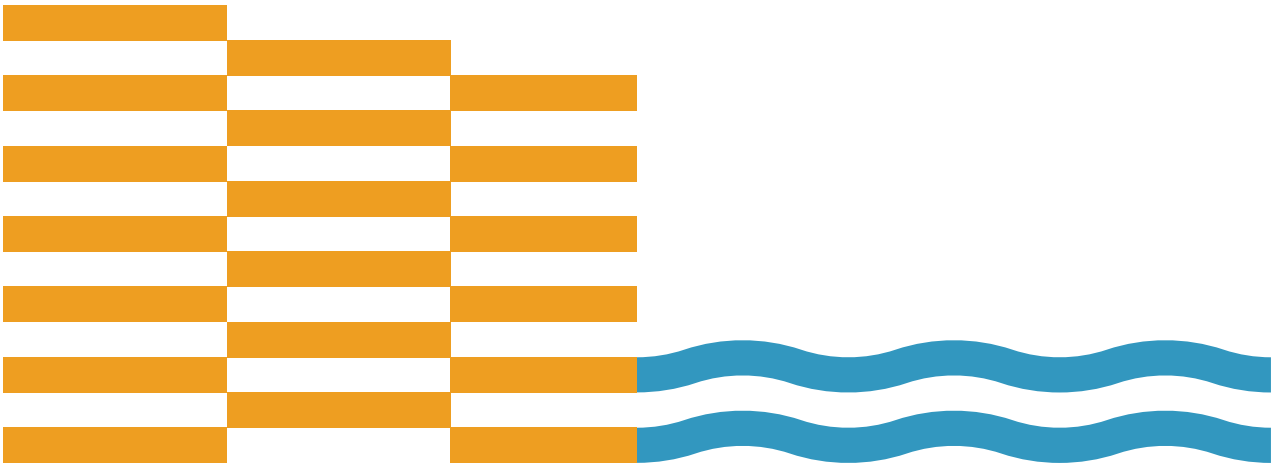
Barcelona
Biomedical
Research
Park

Code of Good Scientific Practice




Whose Choice?
Responsability
Rules
Freedom
Morals
Right / Wrong
Ethics
Life
Papers
Good / Bad Science
Grants
Conflict of Interests
Career

Research centres

Hospital del Mar Research Institute
www.imim.es

Department of Medicine and Life Sciences of the UPF (MELIS-UPF)
www.upf.edu/web/biomed

Centre for Genomic Regulation (CRG)
www.crg.eu

Barcelona Institute for Global Health (ISGlobal)
www.isglobal.org

Institute of Evolutionary Biology (IBE)
www.ibe.upf-csic.es

BarcelonaBeta Brain Research Center (BBRC)
Research Centre of the Pasqual Maragall Foundation (FPM)
www.barcelonabeta.org / www.fpmaragall.org

Contents

Foreword

The public entrusts the scientific community with the responsibility for undertaking high quality scientific research. In hand with this responsibility comes the expectation that this research work is always done in good faith, with honesty and integrity. The Code of Good Scientific Practice of the centres of the Barcelona Biomedical Research Park (PRBB) represents a set of recommendations and commitments governing scientific activities at the park.

The current 2023 update is aligned with the updated European Code of Conduct for Research Integrity (ALLEA, 2023) and is therefore based on the same fundamental principles: Reliability, Honesty, Respect and Accountability.

This code aims to create an environment conducive to high-quality research and prevent problems from arising in relation to the integrity of scientists in their work. It acknowledges the responsibility of both institutions and individuals to ensure a local research culture free from undue pressures and harassment, that fosters research integrity and mutual respect, promoting equity, diversity, and inclusion.

This code applies both to institutional and organisational level, as well as to the research groups and researchers belonging to the institutions at the PRBB. The recommendations in this code complement the legal regulations applicable to each centre as well as their internal rules, and do not prevail over them.

The Code of Good Scientific Practice constitutes a framework for self-regulation. The content, originally published in 2000, has been supervised and updated as part of the remit of the PRBB Good Scientific Practice Working Group (GSP Working Group)[1], made up of nominated representatives of all PRBB Centres[2]. This group can also be contacted for enquiries concerned with good scientific practice (see section 11)[3].

As evidence of the acceptance of the contents of the updated Code of Good Scientific Practice, the directors of the PRBB Centres have signed an original copy of the current version and have committed to promoting dissemination and adherence to its contents within their centres.

