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Manual of Good Research Practice at Palacký University Olomouc

Palacký University Olomouc acknowledges the principles stated in the [European Charter for Researchers](#) which provides a set of general principles and requirements specifying the responsibilities and rights of research workers and their employers. The observance of the highest standards of scientific work in preparation and implementation of the research itself and the subsequent scientific communication is an integral part of excellent research. The fundamental ethical requirements on research activities are set out in [The Code of Ethics for Employees and Students of Palacký University Olomouc](#) and [The Palacký University Ethics Committee Rules of Procedure](#). Regarding observance of the principles of good practice in research, creative activities, and education of students, Palacký University Olomouc adopts the rules and principles defined in [The Ethical Framework of Research](#), created by the Science, Research and Innovation Office of the Government of the Czech Republic and [The European Code of Conduct for Research Integrity](#).

This document aims to provide basic instructions on the tackling of practical matters related to research activity in its individual stages and prevention of possible misconduct. It is intended for all employees and students conducting research and creative activities at Palacký University Olomouc. The principles are based on the above listed codes and reflect other documents and principles of good practice based on, among other things, the specifics of the individual research fields, as well as requirements related to responsibility, openness and reproducibility of research.

1. The Basics of Good Research Practice

Research workers are obliged to follow relevant legislation, ethical rules and other principles, such as those set out by regulatory bodies, learned societies, providers of research funding and publishers. The values and norms adhered to by a researcher may be influenced by technological developments and societal changes within the research environment.

Researchers take responsibility for preventing any misconduct in their work that may pose a danger to their colleagues, human society, the environment, or material, cultural and ethical values. For this reason, it is essential to become familiar with the relevant documents, particularly the legal norms and field-specific codes related to the particular research areas (e.g. work with biological material, research involving human participants).

The ethical values and norms shall be reflected in all stages of the research process: from planning through research implementation to publication of the research. Transparency and credibility of research may only be ensured in this way.

2. Research Planning and Implementation

It is advisable for a research team to agree on the basic principles and rules of conduct already in the stage of planning and preparation of research. These specifically involve the agreement on research objectives, the schedule, financing, etc. It is important to define the roles and duties for the stage of research implementation as well as for the subsequent analysis and publication of the results. The research team shall be informed about possible conflict of interest and shall also address the handling of research data (ethical and legal aspects, etc.). In various fields, however, the form of planning, the matters addressed, and the practical execution may differ. Research workers are responsible for purposeful and efficient utilization of resources and shall not duplicate research conducted at another workplace, unless it is aimed at confirming, comparing, or complementing the results.

The basic kinds of planning tools in research are research strategies including organizational plans for data management (general principles leading to the elaboration of particular data management project plans).

Great emphasis needs to be placed on security and handling of research data obtained during the research, appropriately recorded and stored in accordance with the rules of the organization, as well as the delimitation of the competences of the individual members in the research team.

In the stage of research implementation, additional principles shall be planned and observed, such as compliance with the generally accepted correct procedures for obtaining external and internal grants, and prevention of conflict of interest when obtaining financial support. Care shall also be taken to ensure the safety of the conducted experiments, compliance with operational and laboratory regulations, protection while performing experiments, and compliance with relevant legislation, particularly while working with patients, sensitive data, animals or GMO. The respective UP norms and rules shall be observed in every individual field of research.

3. Publication and Dissemination of Results

Research activity shall be closely linked to objectivity, reliability and accuracy. When publishing their findings and research results, scientific workers shall therefore place great emphasis on their completeness, truthfulness, verifiability and objective interpretation. In this context, the most serious transgression against scientific ethics involves presenting results (research data and conclusions) obtained through dishonest research. This involves in particular fabrication of results or their distortion, i.e. falsification.

The authors are expected to be ready to take responsibility for their findings, statements and reasoning. As a result, the matter of authorship needs to be approached in an appropriate manner both formally and content-wise.

Each piece of work created as a UP employee in order to accomplish tasks arising from employment at UP, is employee work, and involves an obligation to protect and handle it in accordance with the norm [Protection of Copyright and Related Rights and Databases at Palacký University Olomouc](#). If the results of the scientific and creative activity are commercially usable (e.g. inventions, utility models, design, know-how, etc.), there is an obligation to protect the results as the industrial property of UP and proceed in accordance with the valid norms [Implementation of Industrial Property Rights at Palacký](#)

[University Olomouc](#). The procedure is clearly described in the [Guidebook](#) of the Science and Technology Park.

