



Code of Good Practices in Research at the University of Murcia

Approved by the Governing Council
(Session on January 26, 2022)

INDEX

Introduction	3
3. Organization, leadership, training, and supervision	6
4. Research design	7
5. Conflict of interest	8
6. Research with human subjects and human material	9
7. Data Collection and Preservation	10
9. Biosafety	11
10. Health, Safety, and Occupational Risk	12
11. Industrial and Intellectual Property	12
12. Supervision and Audit	12
13. Evaluation, Peer Review, and Advisory	13
14. Publication and Authorship	14
15. Misconduct in research	15

Introduction

The current regulations at the University of Murcia (UMU) and national and regional legislation regarding scientific research identify the rights and duties reserved for both teaching and research staff, as well as administrative and support staff, as public employees. The content of these regulations largely expresses the ethical requirements that are internationally recognized as good practices in research, development, and innovation. However, it is worth summarizing the essence of these good practices in a Code such as this, in order to serve as a reminder and incentive to promote a culture of research excellence among all individuals involved in research activities at UMU.

Furthermore, UMU is committed to the National Declaration on Scientific Integrity, signed in November 2015 by the Confederation of Scientific Societies of Spain (COSCE), the Council of Rectors of Spanish Universities (CRUE), and the Spanish National Research Council (CSIC). This declaration explicitly states that "each subscribing institution or entity is responsible for developing and implementing it, promoting and fostering ethical awareness in general, and responsible research based on good scientific practices in particular."

In accordance with all these regulatory provisions, the present Code of Good Practices in Research (CBPI) at UMU has been designed to promote good practices in this field and help prevent misconduct by offering principles, guidelines, and rules applicable to both the university as a public institution and its research personnel, including individuals from other entities who temporarily carry out activities on UMU premises and facilities.

This Code aims to be a useful and effective tool to promote and ensure the integrity and quality of scientific research conducted at UMU. Its objectives are:

- Encouraging honesty, rigor, and responsibility in research.
- Acquiring good scientific practices during the training stage of research personnel.
- Improving the quality of research in all fields and aspects.

The Code is, therefore, a necessary complement to all the legally binding regulations applicable to research ethics within UMU's scope of action, as well as to the commitments and voluntarily subscribed declarations of UMU. The Code may also be further developed by specific regulations concerning certain aspects included in it.

Finally, it should be noted that, although the text refers to "research personnel," both this personnel and the administrative and support staff collaborating in research tasks or any of the activities included in this document should be considered affected by this document due to their functions and responsibilities.

UMU embraces this Code with the commitment that it will be a valid and effective instrument contributing to the resolution of problems or conflicts that may arise in the university research environment.

1. Principles

1.1 The research staff will strive to achieve the highest possible quality in their research work, with the aim of producing and disseminating the best quality results. In turn, the UMU will develop policies and actions that facilitate this objective.

1.2 The UMU's Governing Council approved on July 1, 2016 the Agreement on institutional policy in favour of open access to scientific production, which involves, on the one hand, adhering to the Berlin Declaration, Declaration on Open Access to Knowledge in the Sciences and Humanities, of October 22, 2003, and on the other hand, expressing its agreement with the principles of the Open Access movement and developing an institutional open access policy in the terms set out in the aforementioned agreement. This institutional policy on open access to academic, scientific and research production at the UMU has been updated and endorsed by the Governing Council on April 30, 2021.

Since July 5, 2013, the UMU has adhered to the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers. Currently, work is being done to define the "Human Resources Strategy for Researchers" (HRS4R), which highlights the institutional commitment to promote and improve recruitment, working conditions and research careers, thus contributing to the development of the European Research Area.

This process was completed last June 2020, with the obtaining of the quality seal awarded by the European Commission "HR Excellence in Research" (HRS4R), which identifies universities and institutions that generate and support the existence of a stimulating and supportive environment for research work.

1.3 The UMU and its research staff should work to create and maintain a research culture that promotes and supports honesty in research. The research staff should be honest both with their own research and with that of other researchers, and should do everything possible to ensure the accuracy of their data and results, acknowledging the contributions of the rest of the scientific community.

