



**UNIVERSITAS**  
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**GUIDE OF GOOD PRACTICE FOR DIRECTING AND  
SUPERVISING RESEARCH PROJECTS**

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## **Preamble**

This guide of good scientific practice aimed at research project directors and supervisors is a document that compiles, in a clear and concise way, some of the rules, recommendations and commitments that favour the quality and integrity of research conducted by researchers of the Miguel Hernández University (UMH). It is a supplementary guide to the instruments provided by current legislation. Below are the unwritten ethical aspects and rules relative to developing research activities, the authorship and publishing of obtained results, the relationships between academic research and industry and other aspects to consider while conducting research and transfer activities.

This short 10-page guide must be completed by reading the Code of Good Scientific Practice of the UMH, which can be found on the following link: <https://oir.umh.es/codigo-de-buenas-practicas-cientificas/>

### **1. Training, direction and supervision**

The Miguel Hernández University (UMH) believes that all lecturers and researchers, in any stage of their academical-research careers, have a commitment to train throughout their lives, both in being up-to-date on the latest breakthroughs in their field of knowledge as well as to train on complementary competences (new technologies, artificial intelligence, managing and processing data, new regulations, management...), and thus improve their academic and scientific endeavours. It is part of the responsibilities of all experienced researchers (R4) to train young researchers, providing the required education to develop their research efforts as well as knowledge on the ethical code and the good practice that governs it, paying special attention to teamwork and establishing an environment of co-existence at their research department/institute.

#### **1.1. Selection and evaluation of researchers in training**

- ♣ The recruitment of staff in training must be guided by academic quality criteria and based on equal opportunity while rejecting any discrimination due to gender, race or religion.
- ♣ The processes for the selection of human resources must be transparent and merit-based, called in good time and in an appropriate manner which enables access from potentially interested people. They must be governed by previously known scales that are verifiable and suitable for said selection.
- ♣ Evaluating research staff in training and the activities they conduct entails great responsibility for the evaluator because of its impact in the progress of their academical-research career. All evaluation must be fair, objective and based on documentary evidence. If the evaluation process includes an interview or presentation, it must always be recorded.

- ♣ Evaluators must maintain strict independence with regard to the evaluated person and avoid conflicts of interest that could limit the issuing of impartial judgement.
- ♣ The protection of personal data in accordance with current regulations must be guaranteed during the entire process.

## **1.2. Obligations of the supervisors**

The supervisors (tutors or directors) are directly responsible for training the young researchers and for ensuring that said training can be undertaken in the best conditions to achieve their goals in a planned timeline.

Specifically, the supervisor must:

- ♣ Be an expert in their field who is open to share their knowledge/expertise and develop their research activity in a way that acts as a benchmark for staff in training.
- ♣ Personally and regularly supervise the tasks assigned to the research staff they are responsible for to guarantee their accurate approach and fulfilment, ensuring good knowledge of all the stages of research of a research project.
- ♣ Provide the research staff in training with the appropriate resources to conduct their work and to learn, avoiding unjustified pressures and getting them involved in activities that improve their training and development as a scientist.
- ♣ Inform the staff in training whether their scientific work and reports are part of projects that have restrictions regarding result dissemination.
- ♣ Ensure that the research staff in training knows and applies the ethical codes, has access to all the necessary information on the rules that regulate their research and is capable of assessing and being self-critical of their work.
- ♣ Ensure the research is performed with the highest safety conditions, informing the staff in training about the mandatory rules on safety and occupational hazard prevention.
- ♣ Encourage the research staff in training to perform seminars and scientific conferences/congresses and advise them in their professional career: publications, project participation, international mobility, etc.
- ♣ Recognise the individual work of the research staff in training and be very rigorous and fair with the authorship of publications and any other dissemination of the research activity.

### **1.3. Obligations of the research staff in training**

The research staff in training must:

- ♣ Be committed to their own training and to the goals of the project/group/department/institute that their research activity is framed in, allocating the time and effort needed to reach the planned goals.
- ♣ Follow the advice and recommendations of the directors and tutors, conveying the researcher in training's own initiatives and notifying the former of the results obtained. In the event of a conflict that hinders the relationship of a researcher in training with their director or tutor, the former may request the mediation of a third party by notifying the Office for Responsible Research (OIR) of the UMH.
- ♣ Use the available resources appropriately and value and facilitate research work management and support tasks.
- ♣ Comply with the safety rules and procedures applicable to their research and with the ethical codes.
- ♣ Take part in scientific activities related to the development of their work as a researcher in training.
- ♣ Recognise the contribution of their directors and tutors when publishing and/or disseminating the results of the researcher in training's own research work.
- ♣ Notify the entities receiving the service of all the findings, discoveries and results that are susceptible of legal protection, and collaborate with the processes of research result protection and transfer.

