

## INSTRUCTIONS TO AUTHORS

The Editorial Board accept for publication original experimental works; reviews in urgent problems of biochemistry; methodical works with a description of new or improved methods of biochemical investigations; papers in the history of biochemical science which elucidate the evolution of ideas, formation and development of scientific schools or are dedicated to creative portraits of researchers; the discussion papers; new books reviews; news items. *The Ukrainian Biochemical Journal* also publishes the works from various sections of related sciences, that is: cell and molecular biology, bioorganic chemistry, biophysics, pharmacology, genetics, and medicine (medical biochemistry) which were performed with the use of biochemical methods and with discussions of the data obtained in biochemistry.

### Ethics of publication

*The Ukrainian Biochemical Journal* follows the internationally accepted principles of publication ethics recommended by the Committee on Publication Ethics (COPE), International Committee of Medical Journal Editors (ICMJE), European Convention for the protection of vertebrate animals used for experimental and other scientific purposes (Strasbourg, 1986) as well as "Bioethical expertise of preclinical and other scientific researches conducted on animals" (Kyiv, 2006).

When reporting experiments on animals, authors should indicate whether recommendations (international, national and/or institute) for the care and use of animals have been followed and that the studies have been approved by a local Committee in Bioethics (where such a committee exists).

When reporting studies that involve human participants, authors should indicate that the studies have been approved by the appropriate institutional and/or national research Ethics Committee and have been performed in accordance with the Declaration of Helsinki and its later amendments or comparable ethical standards. A manuscript should include a statement that informed consent was obtained for experimentation from all participants.

The Editorial Board, authors and reviewers should adhere to ethical standards to ensure a high quality of scientific publications and transparency in research and to avoid scientific misconduct (misrep-

resenting of research results, plagiarism). To prevent the violations of publication ethics the conflict of interests should be prevented. When authors submit a manuscript, they are responsible for disclosing financial relationships (e.g., research grants from funding agencies, sponsor support, patents) and non-financial relationships (e.g., personal relationships) that might bias their work.

The Editors may reject the manuscript if it does not comply with the norms mentioned-above.

### Manuscripts preparation and submission

#### *Requirements for manuscript submission in brief:*

- The work is original and has not been published before.
- It corresponds to the journal scope and level.
- It has a structure and formatting as required below.

The following materials should be sent to e-mail: editor@biochem.kiev.ua:

- A full text manuscript including a summary in English and Ukrainian, tables, figures with legends in order of their citing in the paper, references, paginated from the first to the last page and signed by all the authors on the last page.
- Figures, photographs, schemes may be black-and-white or color. Color pictorial material is preferred. Figures should be presented in separate files in any of these formats: Tif, bmp, wmf, gif, jpg, eps or pdf. For example, Fig1.jpg, Fig2.tif or Fig3.bmp.
- Each table should have a title and a number. All table columns should have brief headings. The notes are placed directly below the tables.
- No more than 6 figures are presented for reviews and experimental papers; no more than 4 – for brief notes. Graph axes on Figures should be appropriately labeled. If the graph contains more than one curve, they should be distinguished by numbers, solid and dotted lines or special symbols. Clarifications of each label should be provided in the figure legend.
- If figures published by other authors are used in the paper, the manuscript author should present the official permission from the copyright owner to use those figures.

- The License Agreement on copyright transfer to the journal signed by all the authors on the last page (a scanned copy is acceptable). The Licence Agreement comes into force after the paper is taken for publication.

- Conflict of interest form (see below).

- Information about authors (surname, first name, father's name of each author, their posts, scientific degrees and titles, telephone (with city code) place of work and post address of organization for all authors in the English, Ukrainian languages, e-mail. The corresponding author's name should be indicated with his contact (work and mobile) telephone.

- The date of receiving the manuscript is the date of the manuscript receipt.

### Manuscript size, formatting and structure

The experimental work, including references, tables, figures with legends should not exceed 20 pages A4 (40 000 printed characters), the review – 30 pages (60 000 printed characters). The text type is Times New Roman type (type size 14, tables – type size 10; line spacing – 1.5).

#### *The manuscript structure*

- UDC (Universal Decimal Classification)
- The paper title
- The authors' surnames and initials
- Complete names of institution where the work

has been done

- E-mail for correspondence
- Summary and keywords
- Introduction
- Materials and methods
- Results and discussion
- Conclusions
- Acknowledgments
- Data on financial support
- Conflict of interest
- References

- **The paper title** should be short (no more than 10 words), informative, corresponding with article content and without abbreviations.

- **All authors** of a paper should be specified under its title, and their names should be transliterated using one of conventional international transliteration systems. Where there are more than one author and they have different affiliations, each of these affiliations should be specified separately in a footnote, using Arabic numerals as footnote indicators.

### • Summary

Summary (no more than 250 words in Ukrainian and English) should be properly organized and briefly describe the scientific work. The summary should include following elements: relevance of work, purpose, methods, results, conclusions, keywords (up to 10 words).

### • Introduction (without title)

The introductory part provides a background for the study (the nature of the problem and its significance) with the pertinent references on previous works and states the specific purpose of the research.

### • Materials and Methods

This section contains the description of the methods, reagents and experiment conditions in such a way that other researchers be able to reproduce the results. The procedure should be described in detail only if it is new, if it is only modified, it is appropriate to mention the principle and the authors of the generally known method. The names of the suppliers of the main equipment and reagents producers, including country name, should be indicated.

The Methods section should include a statement indicating that the research was approved by an independent local, regional or national review body (e.g., ethics committee, institutional review board). The number of experimental animals, as well as the methods of anaesthetization and euthanasia, should be defined.

