate authorship disputes before or after publication.
**IMAGE DO’S & DON’TS**

**Do’s & Don’ts**

1. **Do NOT** use *excessive contrast*, removing the background or part of the image.

2. **Do NOT** adjust the *brightness or contrast* only in specific areas of the image. If necessary, apply the same appropriate adjustments to the ENTIRE image.

3. **Indicate** splicing of lanes and **provide** the full scan as supplementary data. Images from different experiments, gels or exposures CANNOT be spliced into a single image.

4. **Do NOT** overcrop gels. Mark unknown or cross-reactive bands with an asterisk.

5. **Do NOT** remove any part of the image, including spots and background.

6. **Always include** original molecular weight markers.

7. All microscopy MUST INCLUDE an appropriate scale bar. All digital images (gels, microscopy, etc.) MUST have a resolution of at least 300 dpi.
**Do’s & Don’ts**

Show independent data points, rather than using bar graphs. Show means of replicates as a single point, not each replicate. Don’t show error bars or p-values when N<10. If error bars are shown, describe them in the legend. Start axes from zero (except for log axes). Use different symbols for sets of independent biological repeated experiments. Include spread-sheet data in supplementary materials.

**2. Graphs**

In the LEGEND:
Indicate N; define size bars
If they are shown, describe error bars: SEM/SD/CI/other. Where N<10, plot data points, no need include error bars. If p is shown, indicate test.

In the SUPPLEMENT:
Authors’ contribution
Panel authorship
KEEP ORIGINAL RECORDS/IMAGES FOR minimum 10 YEARS