

### General Formatting Guidelines

- Manuscripts must be written in concise English.  
Grammar and spelling errors will be graded unfavorably by reviewers.
- Use Arial font size 11 for all text, references, and supplemental data files.  
Specialized symbols and fonts are permissible when necessary.
- Use Arial font size 9 for all Figure captions, Table titles, and Table contents.  
Specialized symbols and fonts are permissible when necessary.
- Use double line spacing.
- Include line and page numbering.
- Use SI units: Please ensure that all special characters used are embedded in the text, otherwise they will be lost during conversion to PDF.
- Do not use page breaks in your manuscript.

### Specific File Format

- The following word processor file formats are acceptable for the main manuscript document:
  - Microsoft word (DOC, DOCX)
  - Rich text format (RTF)
  - TeX/LaTeX (use BioMed Central's TeX template)
- All manuscript files (text, figures, tables, etc.) must be submitted as editable files. If your submission is accepted and it includes any non-editable files (such as PDFs), you will be notified to re-submit an editable file.
- Figures must be submitted as separate files, not as part of the submitted manuscript file.

## Additional information for TeX/LaTeX users

Please use BioMed Central's TeX template and BibTeX stylefile if you use TeX format. Submit your references using either a bib or bbl file. When submitting TeX submissions, please submit both your TeX file and your bib/bbl file as manuscript files. Please also convert your TeX file into a PDF (please do not use a DIV file) and submit this PDF as a supplementary file with the name 'Reference PDF'. This PDF will be used by our production team as a reference point to check the layout of the article as the author intended. Please also note that all figures must be coded at the end of the TeX file and not inline.

The Editorial Manager system checks for any errors in the TeX files. If an error is present then the system PDF will display LaTeX code and highlight and explain the error in a section beginning with an exclamation mark (!).

For efficient and timely publication, all relevant editable source files must be uploaded during the submission process.

TeX template: Use the template provided by [BioMed Central](#)

## Style and Language

For editors and reviewers to accurately assess the work presented in your manuscript you need to ensure the English language is of sufficient quality to be understood. If you need help with writing in English you should:

Consult a colleague or hire someone who is a native English speaker to review your manuscript. 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. One such service is [American Journal Experts](#).

Disclaimer: CTOR PRESS and INNOVATION have no financial interest in nor any affiliation with this company. Therefore, authors are advised to carefully consider the services offered by American Journal Experts, or any similar company, before paying for their services.

Please note that the use of a language editing service is not a requirement for publication in INNOVATION. We do not ask if such service has been used. Therefore, using such a company does not imply or guarantee that your manuscript will be selected for peer review or accepted for publication.

# Figures

## Preparing Figures

- Submit each figure in a single graphic file. Do not embed figures in the main manuscript file.
- Figure titles and captions must be provided in the main manuscript after the References. Do not include the Figure title and caption in the graphic file.
- Figure keys (e.g. magnification, ruler, etc.) must be incorporated into the image.
- Each figure (whether single panel or multi-panel) must fit on a single page in portrait format.
- Do NOT submit tables as figures. All tables must be included in the main manuscript file.
- Figures must be numbered in the order they are first mentioned in the text. Figure files must be named uploaded in this order.
- Figures must be uploaded in the correct orientation.
- Crop each figure to minimize or eliminate white space surrounding the image.
- Individual figure files must not exceed 10 MB, regardless of the format selected.
- If using figures or tables previously published in a non-open access journal, the author(s) are responsible for obtaining permission from the copyright holder to reproduce each figure or table. Permission should be indicated in the figure or table caption, and the original source included in the reference list. If a previously published figure or table is from an open access journal, full attribution must be made in the figure or table caption, and the original source included in the reference list.

## Figure File Types

EPS (suitable for diagrams and/or images)

PDF (suitable for diagrams and/or images)

Microsoft Word (suitable for diagrams and/or images, figures must be a single page)

PowerPoint (suitable for diagrams and/or images, figures must be a single page)

TIFF (suitable for images)

JPEG (suitable for photographic images only)

CDX (ChemDraw - suitable for molecular structures)

## Figure size and resolution

- Figures are resized during publication of the final full text and PDF versions to conform to the BioMed Central standard dimensions, as follows:

### **Figures on web sites:**

width of 600 pixels (standard), 1200 pixels (high resolution).

