
DIRECTIONS FOR AUTHORS

The Editorial Board takes to press original **experimental works**; **surveys** 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**. Ukrainian Biochemical Journal («Ukrains'kyi Biokhimichni Zhurnal») also publishes the works from various sections of relative sciences, that is: cell and molecular biology, bioorganic chemistry, biophysics, pharmacology, and genetics which were performed with the use of biochemical methods and with discussions of the data obtained in biochemistry .

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- A manuscript identical to the paper version (the file should be titled in English with the name of the first author of the paper, e.g., Petrenko.doc). Format for text files and tables – document MS Word (doc, dox or rtf).

- Figures, photographs, schemes may be black-and-white or colour. Colour pictorial material is preferred. File format tif, bmp, wmf, gif, jpg, eps or pdf. For example, Fig1.jpg, Fig2.tif or Fig3.bmp. Tables should be given with titles and consecutive numbers. All columns in tables should have denominations and filled with corresponding data.

- No more than 6 figures are presented for surveys and experimental papers; no more than 4 – for brief notes. Each figure and tables are presented as a separate file. Figure legends are not included in the figure, they are also presented separately.

- 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.

Bioethical norms

The journal is oriented to directions recommended by European Convention on Protection of Vertebrata used for research and other scientific purposes (Strasbourg, 1986), to directions of International Committee of Medical Journals Editors (ICMJE), as well as “Bioethical expertise of preclinical and other scientific researches conducted on animals” (Kyiv, 2006). All procedures which describe experiments with the use of laboratory animals, any works with the use of materials obtained from humans or

donors, and/or patients should be conducted being guided by the norms of bioethics. When describing experiments with animals, it is necessary to indicate what recommendations (national, institutional) concerning the work with animals should be followed when performing the above procedures. If it is impossible to follow the particular norms, the author should substantiate the protocol change with its approval by the local Committee in Bioethics and define the corresponding changes in the section Materials and Methods.

The manuscript design

Attention! The Directions of design being violated, the paper is not take to publication

General requirements to manuscripts

The experimental work volume, including references, tables, figures with legends explaining obtained results (all on separate pages), should not exceed 20 pages (40 000 printed characters), that of the survey 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).

Separate requirements to manuscripts design

The manuscript structure

- UDC (Universal Decimal Classification)
- The paper title
- The author's (authors') surname(s) and initials
- The Institution where the work has been done
- E-mail for correspondence
- Summary and key words
- Introduction
- Materials and methods
- Results and discussion
- Conclusions
- Acknowledgements
- Data on financial support
- References

• **Summary**

Main investigation results are revealed in Summary in three languages should be structured and, no more than 250 words, and include the following sections:

- title;
- surnames and initials of all authors;
- text of the summary includes the work urgency, purpose, methods, results, conclusions;
- keywords (no more than 10 words).

• **Introduction** (without title). The paper begins with the brief history of the problem with reference to sources and substantiation of the research objective.

• **Materials and Methods**

The section Materials and Methods should present the description of the methods, reagents and experiment conditions in such a way that the experiment could be reproduced. The methods or methodology should be describe only if they are distinguished by novelty or are of interest from the viewpoint of this work. Names of companies and countries producers of the reagents and materials used in the experiments should be given. The number and species of the used animals as well as the methods of anaesthetization and euthanasia should be defined.

Digital data should be rounded off due to the accepted rules, allowing for the average experiment error. The value difference authenticity should be substantiated by statistical analysis, citing the concrete methods. The same results should not be presented in Tables and Figures. The author should indicate the program used for statistical analysis of the obtained results, presentation of results, confidence interval or distribution of values.

All the designations and denominations of physical and chemical units of measurement should be given in SI system. Amino acids are designated by three Latin letters.

In accord with modern terminology it is expedient to use the term Enzyme (instead of ferment) and protein (instead of albumen). The enzymes being used in the work, their recommended or systematic name and cipher should be given, following recommendations of International Biochemical Society (Enzyme Nomenclature – 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>. For long-known enzymes the name and cipher may be given in accord with translated publication Enzyme Nomenclature / Ed A. E. Brownstein, Moscow, 1979. The enzyme activity should be expressed through the rate of the catalyzed reaction in μM of the transformed substrate for 1 min per 1 mg of protein. Sometimes they use two more units of enzymatic activity: standard unit of activity U (IU) and catal (cat, in brief) simplifying the transition to SI system. Specific enzyme activity is usually expressed in $\mu\text{M}/\text{min}$ per 1 mg of protein or in un.act./mg, cat/kg

(R. M. C. Dawson, D. C. Elliott, W. H. Elliott, K. M. Johns. Biochemist's Guide. – Moscow: Mir, 1991. – 543 p.). In all cases the reaction conditions are specified, i.e. temperature, pH, substrate concentration.

