

## *Quantitative Biology*

### INSTRUCTIONS FOR AUTHORS

#### General information

**Quantitative Biology** (QB) is a quarterly journal seeking to provide an inter- and multi-disciplinary forum for a broad blend of peer-reviewed academic papers in order to promote rapid communication and exchanges between scientists in the East and the West. It covers all branches of systems biology, synthetic biology, bioinformatics and computational biology to reflect the significant advances in quantitatively investigating and modeling natural as well as engineered life system at the molecular and higher levels. The journal especially encourages original papers that aim at coupling novel theory with cutting-edge experiments, especially in newly emerging and multi-disciplinary areas of research and development. The journal also welcomes high quality reviews and perspective articles.

Submissions of the following types are invited:

- **Research Article:** Substantial novel research study, with a complex story often involving several techniques or approaches
- **Review:** Comprehensive overviews of recent developments in a research field with comprehensive depth, balanced perspective, intellectual insight, and broad general interest.
- **Mini Review:** Topics of current interest and recent developments in a specific field.
- **Perspective:** A viewpoint discusses current advances and future directions on a specific field or subfield, which may advocate a controversial position or a speculative hypothesis
- **Letter:** Important novel research result, but is less substantial than an Research Article

Papers that have been reviewed, if the authors choose, may be submitted with previous reviews and decision letters. This allows for accelerated review.

When a manuscript is submitted, the Editors assume that no similar paper has been or will be submitted for publication elsewhere. Further, it is understood that all authors listed on a manuscript have agreed to its submission. Upon acceptance, authors must transfer copyright to Higher Education Press.

#### Editorial policies

All research articles are subject to strict peer review organized by the journal, who will select two reviewers with relevant expertise. Should a split recommendation occur between the two reviewers, a third reviewer may be selected at the Editor or the Board member's discretion. Final acceptance or rejection decision resides in the Editor-in-Chief/Associate Editors of Quantitative Biology. In general, the review process takes up to three months from the date of submission, and the Editors will make every effort to reach a decision on a manuscript within this timeline. If revisions are required for further consideration for publication, we generally allow three months for revisions and only one round of revisions will be considered.

## **Submission requirements**

### **Cover letter**

A cover letter from the corresponding author must accompany the manuscript and should provide a brief description of what was known in the field, the conceptual breakthrough, and the significant impact of the reported findings. The authors are encouraged to suggest appropriate reviewers and are permitted to make request for up to three reviewer exclusions. Cover letter should state that the submitted material is original research, has not been previously published, and has not been submitted elsewhere while under review by *Quantitative Biology*. The cover letter is confidential and will not be sent to the reviewers.

### **Manuscript components**

Manuscript should be arranged in the following order:

- (a) Title section (including Title, Running Title, Authors, Author Affiliations, and Correspondence).
- (b) Abstract.
- (c) Introduction.
- (d) Results.
- (e) Discussion.
- (f) Materials and Methods.
- (g) Acknowledgements.
- (h) Compliance with Ethics Guidelines.
- (i) References.
- (j) Figure legends and table legends.
- (k) Figures.
- (l) Tables.
- (m) Supplemental materials.

Text components of the manuscripts (a-j) should be prepared with Microsoft Word in double space and size 10 Times New Roman font, with all pages numbered. Tables should be prepared in Microsoft Word with single space. Figures (k) should be uploaded individually (through online submission system) or converted to PDF format (if submitted by email).

## Research article format

### Text

· **Title** The title should be informative and concise, and not longer than 150 characters (including space). It should describe the topic of the manuscript in terms understandable to a broad readership in either a complete sentence or a phrase.

· **Running title** The running title that describes the key meaning of the paper should be within 80 characters (including space).

· **Authors** Authors should be listed in full names, beginning with the given name, and followed by the family name. Affiliations (including department/subunit, institution, city, state/region, postal code and country) should be provided for each author. If the authors are affiliated to different units, the affiliation sequence should be in the same order of author list, marked at the right upper corner of the author names using 1, 2, 3, etc. Corresponding author's name, full postal address, telephone and fax numbers and e-mail address need to be provided.

· **Abstract** A short summary (within 250 words) written in one paragraph, clearly indicating the objectives, the key methods, major results and their significance. Extensive experimental detail and reference should be avoided.

· **Introduction** It mainly includes the following parts: the background of the research through literature citation, the problems or questions needed to be solved, the objectives of the research, and the main methods used.

