

## **Biomedical Chemistry: Research and Methods**

### ***INSTRUCTIONS FOR AUTHORS***

***Russian speaking authors must use the Russian version of "Author Guidelines".***

The open access journal “Biomedical Chemistry: Research and Methods” publishes papers on all aspects of biomedical chemistry and related fields, including molecular and cellular biology, omix disciplines (genomics, transcriptomics proteomics, metabolomics, bioinformatics), enzymology, biochemical pharmacology, clinical biochemistry. Special attention is paid to methodological problems and detailed description of the methods used in particular studies is an important element of the published works. This helps readers to reproduce a method of interest in their laboratories.

**Accepted papers are published in the following Sections:**

#### **Reviews**

(a) Reviews of own research results

This type of reviews summarizes results of own research. Materials can include both previously published material (with the obligatory citing of primary sources), but also new unpublished data.

(b) Literature reviews.

Such works can be published only if authors provide a new viewpoint on the considered problem.

(c) Reviews of modern methods of biomedical research

Methodical articles on the use of a wide range of methods and their modifications in application to the problems of biomedical chemistry and case studies. Own methods and modifications

should be described in details. All data confirming the work of the methods should be easily accessible or given in Supplementary materials.

#### (d) Meta-analysis of data

This section includes description of data collection obtained as a result of a series of experimental works, linked by a single goal and protocols of work of interest to the scientific community, available on public depositories or in the form of Supplementary materials. The data should be presented in full, both in the original form, and additionally in the form of analytical materials, without cuts and arbitrary correction. The protocols of experiments should be described clearly and comprehensively, it is very important to provide an explanation of the motivation in case of deviation from the standard procedure.

### **Experimental protocols, useful models, programs and services**

The works published in this section provide the opportunity for researchers to use freely available models, programs or service in their research in the field of biomedical chemistry in the most convenient way. Data verifying the quality of the information provided should be easily available or given in Supplementary materials. The works, characterized by originality, ease of use and, most importantly, the usefulness of development for potential users are especially welcome.

### **Experimental studies**

This section publishes results of classical experimental and computational studies. However, the computational works should provide a concrete practical result, useful for the scientific community, and, if possible, tested in biochemical and other experiments. The data obtained (used) in the study should be easily accessible or given in Supplementary materials.

### **Clinical studies**

Only completed studies performed using modern techniques approved in contemporary medical science are accepted for consideration and publication. Preference is given to results of multidisciplinary studies involving a large arsenal of methods from related fields and analyzing representative data sets. Supplementary materials should contain described all the data obtained during the work for each observation.

**General information:**

Papers written in Russian and/or English and relevant for particular journal sections are accepted for publication. Authors can submit both parallel versions of the article in Russian and English.

In the latter case, the following information has to be submitted in both languages:

- (i) the title of the submitted paper, the list of authors with full affiliations and addresses,
- (ii) a summary and a list of keywords;
- (iii) all the captions to the figures and tables are provided.

If neither of authors do not speak Russian, the editors can translate metadata from English into Russian.

The volume of the manuscripts depends on the section in which the publication is planned. Reviews are limited by 15000 words, regular papers should not exceed 7500, and the average length of short communications should be 2000-3000 words. In the list of references authors should avoid to use conference abstracts. The only exceptions are made for conference abstracts within one year after publications and also for abstracts that have DOI.

Authors may provide Supplementary materials necessary to accompany data presented in the submitted paper, which help better understanding of major achievements and conclusions of the paper. Materials will be available at the journal Website. Supplementary materials containing texts, tables, and figures should be provided in English. Supplementary materials will appear in an unedited form (as submitted by authors).

Preparing papers for the sections “Experimental Studies” and “Clinical Studies”, authors should follow the IMRAD structure [Sollaci, L. B., & Pereira, M. G. (2004). The introduction, methods, results, and discussion (IMRAD) structure: a fifty-year survey. *Journal of the Medical Library Association*, 92(3), 364–371]. In the “Reviews” and “Experimental Protocols, Useful Models, Programs and Services” sections, paper subdivision into sections is more optional; however, it is strongly recommended to use the “Introduction” section.

The Journal reserves the right to shorten articles regardless of their size. Submission of an article for publication in the journal Biomedical Chemistry: Research and Methods implies that the authors agree with the published rules.

#### Manuscripts submission and Instructions for authors

Articles are submitted electronically exclusively through the journal website (<http://www.bmc-rm.org>). The E-mail address ([bmcrm@ibmc.msk.ru](mailto:bmcrm@ibmc.msk.ru)) is for editorial communications and articles sent to this address will not be considered.