1.4 All applicable legal and ethical requirements in the field of study in which each researcher works must be met, and any actual or potential conflict of interest related to their research must be declared, collaborating in its resolution.

1.5 The work environment should promote open debate on ideas, research methods, data, and results, and their discussion, always subject to any confidentiality considerations.

1.6 Individuals carrying out research tasks at the UMU must recognize themselves to society as end users of public funds made available to them for the development of their research, and act accordingly. They must ensure that the research undertaken complies with the agreements, terms, and conditions included in the project previously approved by the competent bodies and in the applicable regulations, allowing adequate governance, management, and transparency.

1.7 The UMU must provide appropriate training to its research staff to enable them to carry out their research. In collaboration with this staff, the UMU must identify and address any unmet training needs. The research staff must ensure that they have the necessary skills, training, and resources to carry out the research, seeking collaboration with specialists in the relevant fields if necessary.

1.8 It is necessary to ensure the dignity, rights, safety, and well-being of all subjects involved in the research, including animals, and to avoid unreasonable risk or harm. The competent body or authority should be informed of any doubts or incidents related to these issues. Research should only be initiated and maintained if the anticipated benefits justify the risks involved.

1.9 Gender equality principle will be respected in the exercise of research activities. Likewise, any discrimination based on sexual orientation, ideology, or religion will be avoided.

1.10 The UMU will ensure equal opportunities for its staff, with special attention to the research activities of people with disabilities or special needs.

1.11 One of the most important values established in the social policy of UMU is the sensitivity and commitment to the environment, advocating for sustainable development, with the research practices carried out by its staff aligning with this principle.

1.12 All personnel from other institutions and companies who carry out their tasks, either permanently or temporarily, in UMU's own or joint centers, must be aware of and respect this code, without prejudice to complying with the regulations of their own company or institution.

1.13 Similarly, UMU staff who carry out tasks, either permanently or temporarily, in other institutions and companies will be subject, in addition to what is established in this code, to the regulations applicable to the place where they carry out their tasks.

2. General rules on good practices in research

2.1 The UMU and its research personnel should promote and maintain an environment that fosters and supports the development of research under applicable ethical standards, in a professional, mutually cooperative, and open and honest exchange of ideas. A culture that promotes good research practices should be encouraged, while detecting and penalizing inappropriate practices.

2.2 The UMU and its research personnel must comply with all legal and ethical requirements applicable to their research. This includes submitting applications for ethical review, if necessary, and complying with the results of that review. It must be ensured that research projects have the approval of all relevant bodies.

2.3 UMU research personnel conducting research activities in other Spanish or foreign research centers must comply with the legal and ethical requirements applicable to research conducted at the UMU and at the research center.

2.4 Similarly, external research personnel conducting research activities at the UMU's facilities must comply with the legal and ethical requirements applicable to this institution.

2.5 The UMU shall:

- a) Ensure that good research practices are an integral part of its research policy.
- b) Establish clear policies and procedures that cover the principles of good research practices and provide its research personnel with information and training on the established principles and standards.
- c) Ensure that these policies and procedures complement and align with existing higher-level ones.

- d) Provide training, resources, and support to its research personnel to ensure they are aware of policies, regulations, and procedures related to research ethics.
- e) Encourage its research personnel to consider good research practices as a fundamental part of their work.

2.6 UMU research personnel shall:

- a) Acknowledge their responsibility to conduct research in accordance with legal and ethical standards.
- b) Comply with the UMU's policies and procedures on good research practices, seeking support and guidance when necessary.
- c) Collaborate with the UMU in the compliance, dissemination, development, and updating of regulations on ethics applicable to research.

3. Organization, leadership, training, and supervision

3.1 The UMU must have elements of direction, supervision and management of research and research staff, establishing clear lines of responsibility and providing the necessary support to research staff to comply with legal and ethical requirements applicable to their research.

3.2 Research teams must have an organizational structure in which the lines of authority and communication among its members are clearly indicated, as well as the responsibilities in the development of research activities.

3.3 Research teams must have a leader who will hold the leadership and representation of the team, both in scientific aspects and in organizational and management aspects.