## **2. Publication and dissemination**

Publishing and disseminating research results is an ethical duty of researchers that contributes to making knowledge known and to improve it, while at the same time reporting back to society, who funds science and technology. The unjustified delay or non-dissemination of research results is ethically objectionable. Furthermore, not publishing results that represent a failure of certain experiments must be avoided, as it may delay the progress of scientific knowledge and can have very adverse effects for the patients in the fields of biomedical and clinical research.

### **2.1. Authorship**

- ♣ One must only appear as the author of a publication if this person has taken part in a substantial way in the genesis, experimental design, devising and development of the project, has contributed to the experimental aspect or worked on the analysis and interpretation of the data, their discussion and conclusions.

♣ The author(s) must have contributed to producing the reports and publications, and must be able to present their contribution to the research in detail before a specialised scientific-technical forum and debate its general and specific results.

♣ All the co-authors of a publication must be aware of the final document sent to the publishing house, accept its contents and take responsibility for it.

♣ Taking part in the funding, sampling, data gathering or recruiting of research staff does not necessarily justify the status as co-author. In any case, the contributions of collaborators and technical research support staff must be appropriately recognised, at least in the acknowledgements section.

♣ In no case may the name of a researcher who has contributed as an author be omitted, as it would represent improper conduct according to the ethical codes as well as a misappropriation of the intellectual property by the other authors.

♣ The inclusion of a researcher as the author of a publication solely due to their hierarchical position or professional or personal relationship with another author is an ethically inappropriate practice and may entail an unacceptable abuse of authority.

♣ The order of appearance of authors in scientific publications is established by the rules of each branch of knowledge, and must respect the authorship assignment criteria.

♣ UMH researchers must clearly state their affiliation to this university in all the works they publish. The Committee that approved or monitored the research protocol must also be mentioned, as well as the sources of funding and sponsorships received for the research.

♣ The authors must know about and cite all the relevant background and prior studies. They must not use references that are not real background or use pieces of other studies without clearly and appropriately citing the source.

## **2.2. Publication**

### **2.2.1. Applying the open science publishing principles**

♣ The UMH recognises the need for their researchers to protect their intellectual property rights, but encourages transparency and an open attitude in discussing their work with their peers and in its dissemination, providing open, transparent and honest access to their research.

♣ The UMH is committed to provide the maximum dissemination to research results and promotes the principles of open access among its researchers and teaching staff in accordance with Spanish Law 14/2011 of Science, Technology and Innovation in its article 37, as well as with the requirements of competitive calls and their corresponding clauses. Likewise, it recognises the researchers' right to freely choose the journal or publishing house through which to make their achievements and results known.

### **2.2.2. Fragmented or multiple publishing**

♣ The fragmented publishing of parts of a single research study is not acceptable, except for reasons of length or on petition of the editors.

♣ It is not ethical to use the same results of a research project in several scientific articles, except when justified with the corresponding citations. Any author who submits a study similar to a previously published one must explain these circumstances in a clear and accurate way.

### **2.2.3. Publishing results with potential commercial interest**

♣ The UMH, financing/sponsoring entities and researchers must accept the need to delay publishing some research results for the sole purpose of protecting the intellectual or industrial property of their inventions with potential commercial interest.

♣ The decision to delay publication in order to protect the research results will be made by its owner (UMH/COMPANY), after being notified by the researchers of the need to not publish them due to the risk of their protection being adversely impacted, and must be communicated in writing to all entities and people involved. These two groups shall agree which parts of the research can be published or disseminated without harming the commercial opportunities of the protected results. If there is a university-company agreement that regulates the result dissemination arrangements, what is established in said agreement will prevail.

### **2.2.4. Correction or errors and retraction**

♣ If an error is found that alters the value of the published results, the authors will publish a correction in the same journal or outlet. If the detected errors are major, it is mandatory to publish a retraction as soon as possible.