Solutions should be concentrated in M, mM, μ M, etc., but not in normal concentration (n.). If concentration is expressed in percent, i.e., indices mass/mass, mass/volume, volume/volume should be mentioned. Salts used for making solutions – crystalline hydrates or waterless – should be also mentioned.

A term relative molecular mass M_r (ratio between substance molecule mass to 1/12 of carbon atom C_{12}), having no size, or term molecular weight (M_w) expressed in Da (Dalton) or in kDa are used for substances characteristics.

When describing the data determined using the methods of visible or UV-absorption spectroscopy one should remember that they characterize absorption. For quantitative estimation of cell density in the suspension one should use **transparence (T)**, the scattering being accounted. In other cases the term **absorption (A)** is used, but not extinction or optical density.

If particular organisms (animals, plants, microorganisms) used in the research are mentioned for the first time, their full species name in Latin (italicized) should be given in the paper text, following modern taxonomy; under the second mentioning the genus name should be denominated by one letter, except for the cases when genus names of different organisms begin with the same letter. Then, abbreviations of several letters are used, e.g., *Staph. aureus*, *Str. lactis*.

Word abbreviations, except for generally known ones, should not be given in Tables and Figure legends (with rare exception and then their interpretation in notes is obligatory). It is not worth giving arbitrarily abbreviated words, especially if they are brief. There is no point, for example, in abbreviating such words as peroxidase, glucosidase, etc.

• Results and Discussion

In this section one should avoid the direct repetition of the table data. The result discussion should be limited by considering the most important established facts basing on preliminary data on the problem under study. In other words, the most part of the discussion should be devoted to results interpretation.

• **Conclusions** (without title) may be accompanied by recommendations, estimations, proposals described in the paper.

• References

References are composed due to the order of citing sources in the text (they are denominated by digits in square brackets) and are given at the paper end. References should include names of all authors of the paper, full title of the paper, abbreviated title of the journal, volume, periodical issue and pages. The titles of books (monographs, collected works, etc.) theses, author's synopses, author's certificates and patents should be presented in complete form. One cannot refer to non-published materials. No more than 20 titles should be cited in experimental work, about 100 titles – in the survey. Works of the recent years should prevail in references.

Authors are completely responsible for correctness of references.

Correct description of the used sources in References guarantees that the cited publication will be accounted for when determining the citing index.

Examples of References

1. Maksymchuk O. V., Bezdobna L. K., Sidorik L. L., Kiseleva O. K., Chaschyn M. O. Cytochrome P450 2E1 expression in mice liver under exposure of continuous and acute γ -radiation. *Ukr. Biokhim. Zhurn.* 2008;80(4):59-65. (In Ukrainian).
2. Parkhomenko Yu. M., Pilipchuk S. Yu., Chernysh I. Yu., Chehovskaya L. I., Stepanenko S. P., Donchenko G. V. / Proc. Intern. Symp. "The active forms of oxygen, nitrogen and chlorine in the regulation of cell functions under normal and pathological conditions". Grodno, Belarus, 2006. P. 50-55. (In Russian).
3. Lugovskoy E. V. The Molecular Mechanisms of Fibrin Formation and Fibrinolysis. K.: Nauk. Dumka, 2003. 219 p. (In Russian).
4. Liu Q., Ponnuraj K., Xu Y., Ganesh V. K., Sillanpaa J., Murray B. E., Narayana S. V. L., Hoo M. The Enterococcus faecalis MSCRAMM ACE binds its ligand by the Collagen Hug model. *J. Biol. Chem.* 2007;282:19629-19637.
5. Pat. 40767 UA, ICP G 01 N21/00. A Technique for Determination of the Antioxidant Activity of Biologically Active Compounds (BAC) / Shapoval H. S., Gromova V. P. Publ. 27.04.2009, Bul. N 8. (In Ukrainian).
6. Application for Invention, a200805004 UA, ICP8 A61K35/56, A61K31/66, A61P9/00, A61P11/00, A61P15/00. A Technique for Differentiated

Production of Physiologically Active Compositions from Tissues of Marine Mollusks Rapana / Datsenko Z. M., Komisarenko S. V., Kechun Lu (CN), Chekman I. S., Boroda A. M., Lugovska G. G., Kanivets N. V., Moiseyeva L. G., Liven Khan (CN); appl. 18.04.2008. (In Ukrainian).

7. Hindorff L. A., MacArthur J., Morales J., Junkins H. A., Hall P. N., Klemm A. K., Manolio T. A. A Catalog of Published Genome-Wide Association Studies. Available at <http://www.genome.gov/gwastudies> (accessed, September, 2012).

The manuscript is reviewed anonymously by two leading specialists in the corresponding field of biochemistry. Authors may offer candidatures of independent reviewers for their work (the Editorial Board regards such wishes with understanding),

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