3.1. Authorship and Co-Authorship

Authorship of scientific publications shall precisely reflect the share of individual persons in the work and its reporting. In accordance with guidelines from the International Committee of Medical Journal Editors ([ICMJE](#)), authorship shall only be acknowledged based on fulfilment of all of the following criteria:

- 1) a substantial contribution to the strategy, conception, or design of the work or a substantial contribution to data acquisition, data analysis or result interpretation;
- 2) elaboration of a manuscript or its part, or a critical analysis of a substantial part of its content;
- 3) final approval of the version intended for publication;
- 4) a commitment to take responsibility for all aspects of the work and ensure that any questions regarding the accuracy or integrity of any part of the work are thoroughly investigated and efficiently solved.

All co-authors shall also agree on the final version of the output intended for publication; it is therefore expected that they shall be familiar with all aspects of the research work and bear responsibility for the result or the particular part they contributed to. As a result, the author is not only responsible for the particular parts of the work he/she performed, but shall also be able to determine which co-authors are responsible for the other individual parts of the work.

The UP Code of Ethics puts great emphasis on the role of the main author or corresponding author, who bears responsibility for the fulfilment of the ethical standards of the scientific work even in relation to the parts of the work created prevalently or entirely by other members of the author team, unless the nature of the errors is such that they could not be identified even when exerting maximum effort. In addition, the corresponding author guarantees the correctness of the data stated in the manuscript and all communication with the publisher.

In order to increase transparency and determination of the responsibilities of individual members in the authorial team, it is recommended that the manuscript be complemented with a description of the contributions of the individual authors to the publication, even in cases where such a description is not required by the publisher. The description is usually provided in the acknowledgements. The wording of an authorship description (authorship acknowledgement) may be as follows: *Authors A and B designed and implemented the study, including recruitment of patients, data collection and data analysis. Author A elaborated a draft of the manuscript. All the authors agreed on the final version of the manuscript.*

Some publishing houses have implemented CRediT ([Contributor Roles Taxonomy](#)), a thorough taxonomy for the common roles of the authors of the research results, into their systems for submission of manuscripts. The advantage of the taxonomy is that individual contributors may be attributed multiple roles, and a particular role can be attributed to multiple contributors. If multiple persons hold the same role, there is an option to indicate the degree of contribution to the particular role using the attributes “lead”, “equal”, or “supporting”. The contribution of the individual members of the authorial team may be described as follows: *Jan Novák: review and editing (equal). Jana*

Nováková: conceptualization (lead); writing – original draft (lead); formal analysis; writing – review and editing (equal). John Smith: methodology (supporting); writing – review and editing (equal). Peter Müller: methodology (lead); writing – review and editing (equal). Anna Kowalska: conceptualization (supporting); writing – original draft (supporting); writing – review and editing (equal).

It is recommended that the co-authors agree on the respective roles and draft their expected shares of the results already during the planning stage. It is also advisable to agree in advance on the order of authors where this aspect is part of field-specific conventions. The order of authors shall consequently reflect the overall contribution of the individual members of the authorial team to the manuscript rather than the hierarchy at the particular workplace, the relationship between a lecturer and a student, etc.

Persons not fulfilling the authorship criteria, who contributed to research or preparation of the publication output, shall be mentioned in the acknowledgements. While this also depends on field-specific conventions, it may be stated in general that e. g. acquisition of financing for research, laboratory and field work, data collection, feeding data into databases, translations, administrative work, or general supervision of a research team are not sufficient reasons for authorship.

3.2. Cases of Authorship Abuse

The most frequent examples of misconduct in relation to the authorship of a scientific work is acknowledging the individual or group whose share of the research was small or none at all, and, in contrast, omission of those who contributed to the research. The former case involves particularly the so-called gift authorship, while the latter involves ghost authorship. Both of these are cases of serious misconduct.

Gift authorship, sometimes also called honorary, guest, or complimentary authorship, is authorship attributed to a person who does not fulfil the authorship criteria. The reasons may vary: attributing authorship to more senior or well-known colleagues under the impression that it may help increase the credibility of the research team and chances for publication of the output, seeking to please colleagues or co-workers, a reward for previous help, intentions involving maintaining good relationships and expectation of future reciprocal behaviour from others, attributing authorship to superiors or heads of workplaces as a manifestation of loyalty, respect for formal leadership, material or non-material support, or other expressions of gratitude.