### **Figures in the final PDF version:**

width of 85 mm for half page width figure

width of 170 mm for full page width figure

maximum height of 225 mm for figure and legend

image resolution of approximately 300 dpi (dots per inch) at the final size

- Figures should be designed such that all information, including text, is legible at these dimensions. All lines should be wider than 0.25 pt when constrained to standard figure widths. All fonts must be embedded.

## Figure file compression

- Vector figures should be submitted as PDF files (if possible), which are usually more compact than EPS files.
- TIFF files should be saved with LZW compression, which is lossless (decreases file size without decreasing quality) in order to minimize upload time.
- JPEG files should be saved at maximum quality.
- Conversion of images between file types (especially lossy formats such as JPEG, which eliminate information with each compression) should be kept to a minimum to avoid degradation of quality.

# Tables

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- Tables should be numbered and cited in the text in sequence using Arabic numerals (i.e. Table 1, Table 2 etc.).
- Tables less than one A4 or Letter page in length can be placed in the appropriate location within the manuscript.
- Tables larger than one A4 or Letter page in length can be placed at the end of the document text file. Please cite and indicate where the table should appear at the relevant location in the text file so that the table can be added in the correct place during publication.
- Larger datasets, or tables too wide for A4 or Letter landscape page can be uploaded as Supplemental Data.
- Tabular data provided as Supplemental Data can be uploaded as an Excel spreadsheet (.xlsx) or comma separated values (.csv). Please use the standard file extensions.
- Table titles and captions should be included above the table.
- Tables should not be embedded as figures or spreadsheet files. Tables must be formatted using the 'Table' function in your word processing program.
- Do not use color or shading in your table. Superscript numbering, lettering, symbols or bold text may be used and the meaning of each must be explained in the table caption.
- Commas should not be used to indicate numerical values (e.g. 100000 rather than 100,000).

# References

- All available works can be cited in the reference list. Acceptable sources include:
  - Published or accepted manuscripts
  - Manuscripts on preprint servers, providing the manuscript has a citable DOI or preprint server URL (e.g., arXiv, bioRxiv). For details on our Pre-Publication Policy.
- Do not cite the following sources in the reference list:
  - Unavailable and unpublished data. Authors should not refer to this work as “unpublished work” or “data not shown”. Instead, include these data as Supplemental Data or deposit the data in a publicly available database.
  - Personal communications. These can be included in the text and should be supported by a letter from the relevant authors. However, these should not be included in the reference list.
- References are listed at the end of the manuscript and numbered in the order that they appear in the text. In the text, cite the reference number in square brackets. For example:

We assessed bone volume using an algorithm we previously published [19].
- References are listed using the numbered citation (citation-sequence) method and first six authors, et al. format.
- Do not include citations in the Abstract.

## Formatting References

- INNOVATION uses the reference style outlined by the International Committee of Medical Journal Editors (ICMJE), also referred to as the “Vancouver” style. Example formats are listed below. Additional examples are in the [ICMJE sample references](#).
- Journal name abbreviations should be those found in the [National Center for Biotechnology Information \(NCBI\) databases](#).