## **2.3. Peer review**

♣ A review by peers who evaluate the quality and scientific rigour of a research project or an original paper is the most common way to validate articles to be published in indexed journals and to evaluate projects, technologies, etc.

♣ The evaluations must be objective and based on scientific criteria, not on subjective criteria or personal opinions. One must reject taking part in a review if there are conflicts of interest or if the guest evaluator does not have enough expertise or a suitable academic resume.

♣ Reviewed articles and briefs are confidential and privileged information. Papers submitted for review may not be copied or shared without the explicit permission of the editor.

## **2.4. Dissemination**

### **2.4.1. Transparency and dissemination responsibility**

- ♣ As well as sharing their results through specialised publications and congresses, researchers have the obligation to give the maximum dissemination to their research activity and scientific findings through communication channels and activities aimed at a non-expert audience.
- ♣ Science dissemination must generate confidence in the research and its ability to provide answers to social challenges, while encouraging discussion with and involving society.
- ♣ Beneficiaries of subsidies from research plans and programmes have the responsibility to give the maximum dissemination to the results of their research through the media. Researchers who take part in publicly-funded projects have the responsibility of knowing the calls' clauses on result communication and complying with them diligently.
- ♣ Being one of the goals of science dissemination and transfer to society, as a good practice, it is advisable to identify and communicate the connection and/or contribution of the obtained findings or results to the Sustainable Development Goals and the 2030 Agenda of the United Nations.

### **2.4.2. Sending results to the media**

- ♣ Collaborating with activities of the Communication Service of the UMH, tending to media requests, to the UMH Sapiens scientific dissemination journal, editing blogs or social networks are common channels for communicating research results to society.
- ♣ The researchers are responsible for the reliability and objectivity of the information they convey.
- ♣ Expressing the personal opinions of UMH researchers must not be mistaken for an official position of the university. Therefore, researchers must state the personal nature of the opinions expressed on social networks and in the media.

## **2.5. The presence of financing institutions or companies in the publication of research results**

- ♣ Any publication on a research project conducted by UMH staff must cite and acknowledge the subsidies, financial aid and sponsorships received.
- ♣ It is the responsibility of the project's director or principal investigator to ensure that the communicative requirements of the financing entities are met and that all the team members know them.

- ♣ The entities and researchers involved in a research project may agree to delay publishing the results to protect them for potential commercial use, but pressures from these entities to bring forward or delay publishing the results are not acceptable.

- ♣ The UMH and its research staff reject any attempt by sponsoring entities to interfere in the scientific content when publishing the results of a research project.

### **3. Research evaluation**

#### **3.1. Compliance with ethical principles**

The Office for Responsible Research has been assigned the capacity to evaluate the research works and projects of the teaching and research staff (PDI) of the UMH, and to ensure compliance with the ethical requirements that can be demanded of research work.

The evaluation criteria and procedure are public and can be viewed on the website of the Office for Responsible Research of the Miguel Hernández University along with the necessary information and documentation to prepare requests. The Ethics Committee will evaluate and issue a report on the methodological validity, risk-benefit ratio, justice and equity in selecting participants and all aspects linked to respecting people (safety, welfare, suitable information, informed consent, confidentiality, respect for privacy, custody of personal data, accessing results and sharing the profits) and animal welfare, where relevant, as well as the sustainability of research projects and works submitted to them.

#### **3.2. Researchers as evaluators**

Researchers chosen to take part in the evaluation activities of research projects, publications, laboratories, researchers or institutions, both on a national and international level, must act in accordance with the following principles:

- ♣ Scientific competence and excellence.

- ♣ Evaluators have the obligation to grant the same amount of attention to all evaluated research projects and must withdraw if there is a conflict of interest that may condition their impartiality.

- ♣ The discussions of the evaluation committees and the information obtained in the evaluation processes are confidential and must not be divulged or used by the evaluators in their own research or their group's research.

- ♣ The evaluation conclusions must be transparent, reasoned, comprehensible, based on objective data and accessible by the evaluated researchers.



#### **4. Protection of research results: intellectual and industrial property**

The intellectual and industrial property rights owned by the UMH are part of the university's heritage.

##### **4.1. The obligation to notify about the potential commercial interest of research results**

UMH researchers must communicate the results of their research to the Research Management Service-OTRI before their publication, which will be delayed, if necessary, until the protection of the invention becomes effective.