Ghost authorship occurs when the list of authors and acknowledgements intentionally omit an individual who either fulfils the authorship criteria or significantly contributed to the research. This may involve colleagues who ended cooperation with the research team over the course of the research, students who (actually, or allegedly) do not aspire for an academic career, etc.

The omission may seem to be a minor problem at first sight, however, it may entail ethically controversial matters related for instance to conflict of interest. This practice is sometimes used for deliberate concealment of participation of an individual or an institution (e.g. a private company sponsoring the research). This matter is related to a particularly serious unfair practice where studies (e.g. pharmacological ones) are implemented by employees of private companies with the purpose of promoting a product in the professional community. The actual authors remain unacknowledged and the output is linked to seemingly unbiased authors who add credibility to it.

Ghost authorship is also related to utilization of professional authors, who are paid for conducting scientific work officially attributed to another author, as well as utilization of **artificial intelligence tools (AI)** to generate text.

Generally, authors bear responsibility for the accuracy, completeness and originality of their scientific work. Tools of generative AI do not fulfil the criteria for authorship, and as such cannot be acknowledged as co-authors. Utilization of AI tools, machine learning and similar algorithm tools shall be duly documented, for instance in the methodological part of the publication. All outputs (text, tables, pictures, etc.) created with AI tools and used in scientific work shall be cited.

The field of AI is constantly developing, and it is consequently recommended, among other things, to refer to the instructions from publishers of scientific literature. While some publishers (Springer Nature, Taylor & Francis) allow for utilization of AI tools and require its proper documentation, while others (Science) do not allow such practices without the explicit approval of the editorial office. Consequently, if utilization of AI tools is allowed, you are required to cite the particular outputs e.g. according to recommendations from the [American Psychological Association](#) (APA) or the [Chicago Manual of Style](#). Presenting outputs of generative AI as the results of one's own work is a clear example of plagiarism.

Utilization of advanced spell check tools is not a problem, unless used for substantial changes in text, such as rewriting content, providing new findings, and deleting or adding references. It is otherwise necessary to proceed transparently and document the manner and extent of utilization of the particular tool.

3.3. Affiliation and Dedication

Precise and complete affiliation ensures that publications are indexed and searched for correctly in databases, which may influence the number of citations of the work and the personal assessment of their authors. Correct affiliation is also important for national evaluations of the particular workplace, as well as international comparison in global university rankings. All employees and students of Palacký University Olomouc are therefore obliged to state their affiliation to UP in their publications.

If the format of the affiliation is not established in the instructions for authors, one should first state the official name of the institution, i.e. **Palacký University Olomouc**, followed by the name of the particular workplace (facility or organizational unit).

An analogical approach shall be applied with foreign publications; the names may be stated in the language of the output or in English in order to facilitate the process of indexation into publication databases.

In foreign publications, one should use the official English name **Palacký University Olomouc**.

Avoid incorrect variants, such as: Palacky/ý University, Palacky/ý University in Olomouc, Palacky/ý University, Olomouc.

The same applies to the correct names of the individual facilities:

Sts Cyril and Methodius Faculty of Theology, Faculty of Medicine and Dentistry, Faculty of Arts, Faculty of Science, Faculty of Education, Faculty of Physical Culture, Faculty of Law, Faculty of Health Sciences, The Czech Advanced Technology and Research Institute (CATRIN).

The official names of the facilities and their organizational units can be found in the [CZ-EN Translation Glossary](#).

In case of multiple affiliations, always state them separately, for instance:

- Institute of Molecular and Translational Medicine, Palacký University Olomouc, Hněvotínská 5, 77900, Olomouc, Czech Republic

- Department of Clinical Biochemistry, University Hospital Olomouc, I.P. Pavlova 6, 77900, Olomouc, Czech Republic

Some publishers take the affiliation from the ORCID identifier, thus ensure that one's profile and information are up-to-date and correct.

In exceptional cases, e.g. when mentioning the study curriculum at another institution or within an official research cooperation of multiple organizations where the authors are either employees or students, it is possible to state dual affiliation. It is advisable to discuss such circumstances with the respective head of a UP workplace.

For publications that resulted from grant projects, the required or recommended wording of dedications shall be maintained. A dedication should always contain the exact name of the provider of the financial support and the project number; in case of projects that received targeted support under Act no. 130/2002 Coll., the project number can be found in the Central Register of Projects in the Research, Development and Innovation Information System ([IS VAVAI](#)). This also applies to projects of specific university research (IGA) and UP Young Researcher Grants. Dedications should be formulated according to the instructions provided by the publisher either in Funding or Acknowledgements.