1. See Section 9

2. The term “PRBB Centres” is used to refer to the following institutes collectively: the Hospital del Mar Research Institute, the Department of Medicine and Life Sciences of the Pompeu Fabra University (MELIS-UPF), the Centre for Genomic Regulation (CRG), the Barcelona Institute for Global Health (ISGlobal), the BarcelonaBeta Brain Research Center (BBRC) / Pasqual Maragall Foundation (FPM), and the Institute of Evolutionary Biology (IBE).

3. For current GSP Centre Contacts for all issues related to good scientific practice please see: *https://www.prbb.org/ciencia.php#Buenas-practicas*

1. Supervision of researchers in training

1.1 Responsibilities of institutions

Research institutions and organisations have the responsibility to offer their researchers continued training in best practices in research design, methodology and analysis; in ethics and research integrity; and in other transversal and interdisciplinary topics, such as mentorship or communication. They also must ensure that researchers are aware of the relevant codes and regulations.

1.2 Assignment of a supervisor

All individuals linked to a PRBB Centre either through a contract or grant in order to receive some form of training[4] will be assigned a supervisor[5].

1.3 Limits to the number of individuals assigned to a single supervisor

The total number of trainees for whom a single supervisor is responsible should be appropriate and compatible with the extent of the supervisor's obligations and commitments.

1.4 Responsibilities of supervisors

The supervisor defines the objectives and takes responsibility for the education of the individual in training and should advise and guide the individual in order that the expectations of the initially proposed training may be fulfilled within the time allotted. Furthermore, the supervisor must provide the trainee with the best possible conditions for the development of their future scientific career.

1.5 Obligations of supervisors

The specific obligations of supervisors are as follows: a) to interact personally with trainees for whom they are responsible on a regular basis in order to supervise the tasks with which the trainees are entrusted and ensure that those tasks are correctly completed; b) to encourage regular meetings to discuss the progress of the assigned tasks and contribute to the scientific and technical development of the trainees; c) to monitor the working conditions and wellbeing of trainees and ensure that they receive appropriate support and health and safety training; d) to ensure their trainees receive proper training on good scientific practices; e) to provide trainees with up-to-date information regarding legal requirements affecting scientific activities (see Section 8); f) to lead by example and foster a prevailing culture of research integrity and mutual respect in their groups.

1.6 Rights and obligations of individuals in training

Supervisors should be especially diligent in ensuring that trainees are not involved in performing tasks outside those prescribed by their training and that they have no unjustified restriction in the publication of the results of their work, in particular in the case of collaboration with a company. Trainees should commit to taking full advantage of the educational opportunities offered by supervisors, centres and the PRBB community.

4. Training as a scientist; this includes undergraduate students, postgraduates, individuals with diploma-level education and others.

5. The term supervisor also refers to a tutor or thesis/project supervisor.

2. Preparation of research plans

2.1 Written projects subject to scrutiny by outside parties

All research projects that directly involve humans, experimental animals, or human embryonic material, must be formulated in a written research plan prior to their initiation. The text of the written plan must have been independently assessed by an ethics committee on clinical research and/or animal experimentation[6]. This text generally coincides with the written proposal necessary to obtain approval and funding[7].

2.2 Unacceptability of secret research

Under no circumstances should a research plan, or any part of it, remain secret. This stipulation differs from temporarily restricted access to certain research plans or parts thereof for reasons of competition and confidentiality.

2.3 Extension or modification of the research plan

In research involving humans, or experimental animals, or in some cases where the primary objectives of the research are extended or altered[8], or an unexpected or additional research question arises, a complementary written plan may be prepared prior to initiating research in that direction. If the implications of the new research question so require, the revised research plan must follow established procedures for external authorisation and supervision by the relevant committees.

2.4 Exceptionally urgent research

When situations relating to public health or safety require the immediate establishment and implementation of a research project, the start of research activities must nevertheless be supported by a research plan describing the procedures involved, albeit in a simplified form; this is especially applicable when that research involves human subjects or experimental animals. As far as possible, simplified research plans to be initiated urgently should nevertheless be externally reviewed and processed according to the normally required procedures for research plans.

2.5 Use of external equipment or facilities

In order to ensure appropriate use of resources, all research plans that involve the use of health service facilities or equipment designated for patient care, or of any research facilities or equipment not designated for the exclusive use of the research group, will require prior consent from the individual responsible for the facility or equipment that is to be used.