3.4 All members of the research team, especially their leader, must collaborate in creating a work environment that contributes to the scientific and personal development of all members, as well as the development of their skills, and the achievement of the common objectives of the research.

3.5 The UMU must promote the professional career of its research staff by providing them with the appropriate training to carry out their research tasks and develop their knowledge and skills throughout their career, including training in research design, development, and dissemination. This training must be regularly updated.

3.6 The UMU must ensure the proper training of research staff in training through mentoring and supervision tasks carried out by qualified mentors to assist them in their training and career development.

3.7 Research staff participating in the supervision and training of research staff in training must be aware of their responsibility, dedicating the necessary time and resources to carry out that task, according to availability and with the support of the UMU.

3.8 Those who perform mentoring functions for research staff in training will facilitate compliance with the obligations that they have contracted with funding entities

for their activity, facilitating access to the necessary resources, and avoiding their involvement in tasks unrelated to their training.

3.9 Those who provide mentoring must convey to research staff in training the importance of carrying out their work with rigorous compliance with the guidelines set by good scientific practices, paying special attention to issues related to safety and prevention of occupational risks.

3.10 Research staff in training will follow the guidelines of their mentors, keep them informed of the progress of their work and initiatives, and carry out the tasks entrusted to them, within the objectives of their training, for the proper functioning of the research team in which they are working.

4. Research design

4.1 In the design of research projects, care should be taken to ensure that the proposed research addresses relevant issues, either by providing new information to existing knowledge on the subject, or by developing new research methods.

4.2 The design and implementation of the proposed study should be detailed in a research plan that includes, at minimum, the background and justification of the proposal, the working hypothesis, specific objectives, the methodology to be used, the work plan and proposed timeline, available and necessary resources, participating team members, plan for dissemination of results, as well as the data collection, analysis, and management procedures, and, if applicable, ethical and legal considerations, gender dimension, and safety provisions.

4.3 If the proposed study is to be submitted to a call for proposals, the research plan should comply with all the requirements established in the call.

4.4 The research team should ensure that its members possess all the necessary skills and experience, as well as access to the equipment and resources required to carry out the proposed research, and should collaborate, if necessary, with specialists in the corresponding fields.

4.5 The participation of UMU personnel in external projects, managed by other institutions or companies, should have the express authorization of the responsible academic authorities.

4.6 Similarly, external personnel participating in projects managed by UMU or conducted in its facilities should have the authorization of the university, in accordance with university regulations, as well as the authorization of their own institution or company.

4.7 Unless otherwise specified by the responsible authority according to current university regulations, once a research project is completed, the responsible investigator of the team will act as coordinator of the use of equipment acquired with project funds, ensuring access to it for both team members and other researchers from UMU and its joint centers.

4.8 For equipment that requires it due to its characteristics, the responsible authority according to current university regulations, or the person delegated by them, will designate a responsible individual.

4.9 For equipment where circumstances warrant it, a usage regulation will be developed, which should receive approval from the responsible authority according to current university regulations.

4.10 The research personnel will be responsible for the optimal use of resources and proper maintenance of the equipment under their charge.

4.11 The methodologies used should come from sources that ensure their reliability. If the research involves the development of a new methodology, the process of fine-tuning and validation should be part of the research protocol, and the research personnel should have evidence demonstrating its reliability.

4.12 If necessary, agreements should be sought with other teams or entities to ensure the success of the research, always under legal formulas and paying maximum attention to compliance with the agreed terms and conditions for collaboration, especially regarding industrial and intellectual property, publication, and authorship attribution, which should be addressed with maximum anticipation.

4.13 With the assistance of UMU, if necessary, the research personnel should carry out a risk assessment of the proposed project to determine if it requires review by an ethics committee, if there is the possibility of risks to the health, safety, and well-being of the research personnel and participants, as well as any other applicable requirements for the research.

4.14 Any modification to a project should have the approval of the funding bodies, in accordance with the terms established in the call, or the consent of the other parties involved in the case of research contracts.

4.15 Any modification to a project that has a report from an ethics committee should be brought to their attention for the issuance, if necessary, of a new report.