##### **4.2. Ownership of the intellectual and industrial property derived from the research results**

♣ The UMH is the owner of the intellectual and industrial property rights from research activities, as well as innovations and developments carried out by research staff as a result of tasks that are their responsibility and which are within the scope of their teaching and research duties.

♣ Moral rights derived from research results belong to the researchers of the UMH, as specified in the Intellectual Property Act.

♣ The rights of exploitation derived from the results obtained by the UMH research staff when conducting their duties are regulated by both the Intellectual Property Act and the Industrial and Intellectual Property Regulation of the UMH.

♣ Students have the ownership and rights of exploitation of the inventions they conduct within the framework of their academic activity. In the case of academic projects, they may transfer their author's rights to the UMH and/or authorise their dissemination in the institutional repository of the university.

♣ In the case of inventions conducted by the students together with research and teaching staff, the ownership and rights of exploitation of the invention will be shared, corresponding to the students and the UMH in the proportion agreed by the students and research and teaching staff. It is highly recommended for said co-ownership regime to be specified in a co-ownership agreement signed by the university and the students.

##### **4.3. Research in cooperation with the private sector**

###### **4.3.1. Rights and responsibilities of participating researchers**

♣ Any collaboration of the UMH and its research staff with private companies will be regulated by an agreement that will establish, where relevant, the ownership and management of the products and data used or generated by the project, the ownership of the research results and the rights of the parties involved on the protection of results and their publication.

- ♣ The academic freedom of the researchers will always be upheld and any interference with their scientific criteria in designing and executing research protocols will be rejected.

- ♣ The moral rights of the researchers over the research results are inalienable and must be respected by the private companies.

#### **4.3.2. Managing intellectual and industrial property**

- ♣ Research contracts and agreements signed by the UMH and private entities will include clauses on the ownership of the intellectual and industrial property of the results generated by the R&D projects executed.

- ♣ Said contracts will state who is the owner of the results and who is to manage the protection, as well as the obligation to recognise the moral right of the researchers and the responsibility to protect results.

#### **4.4. Researcher participation in the economic returns from exploiting intellectual and industrial property**

Researchers recognised as the authors of a research result exploited commercially will have the right to partake in the profits generated, in accordance with the Industrial and Intellectual Property regulation of the UMH.

### **5. Conflicts of interest**

#### **5.1. Definition and type**

- ♣ Conflict of interest is a situation or a series of circumstances that cause a risk that the private interests of an interested researcher or third party, research collaborators or financiers may contradict, unduly influence and try to have power over the very purpose of the research.

- ♣ Conflicts of interest can be economic (for example, if a researcher carried out paid work or has economic involvement with a company or entity whose R&D services or technologies are required for projects they are involved in), professional (for example, if they have to take part in evaluating projects or publications of peers they are collaborating or have collaborated recently with) or personal (for example, if there is a family or friendly relationship with people whose selection they are taking part in).

#### **5.2. Action proposals**

- ♣ The UMH researchers must identify and declare any conflict of interest and take action to solve it.

- ♣ After declaring the conflict of interest, the affected researcher will refrain from participating or will withdraw from the activities that generate the conflict.

♣ Concealing a conflict of interest is an ethically inappropriate behaviour that harms trust, honesty and the common good, and can involve legal action.

## **6. Scientific malpractice.**

Violating scientific integrity harms the reputation of the universities and hurts the confidence that society has in research, researchers and science. Cases of scientific malpractice must be addressed rigorously. Any situation must immediately be investigated to clear any doubt on the reputation of the university and its researchers.

### **6.1. Definition and type**

♣ Scientific malpractice is understood as making up, manipulating, falsifying, plagiarising or deceiving when proposing, developing or communicating research and its results.

♣ The intentional deviation from research practice that is accepted by the research community is considered malpractice, including alterations of research protocols that entail an unacceptable risk for people, animals and the environment.

♣ Intentionally concealing the existence of conflicts of interest is ethically reprehensible and is considered malpractice.

♣ In this regard, errors or differences of interpretation and opinion derived from a rigorous assessment of scientific methods or results are not considered malpractice.

### **6.2. Action proposals**

♣ All members of the university community have the moral responsibility of notifying the academic authorities of any research malpractice they witness or are aware of.

♣ Any baseless accusation submitted in a malicious way can lead to disciplinary action against the person who submitted it.

♣ Any allegation of malpractice will be investigated with the utmost confidentiality. All those involved in the investigation must respect the confidentiality of the information throughout the process.