2.6 Collaborative research

When a planned research project involves the participation of several groups from the same or different centres, a formal agreement should be made where the terms of the collaboration are formalised in writing before initiating the definitive project[9]. Also, all partners must take responsibility for the integrity of the research and its results.

2.7 Gender and diversity perspective

Research projects must take into account and be sensitive to relevant

6. See Section 8.

7. A project proposal includes as a minimum requirement, the background to the project, specific objectives, proposed methods, a work plan including a predicted time scale, available and necessary resources, and the names of persons in the participating team. According to the type of study to be undertaken, the project proposal may also include ethical, legal and safety provisions, as well as a plan for the communication of the results of the study.

8. This would be the case, for instance, when stored biological material that is associated with identifying information on the source individuals is used for purposes other than those predicted in the original project proposal.

9. An appendix to the research project proposal might include the following: criteria defining the relationships between the different researchers involved and governing the exchange of information during the course of the project; the explicit distribution of responsibilities, rights, and obligations of the participating groups both in relation to the tasks to be undertaken and the results obtained; a plan for the presentation and communication of the results, as transparently and openly as possible; procedures for the storage and distribution of data and samples; prediction of possible commercial implications; stipulations relating to funding and resolution of conflicts.

differences among research participants, such as age, gender, sex, culture, religion, worldview, ethnicity, geographic location and social class, amongst others.

2.8 Registration of research involving human participants

All research projects involving human participants initiated after October 2013[10] should be registered in a publicly accessible database before recruitment of the first subject.

3. Data practices and data management: recording, documentation, storage, custody, and sharing of data and biological or chemical materials arising from research

Research institutions, organisations and researchers must ensure appropriate stewardship and curation of all data and research materials - including metadata, protocols, code, software, and others - following the points below:

3.1 Data collection and storage

All research plans must include a system for collection of data, registries, and biological or chemical material arising from the research, along with a data management plan (DMP) relating to their custody and storage.

3.2 Recording of data and alterations

Without exception, all data arising from experiments or research observations must be recorded in an accurate way to ensure traceability of the work. That information must remain permanently recorded in databases, registered notebooks, or other appropriate formats, in a condition that facilitates external review. The records must also include changes, errors and negative, unexpected, or conflicting results, as well as an indication of the person who performed the experiment or made the observation.

3.3 Storage of data

The necessary means and infrastructure must be provided by the institutions for correct storage and safekeeping of all documentation and biological or chemical material resulting from a research project. In the case of data recorded on electronic media, a specific plan will be included for the preparation and storage of backup copies

3.4 Custody and access to collected data

All individuals who belong to the research group must be able to access information on the data obtained and their interpretation. The individual responsible for the research will have a single record accessible to the relevant third parties of the locations of all samples and data-collection instruments (registered notebooks, databases, etc).

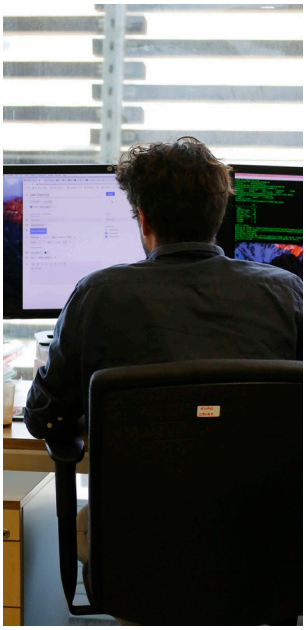
3.5 Ownership of data and samples

All primary documentation (registered data-collection notebooks, databases, etc.) and biological or chemical material obtained in the course of a research project is the property of the centre to which the person responsible for the research is affiliated[11]. Institutions and or-

10. World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects. JAMA. 2013;310(20):2191-2194. doi:10.1001/jama.2013.281053

11. This includes human tissue samples donated for research purposes. Although the tissue donor maintains the right to instruct if or when the tissue be destroyed, the material is the property of the research institute.

ganisations have therefore a role in facilitating the recording, storage, and safekeeping of that material, although the primary responsibility lies with the individual responsible for the project. Should a researcher change institutions, the individual responsible for the project may make available a copy of part or all of the records, and/or aliquots of available biological or chemical materials, provided such sharing is necessary. A Material Transfer Agreement must be signed for all human biological samples (blood, serum, DNA, tissues, etc). When the change involves the person responsible for the research, the director of the centre will take responsibility for supervising this process.