4.16 In order to carry out the necessary actions to minimize potential risks, the research personnel should inform UMU of the possibility of obtaining results that could be used for illicit purposes.

5. Conflict of interest

5.1 A conflict of interest is a situation in which a person's private interests, whether personal, professional, financial, or of any other kind, interfere, or may be perceived to interfere, with the fulfillment of their duties.

5.2 The UMU should have a clear and accessible policy to address conflicts of interest, which includes the necessary guidelines to enable research staff to identify and report them.

5.3 Research staff should be aware of the importance of recognizing, disclosing, and addressing real, apparent, or potential conflicts of interest in the preparation, conduct, and presentation of their research, as well as in their roles in evaluation, peer review, and advisory activities.

5.4 When addressing a conflict of interest, it should be determined whether it is of a type and severity that may compromise the validity or integrity of the research, seeking the most appropriate solution in each case to avoid engaging in research misconduct.

6. Research with human subjects and human material

6.1 The dignity, rights, safety, and well-being of the participants should be the primary consideration in any research study. Research should only be initiated and conducted if the expected benefits justify the risks involved.

6.2 The UMU will provide its research staff with access to an ethics committee trained to address ethical issues related to research involving human subjects or their samples, and to issue relevant reports to conduct the research in accordance with legal and ethical frameworks. Research staff will assist this committee by providing all necessary information and not withholding any information that may be relevant to the committee's actions. Likewise, they will comply with agreements and follow guidelines emanating from the committee.

6.3 The UMU and its research staff must ensure that any research involving human subjects, human-origin material, and/or personal data complies with all legal and ethical requirements, as well as any other applicable guidelines, paying special attention when the research includes groups considered particularly vulnerable.

6.4 UMU research staff conducting or collaborating on research involving human subjects or their samples in other countries must comply with the legal and ethical requirements applicable at the UMU, as well as those applicable in the countries where the research is conducted. Similarly, foreign entities and their research staff participating in research activities conducted at the UMU must comply with the legal and ethical requirements applicable at the UMU, as well as those of their own country.

6.5 The UMU and its research staff must ensure the confidentiality and security of data regarding both research participants and the human material used.

6.6 Research staff will not transfer data or human material samples to other projects or research staff without the authorization of the participants and/or the corresponding ethics committee.

6.7 Research projects involving human subjects or human material samples, in addition to following the instructions of the ethics committee designated by the UMU, will be subject to the regulations and guidelines issued by any other committee operating within the framework of ethics relevant to the UMU's scope of action.

6.8 Research staff conducting research with human subjects must ensure that participants receive all necessary information in an appropriate manner to provide informed consent, with particular care when working with vulnerable groups.

6.9 If, during the course of their work, research staff identify that human participants in the research are subject to unjustified risk or harm, or that human samples are not being treated or stored properly, they should bring this to the attention of the responsible body at the UMU, even if the research has been favorably reviewed by the relevant authority.

6.10 In the event that a project involves the participation of UMU students as research subjects or study participants, the responsible research staff must ensure the establishment of appropriate procedures to minimize the possibility of undue influence in obtaining the students' consent and to avoid any form of coercion in their recruitment and subsequent participation.

6.11 Students undergoing direct academic evaluation will be avoided from being included as research subjects, unless the experiment or study to be conducted is part of their training.

6.12 The mere participation of students as passive subjects in an experiment or study cannot result in academic benefits.

7. Data Collection and Preservation

7.1 The UMU and its research personnel must comply with all ethical and legal requirements regarding the collection, use, and storage of data, with special attention to personal data, which must be handled in accordance with legislation.

7.2 Data that have served as the basis for research publication, including those considered invalid, as well as the methodology used, must be preserved for the legally established period, allowing for verification by a third party of the published results and their discussion with other researchers, while respecting the limitations imposed by legislation and the principles of confidentiality.

7.3 In cases where there is no specific regulation, the minimum data retention period will be 5 years.

7.4 Special attention will be paid to compliance with data preservation regulations in certain disciplines, such as health and biomedicine, which may be subject to specific regulations.