During article submission via the electronic system authors should download:

1. Archive with the materials of the article. Only files archived with the ZIP archiver are accepted. The archive should contain:

a. The text of the article for review. Acceptable formats are “MS WORD”, “RTF” or “PDF” (preferred). This file should contain all materials of the article, and the figures and tables should be located in the text next close to the place of their first mention. This file is provided for the convenience of reviewers.

b. Files with article materials suitable for further processing and layout. The composition of the files and file formats are described below.

2. Archive with supplementary materials. The archive should contain:

a. A ZIP archive containing all the files of the supplementary materials, including a file with a description of the data for each file submitted. Please note that file sizes transferred to the system are limited to 50 megabytes. You can download multiple archives. However, if file sizes significantly exceed 50MB, it is recommended to consult with the editors about alternative ways file uploading.

b. A letter to the editor. The article should be accompanied by a scanned version of the letter, signed by all authors, which states that this material has not been previously published and not sent to other journals. Acceptable formats are “JPEG” and “PDF.” Letters from authors who do not speak Russian can be written in English.

*The composition of files containing materials of the submitted paper*

The names of files in the archive should be formed as follows. Only Latin letters and numbers and the underscore "\_" should be used in file names. The file name is formed from the prefix, which is used as the name and initials of the author submitting the article, and the year of manuscript submission. For example, "IvanovAA2018". This is followed by the symbol "\_" and description of materials in the file (e.g. "IvanovAA2018\_text" is the file with the text of the paper, "IvanovAA2018\_figure1" - figure 1, "IvanovAA2018\_table2" - table 2, "IvanovAA2018\_response ToReviewer" - answers to the comments of the reviewer). If the document has options in both Russian and English, then it ends with addition of "-rus" or "-eng".

Acceptable formats for text files and tables are "MS WORD" and "RTF". For Figures: - "PNG" (preferential), "TIFF" and "JPG" (for photos, and under conditions of low compression).

The double spaced text should be printed using "Times New Roman" (font size 12). If there is a need to use a fixed font, it is recommended to use "Curier New". The text should be arranged as follows:

1. Title page:

1.1. Title should be concise and informative.

1.2. Author names and affiliations. Present the authors' affiliation addresses (where the actual work was done) below the names. Provide the full postal address of each affiliation, and e-mail address of corresponding author.

1.3. Key words (not more than six) separated from each other with semicolon.

2. Summary from 100 to 300 words describing major goals of the study and main results.

Other sections of the manuscript include:

3. INTRODUCTION

4. MATERIALS AND METHODS

5. RESULTS

6. DISCUSSION

## 7. COMPLIANCE WITH ETHICAL STANDARDS

## 8. ACKNOWLEDGMENTS

## 9. FUNDING

## 10. SUPPLEMENTARY MATERIALS

## 11. REFERENCES

12. Captions for figures and tables. Authors may insert in the main text in the form of a separate line indication, where to place a table or figure (see example below).

The section COMPLIANCE WITH ETHICAL STANDARDS is required for all articles except reviews.

If the study has been performed using animal species as research object, then it is necessary to indicate the ethical standards. For example:

“The animal studies have been carried in accordance with International, national and/or institutional/local guidelines for the care and use of animals”

In the case of human research the following information is needed:

1. “All procedures carried out in the human study comply with the ethical standards of the institutional and/or national research ethics committee and the Helsinki Declaration of 1964 and its subsequent changes or comparable standards of ethics.” Approval of the study by Institutional Ethics Committee requires Protocol number and date.
2. Informed voluntary consent was obtained from each of the participants in the study.

If the work is not related to human and animal studies this should be also stated:

"This article does not contain any research involving humans or using animals as objects."

### **Guidelines for text preparation**

- Abbreviations used in the article should be deciphered at first mention in the text. Standard symbols of amino acids, nitrogen bases, nucleosides, nucleotides, written in Latin letters, for

example, Ala (alanine), G (guanine), dA (deoxyadenosine), AMP, ADP, ATP, NAD, NADH, NADP, NADPH, do not require decoding. It is recommended to provide a list of abbreviations.