· **Results** Results can be described using text, tables and figures. The text should complement material given in Tables and/or Figures but should not directly repeat it. Please give full details of statistical analysis either in the text or in Tables and/or Figure legends. Please include the type of test, the precise data to which it was applied, the value of the relevant statistics, the sample size and/or degrees of freedom, and the probability level.

· **Discussion** The main purpose of the Discussion is to comment on the significance of the results and set them in the context of previous work. Hypothesis should be rational and evidence-based. Please avoid repeating information in the Results section.

· **Materials and methods** Methods must be described completely enough so that other laboratories can replicate results and verify claims. Generally, standard procedures should be referenced, though significant variations should be described. Appropriate experimental design and statistical methods should be applied and described wherever necessary for proper interpretation of data and verification of claims. All novel materials and procedures should be described in sufficient detail to allow their reproduction (e.g., DNA constructs, genetic stocks, enzyme preparations, and analytical software).

- **Acknowledgements** A list of contributions, credits, potential conflicts of interests, and previous presentation of the information reported in the manuscript.

- **Abbreviations** Abbreviations used in the text should be defined. However, some common names, such as GTP, RNA, PBS, PCR may not be defined. All nomenclature, including gene names and symbols, should be used in a scientifically accurate manner following the nomenclature conventions adopted by the scientific community.

- **Figure/Table legends** Every figure should contain a title, and the figure legend should follow the title closely. Figure legends should provide enough information to make the figures understandable without frequently referring to the text. Do not describe methods in figure legends unless they are necessary to interpret the results conveyed by the figure. Define in the legend all symbols and abbreviations that are used in the figure.

- **References** The references section should include all printed/online journal articles, books and book chapters, published conference proceedings, and meeting abstracts. Please cite unpublished data (including submitted manuscripts), personal communications, statistical packages, computer programs and web sites in text only. Accession numbers may be cited either within the text or in the form of a reference. All the references should be cited in the text by sequential number only, in order of appearance, and listed numerically in the References section. All authors' names (up to ten) should be quoted. Where the list of authors is extensive it is acceptable to list the first 10 authors followed by et al. Full titles of journal articles should be provided. Please refer to the following examples:

1. Schmitt, E., Panvert, M., Blanquet, S. and Mechulam, Y. (1995) Transition state stabilisation by the 'high' motif of class I aminoacyl-tRNA synthetases: the case of *Escherichia coli* methionyl-tRNA synthetase. *Nucleic Acids Res.*, 23, 4793–4798.
2. Huynh, T. V., Young, R. A. and Davies, R. W. (1988) Constructing and screening cDNA libraries in lambda<sub>gt</sub>10 and lambda<sub>gt</sub>11. In Glover, D. M. (ed.), *DNA Cloning — A Practical Approach*. Oxford: IRL Press, Vol. 1, 49–78.
3. Maniatis, T., Fritsch, E. F. and Sambrook, J. (1982) *Molecular Cloning: A Laboratory Manual*. Cold Spring Harbor, NY: Cold Spring Harbor Laboratory Press.
4. Burnett, R. C. (1993) EMBL accession no. X52486.
5. Capaldi, S., Getts, R. C. and Jayasena, S. D. (2000) Signal amplification through nucleotide extension and excision on a dendritic DNA platform. *Nucleic Acids Res.*, 28, e21.
6. Qiao, D., Chen, W., Stratagoules, E. and Martinez, J. (2000) Bile acid-induced activation of activator protein-1 requires both extracellular signal-regulated kinase and protein kinase C signaling. *J. Biol. Chem.*, 10.1074/jbc.M908890199.
7. Bernhagen, J., Elkin, B., Geiger, G., Tovar, G. and Vitzthum, F. (1999) Patent DE-198198889.2-44; PCT/WO/EP/99/03047.

## Tables and Figures

• **Tables** Tables should be practically self-contained and self-explanatory. All tables should be cited in the text and numbered consecutively with Arabic numerals. Label each table at the top with an Arabic numeral followed by the table title. Insert explanatory material and footnotes below the table. Designate footnotes using lowercase superscript letters (a, b, c) reading horizontally across the table. Abbreviations that are used in a table should be defined in the footnotes. Please prepare the tables in MS Word with a single-space format. Do not embed tables as graphic files, document objects, or pictures.

• **Figures** Figures (graphs, charts, photographs, and illustrations) should be practically self-explanatory and labeled professionally. Dimensional drawings and diagrams should include only the essential details and as little lettering as possible. The magnification for micrograph should be indicated by scale bars, inscriptions should be legible, and the symbols and letters should be consistent among the panels.