7.5 The UMU owns all data and information derived from projects carried out on its premises under the responsibility of its research personnel and must have procedures, resources (including physical space), and administrative support, when necessary, to assist research personnel in the efficient preservation and secure storage of data.

7.6 The research project must include procedures for data collection, analysis, management, availability, and eventual destruction.

7.7 Research personnel must collect data accurately, efficiently, and in accordance with the planned research design, ensuring that they are stored securely and accessible. In cases where regulations require it, this procedure must be approved by the competent authority.

7.8 Regarding data protection, the UMU has its own regulations and a Data Protection Officer in compliance with the legally mandatory Data Protection Regulation. For more information, please refer to the UMU Data Protection website.

8. Research Involving Animals

8.1 The UMU has not formally adhered to the *Agreement on Transparency in the Use of Animals in Scientific Experimentation in Spain*, promoted by the Confederation of Scientific Societies of Spain (COSCE), but its research personnel fully endorse the principles, norms, and recommendations contained in said agreement. Furthermore, the UMU strictly adheres at all times to European, Spanish, and regional legislation regarding the treatment of animals used in research and other scientific purposes.

8.2 The UMU will provide its research personnel access to an ethics committee capable of addressing ethical issues related to animal research and issuing relevant reports to carry out research in accordance with legal and ethical frameworks. Research

personnel will facilitate the work of this committee by providing all necessary information and not withholding any information that may be relevant to the committee's actions. Additionally, research personnel will comply with the agreements and guidelines issued by the committee.

8.3 Research involving the use of animals, in addition to complying with the instructions of the ethics committee designated by the UMU, will be subject to regulations and guidelines issued by any other committee operating within the framework of ethics and relevant to the UMU.

8.4 UMU research personnel involved in or collaborating in animal research conducted in other countries must comply with the legal and ethical requirements applicable at the UMU, as well as those applicable in the countries where the research is conducted. Similarly, foreign entities and their research personnel participating in research activities conducted at the UMU must comply with the legal and ethical requirements applicable at the UMU, as well as those of their own country.

8.5 If research personnel detect that animals used in research are subjected to unjustified risks or harm, they must report it to the responsible authority at the UMU, even if the research has been approved by the competent authority.

9. Biosafety

9.1 The UMU will provide its research staff with access to an ethics committee trained to address safety issues related to research involving biological agents, genetically modified organisms, and hazardous chemicals, including radioactive substances. This committee will issue relevant reports to carry out research that intends to handle these types of products in accordance with legal and ethical frameworks. The research staff will assist this committee by providing all necessary information and not withholding any information that may be relevant to the committee's actions. Similarly, the research staff will comply with the agreements and follow the guidelines issued by the committee.

9.2 Research projects involving the use of biological agents, genetically modified organisms, or hazardous chemicals will be subject, in addition to the actions of the ethics committee designated by the UMU, to the regulations and guidelines issued by any other committee operating within the scope of ethics in which the UMU operates.

9.3 UMU research staff involved in or collaborating on research projects that include the use of biological agents, genetically modified organisms, or hazardous chemicals conducted in other countries must comply with the legal and ethical requirements applicable at the UMU, as well as those applicable in the countries where the research is conducted. Likewise, foreign entities and their research staff participating in research activities carried out at the UMU must comply with the legal and ethical requirements applicable at the UMU, as well as those of their own country.

9.4 If, during the development of research projects involving the use of biological agents, genetically modified organisms, or hazardous chemicals, the research staff detects real or potentially dangerous situations, they must notify the responsible body at the UMU, even if the research has been favorably reviewed by the competent authority.

10. Health, Safety, and Occupational Risk

10.1 The UMU and its research staff must ensure that all research carried out under their responsibility complies with the requirements established in the regulations and guidelines for good practices in health, safety, and occupational risks.

10.2 The UMU is responsible for keeping its staff, especially trainees, informed of health, safety, and occupational risk regulations.

10.3 The UMU must ensure, in particular, that all research involving potential risks or harmful materials that may cause damage to the environment complies with all applicable legal requirements and guidelines, establishing protocols that ensure this type of research is subjected to appropriate review procedures according to its health, safety, and occupational risk policies.