- In the MATERIALS AND METHODS Section describe in details all the methods used: electrophoresis conditions, chromatography, centrifugation (the rate expressed in units of gravity (g) or rpm, provided the type of centrifuge and rotor are indicated). Alternatively, a detailed description of the techniques can be presented as additional materials, leaving the article highlights mainly at methodological changes that differ from the original method described in a particular literature reference.
- References should be given as numbers in square brackets assigned in the **order** of their appearance in the text.
- All formulas, physical, mathematical symbols, and equations must be typed in the form of Microsoft Equation objects. It is necessary to avoid the mixed use of Russian and Latin indices, the indices should be explained. Mathematical formulas should be placed on a separate line and numbered. The reference in the text to the formula should be in parentheses. If mathematical symbols are used in the text, they should be presented as Greek symbols.
- All chemical formulas and reaction schemes should be prepared in the form of figures (“PNG” format).
- The article should use the physical units and designations adopted in the International System of Units of SI, as well as the relative atomic masses based on the <sup>12</sup>C scale. Names of chemical compounds should be given using the IUPAC terminology.
- Concentrations of substances in solutions should be given in M, mM, μM, nM, etc.
- The list of references follows the APA style (American Psychological Association). All references are given only in English. In the absence of the English version, transliteration is required according to ISO 9 (GOST 7.79-2000).

Examples of references:

a. articles:

Fleischmann, G., Fisette, O., Thomas, C., Wieneke, R., Tumulka, F., Schneeweiss, C., Springer, S., Schäfer, L.V., Tampé, R. (2015) Mechanistic Basis for Epitope

Proofreading in the Peptide-Loading Complex. *J. Immunol.*, 195(9), 4503-4513.  
DOI:10.4049/jimmunol.1501515

b. books and chapters:

Gavrilova, S. I., Seleznyova, N. D., Roshchina, I. F., Fedorova, Y. B., Rannaya diagnostika bolezni Alzgeimera na dodementnoistadii i preventivnaja terapiya., in *Neirodegenerativnye zabolevaniya*, Ugryumov, M. V., Editor. 2014, Nauchny Mir: Moskow. p. 95-123.

c. web-documents other than scientific papers:

WHO. Dementia. Retrieved December 12, 2017, from: <http://www.who.int/news-room/fact-sheets/detail/dementia>

d. patents:

printed version:

Irwin, M. D., Lovelace, J., & Mielczarek, K. (2018). *Australian Patent No. AU 2018204249*. Canberra, ACT: IP Australia.

online version

Botura, G. C., Wilson, T. M., & Hartzler, B. (2018). *European Patent No. EP3331317*. Retrieved from <https://www.epo.org/application?number=EP17205218>

e. abstracts:

Baskin, I. I., Halberstam, N. M., Artemenko, N. V., Palyulin, V. A., & Zefirov, N. S. (2003). *EuroQSAR 2002. Designing Drugs and Crop Protectants: Processes, Problems and Solutions*. ISBN: 978-1405125161 (or DOI:XX.XXXX/XXXXXXXXXX)

Abstract are considered as references only if they have been published within one year before manuscript submission and if such reference has a DOI.

- Preparing figures, it should be assumed that the minimum horizontal size of the figure (excluding chemical formulas) is 600 pixels. The maximum size is 1200 pixels. If the figure contains many small elements, then a maximum size of up to 1600 pixels is applicable. All the inscriptions in different figures should be of comparable sizes. For diagrams and schemes it is preferable to use the format "PNG". For photos JPEG is a preferable format. Figures may be also submitted in the "TIFF" format. In order to adequately display in the PDF version of the article, all pictures should be easily readable under the following conditions: a horizontal print size not more than 9 cm for a picture of 600 pixels horizontally, or 18 cm for a picture of 1200 pixels.
- Illustrations and tables copied from other publications may be given only with the permission of their right holders, unless otherwise indicated in the original publication.

- Files containing Supplementary materials and their description should be provided during initial submission of the manuscript. The description file (an example of the name IvanovAA2018\_suplement.rtf) is provided in a format compatible with MS WORD and should contain the names of individual application files with a brief description (no more than 2-3 lines, if a more detailed description is required, it should be placed as a separate PDF file).

Example:

1. IvanovAA2018\_supplementary1.tiff. A full size photo of 2D electrophoresis shown in Figure 3.
2. IvanovAA2018\_supplementary2.pdf. A complete list of identified proteins obtained by blood plasma analysis.

Files should be archived using the ZIP archiver (e.g. file name IvanovAA2018\_supplementary.zip).

Supplementary files are published in the unedited author version and the journal is not responsible for errors made by the authors in the Supplementary materials.

### **Preparation of revised version of the manuscript**

All changes (corrections, additions, etc.) made to the initially submitted material according to the comments of reviewers or a scientific editor should be highlighted in yellow in the text.

Simultaneously with the corrected material, it is mandatory to provide a letter-response to the comments.

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