As concerns multiple dedications, the benefit of each project on the particular publication output should be appropriately explained and which part of the publication was supported should be stated by the respective project. As concerns co-authored works, dedications shall be stated separately for every author. If the output used data, tools, or other services, it is appropriate to state this fact in the acknowledgement or dedication.

3.4. Unethical Publication Practices – Plagiarism

One of the most serious cases of scientific misconduct is plagiarism. A plagiarized work is an unauthorized imitation (exact or partial) of another person's artistic or scientific work presented as an original without indicating the actual original work. Plagiarism is a serious offence against copyright.

In order to avoid plagiarism, the following three rules should be observed: differentiate between reproduced ideas and one's own, refer to the original sources, and indicate the original sources exactly and completely, so that they may be traced.

Plagiarism occurs either intentionally or unintentionally in various forms, such as:

- verbatim copying of a foreign text (or graphs, tables, etc.) presenting it as one's own;
- mosaic plagiarism, i.e. compiling sections of text from various sources without referring to them;
- paraphrases or translations without reference to the source;
- adoption of ideas or lines of reasoning from foreign-language literature without a reference;
- incorrect direct citations;
- incorrect, often mechanical, compiling;
- auto-plagiarism.

Auto-plagiarism occurs when one repeatedly uses the results of one's own work without presenting any substantial new outputs of activity, without a clear and unambiguous citation. This involves publishing an identical article that had previously been published elsewhere without notifying the reader or publisher of the respective journal of this fact, or recycling parts of a previously published text without referring to the source.

This is also related to redundant publications, resulting particularly from division of one's existing results into multiple publications to the detriment of their quality and clarity. Such behaviour may pose a danger to the scientific community's ability to access all project results and evaluate their importance and relevance. If one needs, however, to publish partial results or results of preliminary research, this fact shall be pointed out and reasoning and references to all related outputs shall be provided.

Other unethical practices include distorted citations, misinterpretation and purposeful presentation of citations out of their original context. Another extremely problematic matter is acquisition of citations of one's own work by means of agreement with other authors on mutual reciprocal citing (citation cartels). It is therefore not part of good practice to purposefully cite one's colleagues or contacts or deliberately cite results from specific journals that are, for example, personally connected to one's colleagues in order to increase their scientometric evaluation, which may not reflect the quality of the published materials.

3.5. Dubious Publication Practices – Predatory Journals

The expansion of so-called open science/open research and the increasing need for authors to publish their work in the open access mode, together with the fact that this service is frequently charged, has resulted in the emergence of so-called predatory journals (or even predatory publishing houses) preying upon this system in order to generate profit. They are characterized by a non-standard review procedure, untruthful or misleading information, deviations from well-established editorial and publication practices, insufficient transparency and/or utilization of aggressive practices in acquisition of clients, for instance repetitive e-mailing or frequent and repeated editorial offers for special issues of journals.

Although publishing in predatory journals is not unethical, it may, nevertheless, significantly harm the professional reputation of the author as well as the prestige of the respective workplace. A similarly problematic matter is membership in editorial boards of disreputable or otherwise dubious journals and participation in predatory conferences. Articles in disreputable journals may impact the author's success in grant competitions or his/her efforts to become employed in the academic environment.

The time and effort put into a research project may be undermined by the above-described manner of publishing. Disreputable publishers frequently fail to observe the principles of long-term archiving of digital content; the published works may eventually not be accessible. In addition, texts published in predatory journals do not contribute to the development of the fundamental body of knowledge in the individual fields. Reading, analysing, and attempts at replicating studies that lack scientific value are frequently not worth the effort.

Predatory journals often manifest the following characteristic features:

- Their names often include misleading terms such as “international”, “global”, “world journal”, etc. The journals are registered in developing countries. Some directly prey upon renowned journals or even imitate their names.
- They are indexed in dubious registers, such as the Global Impact Factor, CiteFactor, Universal Impact Factor, Index Copernicus.
- They frequently declare that the journal is indexed in renowned databases (Web of Science, Scopus or DOAJ) without any proof supporting the claim.
- They state false scientometric indicators, e.g. false values of the impact factor.