The full binomial names for experimental animals, plants, microorganisms and the source of the material should be given. Italicized Binomial Latin names should be indicated for microorganisms, single letter abbreviation may be given for the generic name. Alternatively, a strain number (not italicized) could be used. If two genera with the same initial letters are studied, abbreviations such as *Str. lactis* *Staph. lactis* are given.

In biomedical studies clearly describe the selection of observational or experimental participants (healthy individuals or patients, including controls), including eligibility and exclusion criteria and a description of the source population.

The International System of Physical Units (SI) is preferred. The recommendation of the International Union of Biochemistry should be followed for abbreviations and symbols.

The systematic name of enzymes should be given according to the recommendations of the Nomenclature Committee of the International

Biochemical Society (Enzyme Nomenclature, 1992, Acad. Press. San Diego. California and Supplement (1-6) in Eur. J. Biochem. (1993-1997, 1999) or electron version: <http://www.chem.qmul.ac.uk/iubmb/enzyme>.

There are two common ways to describe the molecular mass. *Molecular weight*, or *relative molecular mass* is defined as the ratio of the mass of a molecule of that substance to one-twelfth the mass of carbon  $^{12}\text{C}$ , is denoted  $M_r$  and has no associated units. *Molecular mass* is defined as the mass of one molecule divided by Avogadro's number, is denoted  $m$  or  $M.m.$  and is expressed in daltons (Da).

The SI unit for the rate of the enzymatic reaction is 1.0 mol of substrate transformed per sec (or 1.0 mol of product formed per sec). By international agreement 1.0 unit of enzyme activity is defined as the amount of enzyme causing transformation of 1.0  $\mu\text{mol}$  of substrate per min at 25 °C under optimal conditions of measurement. Units of enzyme amount should be defined in terms of the rate of the reaction catalyzed under specified conditions and may be expressed in  $\mu\text{mol}$  of transformed substrate/min or arbitrary units (a.u.)/min. Specific enzyme activity is usually expressed in  $\mu\text{mol}$  of transformed substrate/min per 1.0 mg of protein.

The author should describe statistical methods with enough details to judge its appropriateness for the study and data reproducibility. The information is adequately given by the number of independent experiments, the mean value ( $M$ ), the standard deviation (SD) or the standard error. The program used for statistical analysis, the statistical software package(s) and versions used should be specified. The statistical significance of the observed differences could be analyzed by t-test or ANOVA.

#### • Results and Discussion

Present your results in logical sequence in the text, tables, and figures. Do not repeat in the text all the data presented in the tables or figures, emphasize or summarize only the most important observations and explain the logical links between the described experiments.

Most of the discussion should be devoted to results interpretation. It is useful to begin with briefly summarizing the main findings and explore possible mechanisms or explanations for these findings. Emphasize the new and important aspects of your research. Do not repeat in detail information given in the introduction or results section.

#### • Conclusions (without title)

Link the conclusions with the goals of the study and avoid statements not adequately supported by the data. New hypothesis if warranted and clearly presented could be stated.

#### • Acknowledgments

All contributors who are not entitled to authorship should be listed in Acknowledgments. Their contributions in performing experiments or in preparation of the manuscript should be specified.

If the research was supported by funding agencies, the authors should indicate the research funder and the grant number.

#### • Conflict of interest

All authors should clearly declare any conflicts of interest (financial, consultant, institutional or personal relationship, academic competition) by filling out the Conflict of Interest form [http://ukrbiochemjournal.org/wp-content/uploads/2018/12/coi\\_disclosure.pdf](http://ukrbiochemjournal.org/wp-content/uploads/2018/12/coi_disclosure.pdf)

#### • References

The authors should provide direct references to original research sources. References should be numbered (in square brackets) in the order in which they are first mentioned in the text. Recent publications of fundamental importance should prevail in the list of references.

Do not use conference abstracts, PhD thesis abstracts or papers accepted but not yet published as references.

It is recommended to use up to 20 references in the experimental work, and up to 100 – in the review article.

Authors are completely responsible for the references correctness.

### Examples of References

1. Maksymchuk OV, Bezdrobna LK, Sidorik LL, Kiseleva OK, Chaschyn MO. Cytochrome P450 2E1 expression in mice liver under exposure of continuous and acute  $\gamma$ -radiation. *Ukr Biokhim Zhurn.* 2008; 80(4): 59-65. (In Ukrainian).
2. Kibirev VK, Osadchuk TV, Kozachenko OP, Kholodovych V, Fedoryak OD, Brovarets VS. Synthesis, biological evaluation and docking of novel bisamidinohydrazones as NON-peptide inhibitors of furin. *Ukr Biochem J.* 2015; 87(1): 55-63.
3. Lugovskoy EV. The Molecular Mechanisms of Fibrin Formation and Fibrinolysis. K.: Nauk. Dumka, 2003. 219 p. (In Russian).
4. Demchenko A. P. Introduction to Fluorescence Sensing / Springer. – 2nd ed. 2015, XXXI, 794 p.
5. Liu Q, Ponnuraj K, Xu Y, Ganesh VK, Sillanpaa J, Murray BE, Narayana SVL, Hoo M. The Enterococcus faecalis MSCRAMM ACE binds its ligand by the Collagen Hug model. *J Biol Chem.* 2007; 282: 19629-19637.
6. Hindorff LA, MacArthur J, Morales J, Junkins HA, Hall PN, Klemm AK, Manolio TA. A Catalog of Published Genome-Wide Association Studies. Available at <http://www.genome.gov/gwastudies> (accessed, September, 2012).