3.6 Sharing of data and samples with outside parties

Researchers, research institutions and organisations must ensure access to data is as open as possible and as closed as necessary. Where appropriate, data and materials arising from a research project must be publicly available and in a condition to be shared with outside parties in line with the FAIR Principles[12] (Findable, Accessible, Interoperable and Re-usable) for data management. Exceptions include cases where restrictions have been established on the basis of possible future commercial use.

Provision of data or materials will require 1) that information be provided on the intended use by the person who has requested them; 2) that the research group is aware of the request; 3) that there is a material or data transfer agreement with the approval of the individual responsible for the research; 4) and that the person making the request is willing to pay all possible costs of production and shipping. Sharing may be restricted for reasons of availability, competition, or confidentiality. Material or data obtained from human subjects must be shared in such a way that the subjects cannot be identified; if identification of individual subjects is possible, those individuals must first consent.

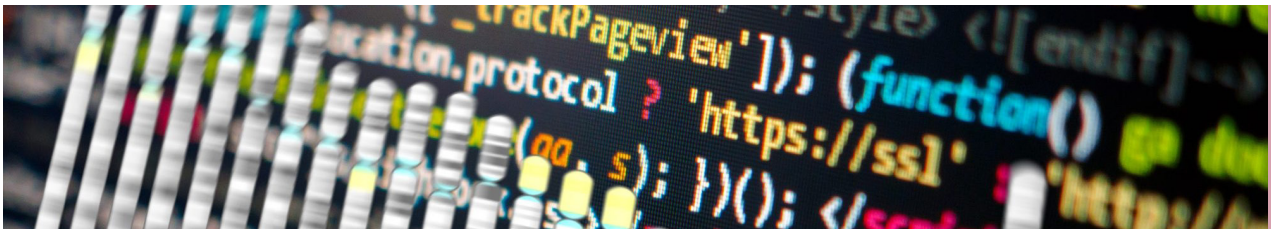
3.7 Length of storage of data and samples

All original primary information and biological and chemical material arising from a research project must be stored for a minimum of 5 years from the date of the first publication of the results, except in those cases in which the law allows shorter storage periods or requires longer periods to be applied. If the centre and the informed consent allow it, the primary information and material may remain stored for longer periods, provided their final destination meets the approval of the person responsible for the research.

3.8 Falsification and fabrication

Falsification and fabrication of data are research misconduct and serious offences. Falsification is the modification, incomplete or inaccurate reporting of findings in order to deceive. Fabrication is the intentional misrepresentation of research results by invention of data, findings or procedures that were not conducted (see also section 11).

12. See *https://www.go-fair.org/fair-principles/*

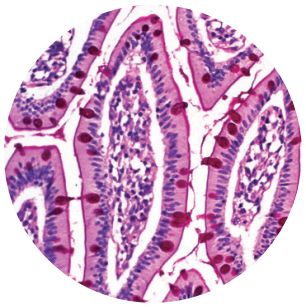


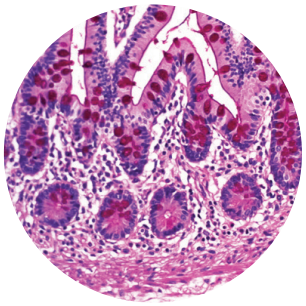
4. Research projects funded by the healthcare industry or other commercial enterprises

4.1 Transparency
When knowledge and technology is exchanged or provided to private enterprises, public interests must always take priority, and any agreements must be transparent.

4.2 Priority of interests
It is recommended that directors of the PRBB Centres establish a conflict of interest policy that includes guidance for their researchers on protection of intellectual freedom and avoidance of excessive confidentiality agreements or unjustified publication restrictions.

4.3 Intellectual property rights and economic compensation
When researchers participate in a project promoted by industry and make essential contributions to its design and execution, they must inform their affiliated centre and seek technology transfer advice to ensure that appropriate intellectual property rights agreements are negotiated. Such agreements also include all aspects of economic compensation directly or indirectly relating to the research and should be accessible to all parties involved in the agreement.





5. Publication and communication practices

5.1 Peer review of results
The results of scientific research must always be subject to peer scrutiny. Publication of results in journals or other media that apply a process of peer review is an essential part of the research project proposal.