10.4 The research staff must pay special attention to compliance with the protocols established by the UMU for this type of research, facilitating their supervision by management and the Occupational Risk Prevention Unit, complying with the results of such review, and notifying university authorities of any incident that may pose a risk to personal health and the environment, as well as carrying out the relevant containment and decontamination protocols to minimize the risk of exposure.

11. Industrial and Intellectual Property

11.1 The UMU and its research staff must ensure compliance with all conditions regarding industrial and intellectual property established by funding agencies. Likewise, special attention should be paid to compliance with provisions regarding industrial and intellectual property included in research contracts or agreements.

11.2 While all research results discovered or developed using public funds should be disseminated for the benefit of society as a whole, research staff should pay special attention to not prematurely disclose results that could be subject to protection through industrial or intellectual property rights, minimizing, as far as possible, any delay in publication and dissemination while waiting for the protection of rights.

11.3 Research staff should address any issues that may arise regarding industrial and intellectual property as soon as possible, informing the responsible parties at the UMU in charge of managing the rights and keeping all members of the research team informed.

12. Supervision and Audit

12.1 The UMU may monitor and audit research projects for which it is responsible, as well as any other projects developed in its facilities through agreements or other means, to ensure compliance with applicable legal and ethical requirements.

12.2 The UMU must ensure that the personnel responsible for carrying out such monitoring and audits have sufficient training, resources, and support to fulfill this function.

12.3 Research staff should cooperate with the supervision and audit of their research projects by the corresponding bodies, as well as with any actions derived from such activities that are deemed necessary. They should also report any deficiencies detected in this regard to the competent authority.

12.4 The UMU and its research staff must ensure compliance with the applicable economic terms and conditions of any grants or contracts related to research in accordance with the regulations and procedures established by the corresponding management units.

12.5 The UMU will regulate the purchase or acquisition of materials, equipment, or other resources for research purposes, as well as the hiring of personnel for project implementation, all without prejudice to compliance with superior legislation and regulations. Such regulation will establish the ownership of resources and the rights of research staff using them, as well as procedures for the supervision and economic oversight of research projects.

12.6 Research staff must comply with the guidelines established by the University regarding the economic management of research projects, facilitate their monitoring and economic supervision, and promptly report any doubts or irregularities to the responsible university management personnel as soon as they become aware of them.

13. Evaluation, Peer Review, and Advisory

13.1 UMU research staff should be aware that peer review is a fundamental part of publishing and disseminating research results, as well as evaluating personal grant applications and ethically reviewing research projects.

13.2 Research staff conducting peer review should do so with the highest standards of rigor and objectivity and should always follow the guidelines received from the entity for which they perform this function. Evaluation or review should not be carried out by an invited person who does not consider themselves sufficiently competent to do so.

13.3 It is the duty of research staff to maintain confidentiality and not retain or copy any material under review without the express written consent of the requesting entity. They should not use, or allow others to use, the information under review without the explicit authorization of the authors.

13.4 Research staff acting as reviewers should disclose any potential conflicts of interest.

13.5 In the event that potential research misconduct is detected or suspected during a review, it should be confidentially reported to the requesting entity.

13.6 The UMU urges its research staff to participate in review tasks for scientific meetings, journals, and other publications, grant applications, and ethical review of research proposals. Likewise, it recognizes the obligation of those involved in the review to act exhaustively, objectively, and confidentially, and commits to not pressuring, directly or indirectly, individuals performing review and evaluation tasks to violate these obligations and to support them in case third parties attempt to do so.

13.7 Research staff may provide advisory activities in a subject in which they possess specific competence. In formulating the advice, the necessary recognition of the sources used and the most updated information must be taken into account.

13.8 Acceptance of advice must be brought to the attention of the competent authorities of the UMU who, if they deem it appropriate, will regulate it through an agreement or contract.

14. Publication and Authorship

14.1 UMU research staff must accept their obligation to publish and disseminate, orally or in writing, the results of their research in an accurate and non-manipulative manner that could lead to misleading conclusions, including results that contradict defended hypotheses.