Source	Format
Published articles	<p>Guo Y, Tang CY, Man XF, Tang HN, Tang J, Wang F, et al. Insulin receptor substrate-1 time-dependently regulates bone formation by controlling collagen 1a2 expression via miR-342. <i>FASEB J.</i> 2016; 30(12):4214-26.</p> <p>Wolfson B, Zhang Y, Gernapudi R, Duru N, Yao Y, Lo PK, et al. A high-fat diet promotes mammary gland myofibroblast differentiation through microRNA 140 downregulation. <i>Mol Cell Biol.</i> 2017; 37(4):pii:e00461-16. Doi: 10.1128/MCB.00461-16.</p> <p>Note: A DOI number for the full-text article is acceptable as an alternative to or in addition to traditional volume and page numbers.</p>
Accepted, unpublished articles	Same as published articles, but substitute “In press” for page numbers or DOI.
Web sites or online articles	Children’s food environment state indicator report, 2011. Available from: <a href="https://www.cdc.gov/obesity/downloads/ChildrensFoodEnvironment.pdf">https://www.cdc.gov/obesity/downloads/ChildrensFoodEnvironment.pdf</a>
Books	Bilezikian JP, Raisz LG, Martin TJ. <i>Principles of Bone Biology.</i> 3rd ed. Cambridge, MA: Academic Press. 2008.
Book chapters	Alansari S, Teixeira CC, Sangsuwon C, Alikhani M. Introduction to micro-osteoperforations. In: Alikhani M, editor. <i>Clinical guide to accelerated orthodontics: with a focus on micro-osteoperforations.</i> Cham, Switzerland, Springer; pp. 33-42. 2017.
Deposited articles (preprints, e-prints, BioRxiv or arXiv)	Armstrong E. An optimization method for estimating functional connectivity and electrophysiology within a biological neuronal network. Available from: arXiv:1711.03834. Cited Nov 17 2017.
Published media (print or online newspapers and magazine articles)	Gussone F. America’s obesity epidemic reaches record high, new report says. <i>NBC News.</i> Oct 13 2017. Available from: <a href="https://www.nbcnews.com/health/health-news/america-s-obesity-epidemic-reaches-record-high-new-report-says-n810231">https://www.nbcnews.com/health/health-news/america-s-obesity-epidemic-reaches-record-high-new-report-says-n810231</a> . Cited Nov 17 2017.
New media (blogs, web sites, or other written works)	Kane C. New threats of Zika infection and complications with pregnancy. In: <i>Foundation for Biomedical Research Blog.</i> May 31 2017. Available from: <a href="https://fbresearch.org/new-threats-zika-infection-complications-pregnancy/">https://fbresearch.org/new-threats-zika-infection-complications-pregnancy/</a>
Masters’ theses or doctoral dissertations	Wallis AM. TRAF3 as a regulator of T lymphocyte activation. PhD Thesis, University of Iowa 2017. Available from: <a href="https://ir.uiowa.edu/cgi/viewcontent.cgi?article=7351&amp;context=etd">https://ir.uiowa.edu/cgi/viewcontent.cgi?article=7351&amp;context=etd</a>
Databases and repositories (Figshare, BioRxiv, arXiv)	Freyria FS, Cordero JM, Caram JR, Doria S, Dodin A, Chen Y, et al. Near-infrared quantum dot emission enhanced by stabilized self-assembled J-aggregate antennas. Nov 17 2017. Database: figshare [Internet]. Available from: <a href="https://figshare.com/articles/Near-Infrared_Quantum_Dot_Emission_Enhanced_by_Stabilized_Self-Assembled_J_Aggregate_Antennas/5612752">https://figshare.com/articles/Near-Infrared_Quantum_Dot_Emission_Enhanced_by_Stabilized_Self-Assembled_J_Aggregate_Antennas/5612752</a>
Multimedia (videos, movies, or TV shows)	Davis G. The truth about protein & what to do about it. <i>Proteinaholic.</i> Plant based diet. Video. Inspire Nation. Feb 18 2017. Available from: <a href="https://www.youtube.com/watch?v=izALZTv7GMA">https://www.youtube.com/watch?v=izALZTv7GMA</a>

# Supplemental Data

As the length and quantity of data is not restricted for INNOVATION articles, authors can submit datasets, tables, movies, or other information as Supplemental Data.

All Supplemental Data files will be published along with the accepted manuscript. Do not include files such as patient consent forms, certificates of language editing, or revised versions of the main manuscript document with tracked changes. Such files, if requested, should be sent by email to INNOVATION's Editorial email address ([innovation@ctor.press](mailto:innovation@ctor.press)), quoting the manuscript reference number in the Subject line.

Authors must not use “data not shown” in the main manuscript. Instead, “data not shown” must be included as Supplemental Data. Data submitted in Supplemental Data must adhere to INNOVATION's [Publishing](#) and [Editorial](#) Policies. All Supplemental Data files will be virus-scanned on submission. Each Supplemental Data file should be named, cited and uploaded in the sequence they appear within the main manuscript.