Please make sure that the letters, labels and symbols are in proportion to the figure and are easily readable after the figures are reduced to printable size. For example, the final text should be at least 2 mm in size and the graph lines should be at least 0.5 pt in weight. We recommend that all graphs are submitted in the intended publication size.

The options include:

- 1 column width: 3.3 inches (8.4 cm)
- 2 column width: 6.7 inches (17 cm)
- Maximum height: 9 inches (23.0 cm)

Figures should be prepared in a publication quality resolution. The minimal resolution is:

- color images – 300 dpi. Color figures must be supplied in CMYK not RGB colors.
- grayscale images and line drawing – 600 dpi
- screen – 72 dpi.

Each figure (with one or more panels) can be submitted individually through online submission system, which will automatically convert the figures to PDF format for review purpose and keep the original files for publication. To ensure the quality, we recommend TIFF or EPS file types for illustrations. If a single PDF file containing multiple figures is submitted, each figure should occupy a single page and the figure number should be indicated. However, original files will be requested upon acceptance. We cannot accept MS Powerpoint or MS Word file for figures.

• **Cover figures** Authors are encouraged to submit color figures to be considered for the cover figures of *Quantitative Biology*. Such figures must be related to the manuscript they accompany. Potential cover figures should be uploaded as separate files during the online submission of a manuscript.

## Supplemental Materials

Supplemental materials that are directly related to the conclusion are welcomed. However, unrelated data may be removed by editors. Depending on the nature of supplemental materials, they can be in

plain text, MS Word, MS Excel, JPEG, TIFF, video, et al. We encourage authors to submit supplemental documents in PDF format if applicable.

## **Compliance with Ethics Guidelines**

All authors should declare any Conflict of Interest in details. So each author individually by name must declare any potential Col, or declare that s/he does not have any Col. General collective statements like “The authors declare that there is no Conflict of Interest” is NOT sufficient.

Authors must also state that they conformed with the Helsinki Declaration of 1975, as revised in 2000 (5) concerning Human and Animal Rights, and that they followed out policy concerning Informed Consent as shown on Springer.com.

In order to comply with the ethical requirements, the following sentences should be included in a separate section of each article just before the reference list. The section should be called “**Compliance with Ethics Guidelines**”.

### **Conflict of Interest:**

The Conflict of Interest statements should list each author separately by name:

*John Smith declares that he has no conflict of interest.*

*Paula Taylor has received research grants from Drug Company A.*

*Mike Schultz has received a speaker honorarium from Drug Company B and owns stock in Drug Company C.*

If multiple authors declare no conflict, this can be done in one sentence:

*John Smith, Paula Taylor, and Mike Schultz declare that they have no conflict of interest.*

### **Human and Animal Rights, and Informed Consent:**

#### **For studies with human subjects include the following:**

*All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000 (5). Informed consent was obtained from all patients for being included in the study.*

If doubt exists whether the research was conducted in accordance with the Helsinki Declaration, the authors must explain the rationale for their approach, and demonstrate that the institutional review body explicitly approved the doubtful aspects of the study.

If any identifying information about patients is included in the article, the following sentence should also be included:

*Additional informed consent was obtained from all patients for which identifying information is included in this article.*

#### **For studies with animals include the following sentence:**

*All institutional and national guidelines for the care and use of laboratory animals were followed.*

#### **For articles that do not contain studies with human or animal subjects performed by any of the authors:**

While it is not absolutely necessary, we recommend to include the following sentence, just to make sure that readers are aware that there are no ethical issues with human or animal subjects:

*This article does not contain any studies with human or animal subjects performed by any of the authors.*

## **Copyright transfer**

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## **Submission**

Please submit your complete manuscript to *Quantitative Biology* editorial office through online submission system, <http://mc.manuscriptcentral.com/qb>.

We do not charge submission/publication fee for 2013 issues. Color figures, if considered essential for comprehension of research work, will be accepted and published for free.

## **Language assistance**

Authors who are not native English speakers may appreciate assistance with grammar, vocabulary, and style. This can improve the accuracy and facilitate the communication with other scientists and reviewers. Some companies provide revising, editing, and proofreading services for scientific and medical research documents are listed:

<http://www.biosciencewriters.com>

<http://www.prof-editing.com>

<http://www.editage.cn>

<http://www.scientrans.com>

<http://www.bioedit.co.uk>

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