14.2 Research staff must not unduly delay the publication of publicly funded research results, unless legal protection requires it.

14.3 Sponsors and funders of research carried out at the UMU must respect the duty of research staff to publish their research results and not attempt to inappropriately influence the presentation or interpretation of the results. Any incident in this regard must be reported to university authorities.

14.4 Research staff must be aware that it is unacceptable to submit research results for publication to more than one potential editor at a given time or publish them in more than one publication without proper acknowledgment of previous publications.

14.5 The fragmented publication of parts of the same work will be avoided, except for reasons of length or at the request of editors.

14.6 In the event of errors being detected in the content of any publication, the authors must report them in publications of the same level, with the retraction of the publication as a whole being necessary in case of serious errors.

14.7 The UMU must provide training and support to facilitate the publication and dissemination of research results by research staff, with special emphasis on topics such as confidentiality, issues related to intellectual property, contractual or legal obligations, results of special interest to public health, and topics of special interest to the media or the general public.

14.8 All decisions regarding publication and authorship must be known by all potentially affected research staff and be agreed upon jointly.

14.9 The authorship declaration must be limited to those contributing and collaborating individuals who have made a significant intellectual or practical contribution to the work, with the consideration of authorship based on hierarchical position or employment relationship being unacceptable. Research staff must be aware that any person listed as an author must assume responsibility for the publication as a whole and be able to identify their own contribution to it. No person meeting the criteria for authorship should be excluded from presenting the results.

14.10 The order of names of authors in publications should be based on accepted guidelines in the discipline of the work, which should be known in advance by all authors. The order of authorship should allow for the recognition of the authors who have made the most significant effort in the research and the person who leads and/or has the ultimate responsibility in the research protocol.

14.11 UMU research staff is obliged to include the name of the institution in their affiliation. External research staff will follow the current regulations at the UMU and the guidelines agreed upon with their home institution, if applicable.

14.12 In the publication, unless expressly refused, the work of all contributing individuals who do not meet the criteria for authorship should be acknowledged in an acknowledgements section. Similarly, all funders and sponsors of the conducted

research should be clearly recognized, unless expressly refused, in the publication of the research results.

14.13 The research staff must include references to all previous works used in their research. In the case of using partial procedures or information that have not been published, obtained from individuals not involved in the works being handled, permission from the authors must be requested and only used once such permission is obtained, explicitly mentioning this situation in the publication, if applicable.

14.14 The research staff must comply with the regulations developed by the UMU regarding the publication of their research results in open access repositories, as well as any other regulations related to this issue that the university has adhered to or is applicable to them.

14.15 The research staff must disclose potential or actual conflicts of interest in relation to their research when publicly presenting their research results.

14.16 As generators and communicators of knowledge, the research staff must contribute to the dissemination and communication of the results of their research to society, in order to contribute to the cultural advancement of the general public and the dissemination of knowledge, and to justify to society the resources dedicated to research.

15. Misconduct in research

15.1 The UMU considers the following as misconduct in research:

- a) Invention of results.
- b) Fabrication of results.
- c) False statements of data, interests, or participation.
- d) Inappropriate spending of R&D funds.
- e) Falsification of justifications for project/contract expenses.
- f) Plagiarism.
- g) Unjustified non-publication of results.
- h) Duplicate or unnecessarily fragmented publication.
- i) Deliberate omission of reference to other relevant works.
- j) Inclusion of honorary or unjustified references.
- k) Use of incorrect procedures that may pose excessive or unjustified risks or harm to humans, animals used in research, or the environment.
- l) Inappropriate use of privileged or private information of individuals collected during the research and/or review or evaluation process.
- m) In general, any action contrary to the content of this Code of Good Practice in Research.

15.2 The UMU must have a procedure to investigate complaints, both internal and external, of misconduct in research, ensuring that the personnel responsible for the investigation have the necessary training, resources, and support to fulfill their function.

15.3 Detection and elimination of misconduct in research should be part of the UMU's policy, and its research staff should collaborate with it in this purpose, reporting any suspicion of misconduct to the relevant authority.

-----o-0-o-----