## General Guidelines

- Supplemental Data is limited to data and other materials that substantively support the main conclusions or models presented in the manuscript, but are considered additional or secondary support.
- Supplemental Data must be within the conceptual scope of the manuscript.
- The quality and presentation of Supplemental Data should be equal to that in the manuscript, as it will be held to the same scientific standards.

## Format

- Files appear online alongside the relevant article in the form in which they are sent (or are converted to PDF files if sent as Word documents). Although Supplemental Data files are styled by the Editorial Team, no additional editorial work is carried out on these files once an article is accepted. You should therefore ensure that the text is as accurate as possible and is consistent with the manuscript (e.g., with respect to gene nomenclature, compound terminologies, taxonomic nomenclature, etc.).
- Supplemental Data must be a “stand-alone” document (e.g., references should not follow on from those in the article itself). If possible, authors must ensure that all elements of the Supplemental Data are included in one file only (e.g., embed figures in the Word document so that they sit alongside the relevant caption or point of citation). The layout of text files containing figures is not altered by the typesetters.



- If you are submitting video or audio files, provide a short description of each. This text will appear online as a caption alongside the link to the Supplemental Data file.
- Include the manuscript title and author names at the top of the Supplemental Data, preceded by Supplemental Data as shown below:  
Supplemental Data  
Role of cAMP signaling in osteoblast differentiation in CREM null mice.  
Allison K. Miller, Gregory A. Hammond, and William F. Jenkins  
Department of Skeletal and Molecular Bone Biology, Southwest American University, 250  
Longwood Ave, Phoenix, AZ 85006, USA  
  
Correspondence: wf.jenkins@swau.edu (WF Jenkins)
- Each type of Supplemental Data should be continuously numbered independent of the numbering of figures and tables in the manuscript (example: Figure S1, Figure S2; Table S1, Table S2; Movie S1, Movie S2, etc.). Authors should order the Supplemental Data files according to the main figures or tables to which each relates.
- Supplemental Data file names should make it clear which main figure they are most related to (examples: Figure S1, related to Figure 1; Movie S1, 3D image of Arabidopsis flower, related to Figure 1).
- All Supplemental Data files, including Supplemental figures, movies, and tables, should have legends that briefly describe the data presented.
- Cite each Supplemental Data file in the manuscript at least once. They should also be cited at the end of the legend of the main figure or table to which they are linked (i.e., “see also Online Supplemental Data Figure S1”). The following information will be added automatically between the Acknowledgments and the References sections of the manuscript in the final version as follows:  
Supplemental Data  
Supplemental Data associated with this article can be found at doi:XXXXXXX
- In tables, references should be cited in numbers, in square brackets, in a separate column. Any tables should be styled according to the manuscript style.
- Literature citations (even if already listed in the main article) should be listed again at the end of the Supplemental Data as Supplemental Data References and numbered with S1, S2, etc. Please note that, as references in Supplemental Data do not contribute toward citation measures for those papers, authors are encouraged, when possible, to include references in the main body of the paper.
- References should be listed in order of citation, not alphabetically, with one reference per number and should follow our Reference Guidelines

## Submission of Supplemental Data Files

Provide Supplemental Data Files as follows:

- Supplemental Figures and Legends, Tables, and References: Provide a single Word file that contains all supplemental figures and legends, descriptions for video or audio files, tables, and references (in this order).
- The types of Supplemental Data files and their preferred formats are as follows:
  - Text files (e.g., text, embedded figures, tables, reference lists): Word (please note that these are converted to PDF files for the final version).

### Multimedia Files (Movies, Audio Clips, etc.)

We accept .mp4 files. Please note that we cannot accept movie files that require the reader to download particular codecs; the files must be playable on computers with standard media players such as QuickTime or Windows Media Player. To create high-quality files with maximum compression, the following specifications are recommended:

- Frame rate: 15 frames per second minimum
- NTSC (4:3) size and frame rate, deinterlaced
- Video codec: MPEG2 or MPEG4 (MPEG4 preferred)
- Video bitrate: at least 260 Kbps (750 Kbps preferred)
- Audio codec: MP3 vbr
- Audio bite: at least 70 Kbps (128 Kbps preferred)