5.2 Open Access
All researchers are encouraged to make their publications as openly accessible as possible. Research institutions and organisations are responsible for facilitating and encouraging this openness.

5.3 Protection of results with possible commercial interest
If the results of research could lead to inventions or applications that may be subject to protection on the basis of their commercial interest, the individual responsible for the research project should communicate this information to the leadership of their centre and manage the publication of the results in scientific journals accordingly.

5.4 Unpublished results
Failure to publish results of research, or excessive delay in publishing, should be avoided.

5.5 Negative results
It is both necessary and important to make every reasonable effort to publish negative results or results that differ from those predicted in the research project, especially in the case of clinical studies and epidemiological studies.

5.6 Fragmented publication
Intentional fragmented publication of a single piece of research should be avoided. Fragmentation is only justified by extension of the research.

5.7 Duplicate publication
Duplicate or redundant publication is an unacceptable practice. Secondary publication is only acceptable under the terms established in the guidelines of the International Committee of Medical Journal Editors ('Vancouver Group')[13].

5.8 Plagiarism and bibliographic references to third parties
Plagiarism, defined as the use or copying of ideas, text or data from other sources without acknowledgement, is research misconduct and unacceptable. Both in publications and in patent applications or utility models, it is necessary to cite all work directly related to a given piece of research and, in turn, to avoid unjustified or honorary citations. Reference to the work of others must include sufficient recognition of the value of that work (see also section 11).

5.9 Artificial Intelligence use
Researchers also report the use of external services or Artificial Intelligence and automated tools, in a way that is compatible with the accepted norms of the discipline and facilitates verification or replication, where applicable.

5.10 Acknowledgements
Authors acknowledge important work and contributions of those who do not meet the criteria for authorship, including collaborators, assistants, and funders who have enabled the research. The Acknowledgements section of a publication must follow strict principles. The individuals or institutions mentioned have the right to deny permission to be included. Some journals require that written authorisation be obtained from individuals acknowledged. The same principle is applicable to references to 'personal communication'.

5.11 Corrections
Authors promptly issue corrections or retract publications, if necessary, the reasons are stated, and authors are given credit for issuing corrections post-publication.

5.12 Institutional affiliation and acknowledgement of support
In conference presentations and all other types of presentation of results, the following must be declared: a) the institutions or centres to which the authors belong, or belonged, and in which the research was undertaken[14]; b) whenever applicable, the independent ethics committees who supervised the research protocol and the specific permission obtained; c) details of all funding received and any potential conflicts of interest.

5.13 Presentation in the mass media
The presentation of results in the mass media must always include an appropriate level of explanation for a non-specialist audience or a part of the presentation that has been adapted for the general public. They must also be transparent about assumptions influencing the research

13. For more detail on acceptable secondary publication see current ICMJE Recommendations, International Committee of Medical Journal Editors, *http://www.icmje.org*

14. Regarding multiple affiliations, we suggest following the CIR-CAT recommendations.

as well as any uncertainties and knowledge gaps. In such presentations, the names of the authors must always be linked to their institutions and, wherever possible, financial support and help received should be mentioned. Specific training and support should be provided to researchers so they can communicate to the mass media in an effective, appropriate and responsible way.

5.14 Premature communication through the media
All research results should be scrutinised by other scientists through peer review in scientific publications prior to their communication in the general media.

5.15 Use of publication record for purposes of research assessment
In assessments of individuals or groups involving analysis of scientific publications for the purposes of promotion or other forms of compensation, evaluation will always be based on the quality and potential importance of the scientific output, not simply on bibliometric parameters like the number of publications or the impact factor of the journal in which it is published, as recommended by the DORA declaration. They will also take into account diversity, inclusiveness, openness and collaboration, where relevant.

5.16 Communication to stakeholders
All groups who stand to benefit from the results of a research project or that are somehow involved in it have the right to be informed of the results of the research. In particular, interested study participants who provided samples and/or information, patient groups and other stakeholders should receive information about the outcome of the project in plain language.

6. Authorship of scientific articles, other publications, and patents

6.1 Who may be an author?
The status of author derives from the contribution made by the individual to the research; it is not dependent upon belonging to a given profession or on hierarchical position, nor to employment status.