- Their website does not provide information on the journal publisher or the official headquarters.
- The editor-in-chief is not clearly stated or his/her affiliation is missing.
- Unbeknownst to them, renowned foreign scientists are listed as members of the journal's editorial board; alternatively, only scientists from one country or geographical region are listed, frequently without their affiliation. The editorial board also often includes profiles of non-existent scientists.
- They promise very short review procedures and very fast open access publishing.

Before submitting your manuscript to an unknown journal, it is advisable to verify the information in the available databases. One should specifically check the following:

- If the journal has a valid ISSN code; available e.g. at the [ISSN Portal](#).
- If it is indexed in renowned databases, e.g. [Web of Science](#).
- Whether or not it is not listed in the original or the updated version of [Beall's list](#) of potentially predatory journals, or in the paid service [Predatory Reports](#) provided by the company Cabells. If there is a hit, it is to be taken as an indicator of the possible unfair practices of the particular publishing house / publication.
- An open access journal should be listed in the register of open access journals [DOAJ](#). Caution should be observed as some disreputable journals may still get access to this database from time to time.
- The provided scientometric data are truthful, e.g. in [Journal Citation Reports](#), Scopus, or [Scimago Journal & Country Rank](#).

The studying of the website of the journal in detail is recommended and checking the quality of the published texts, particularly regarding the following:

- The website looks unprofessional and the texts contain mistakes regarding grammar and style.
- The image attachments have low resolution, are blurred, or are clear imitations (e.g. of authentic logos).
- The content of the website is not focused on the scientific community, but primarily on prospective authors – it praises the journal and intends to persuade the scientists to publish their articles in it.
- The journal accepts articles only via e-mail, often on insecure servers such as Gmail or Yahoo.
- There is no description of the procedure of manuscript processing (i.e. the review procedure), no mention of the article retraction policy (e.g. due to fraud or plagiarism), nor any information on the preservation of the digital content.
- The charge for open access publishing may be suspiciously low.
- It is difficult to verify the members of the editorial board – e.g. missing affiliation, or the profiles of the members of the board, e.g. ORCID. The websites of their respective workplaces do not mention their membership in the board. Another suspicious fact may be that several journals under one publishing house share the same board, or that members of the editorial board all come from one country or geographical region.

Authors need to be cautious when making decisions regarding publication of the results of their scientific work and assess critically any tempting and suggestive offers to review articles in unknown journals or publish in them. The same holds for offers of membership in editorial boards of unverified journals or offers from publishing houses whose practices are close to predatory or whose publishing raises any doubt. It is advisable to consult such offers with more experienced colleagues in the particular field.

4. Violation of the Rules of Good Research Practice

If any violations of the rules of ethics in any stage of research or publication of results are encountered, one should inform your lecturer, head of team or head of workplace. If there are serious reasons (possible conflict of interest, concerns about one's career, etc.) not to discuss such matters with one's superior, contact the [UP Scientific Ombudsman](#) to discuss possible next steps in view of the seriousness of your suspicion or evidence. One should also bear in mind that exposing information on misconduct of a particular UP employee or student can have serious consequences for this person – proceed with the maximum possible objectivity, impartiality and sensitivity. In all cases, care should be taken to ensure privacy protection to the greatest degree possible.

Less serious cases of misconduct in publication activities, errors or unintended mistakes may be solved through an explanation provided in person or in writing, correction, rectification, mediation, learning from one's mistakes, and avoiding any such behaviour in future cases.

Serious misconduct such as plagiarism, falsification of results, intentional distortion or direct fabrication of used data, or utilization of work methods or experimental methods violating ethical rules or social norms shall be tackled at the level of university bodies in the extent corresponding to their position within UP. In such cases, the procedure is established in [The Code of Ethics for Employees and Students of Palacký University Olomouc](#) and [The Palacký University Ethics Committee Rules of Procedure](#), possibly complemented with the statutes of faculty ethics committees, e.g. the FS UP Ethics Committee.

Impartial, thorough, and transparent investigation of any suspicion is vital for the functioning of self-regulatory mechanisms in science. In case of confirmation of deliberate unethical behaviour, corrective and preventive measures shall be applied in accordance with the seriousness of the case. As concerns problematic publications, corrective measures shall be applied. If possible with regard to the publication and the journal as well as the extent of misconduct, communication with the editor's office, corrigendum, or retraction of the work is essential. In such cases, the work shall subsequently be excluded from the Personal Bibliographic Database (OBD) and the Registry of Information about results (RIV), as well as other relevant lists and registers.