6.2 Who should be an author?
To fully meet the criteria of author of a publication or patent, an individual must a) have made a substantial contribution to the creative process, that is, to the conception and design of the study, or to the collection, analysis and interpretation of the data; b) have contributed to the preparation of the communications, reports, or publications that have arisen; and c) be able to present in detail their contribution to the project and to discuss the main aspects of the overall research. It is recommended to openly discuss authorship at the onset of a project. All authors are fully responsible for the content of a publication, unless otherwise specified, and should confirm in writing their agreement with the final version of original manuscripts submitted for publication or registration.[15] The use of a contributor's role taxonomy is recommended.[16]

15. For more detail on authorship rules see ICMJE Recommendations, International Committee of Medical Journal Editors, *http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html*

16. For example CRediT: *http://credit.niso.org/*

6.3 Provision of data, expert reports, or experimental subjects

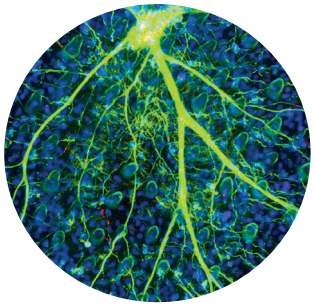
Mere participation in obtaining resources or in data collection, such as, for example, the provision of routine data or experimental subjects, does not necessarily justify the condition of author, although such involvement should be recognised in the Acknowledgements section. In studies involving the use of samples, analysis, or expert reports provided by third parties, it is advisable to establish a prior plan relating to communication and authorship in which the potential intellectual contribution to the project is taken into account along with any other elements relating to rights to authorship.

6.4 Honorary and ghost authorship

Any person linked to a research group who requests inclusion as an author on the basis of hierarchical position or professional relationship violates the principles of academic freedom and commits an act of injustice, if not abuse of authority. Likewise, the omission of names of any individuals who have made proven contributions according to the criteria in Section 6.2 represents an act of misappropriation of intellectual property on the part of the other authors.

6.5 Indication of authorship in reports

The preparation of memoranda, technical or work reports, or other written documents for the attention of outside parties must always indicate the authors of the research, the centre or centres with which they are affiliated, and the support received, in the same way as if the document were a scientific publication or patent.



6.6 Order of authorship

As a general rule, the order in which authors appear in scientific publications should be as follows: a) the first author should be the person who has made the greatest contribution to the study and has prepared the first draft of the article; b) the senior author who directed or has final responsibility for the research project appears as the last author; c) the remaining authors may appear in order of importance and, in certain cases, in alphabetical order. The corresponding author is responsible for dealing with the editorial process and future correspondence arising from the publication of the study.

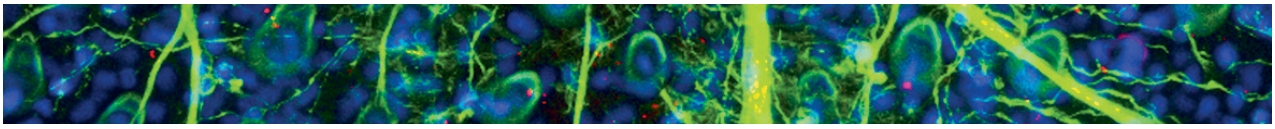
6.7 Shared main authorship

The right exists in scientific publications to justify the order in which authors appear and some journals request this as a condition of publication. When two or more authors have made an equal contribution to the same study and have shared responsibility for preparation of the manuscript, they will be considered as equal first authors. This condition will be made clear in the publication of the article. The same criteria may be applied to intermediate or senior authors.

6.8 Conflict of interest declarations

Conflicts of interest may be financial or personal and where possible should be avoided. If it is impossible to avoid them, conflicts of interest must be declared by all authors of an article.[17]

17. For more detail on conflict of interest see ICMJE Recommendations, International Committee of Medical Journal Editors, *http://www.icmje.org*



7. Peer review

7.1 The concept of peer review

Peer review is understood as all requests to an individual in their position of expert or similar status to undertake a specific assessment, examination, or evaluation of a manuscript submitted for publication, an individual or group grant proposal, a clinical or experimental protocol subject to assessment by an ethics committee, or a report arising from an on-site visit to a laboratory or centre. Researchers take seriously their commitment to peer review, and this work is recognised and rewarded by research institutions and organisations.

7.2 Peer review training

Training on how to perform a good peer review should be facilitated to all researchers, especially those in their early career.

7.3 Conflicts of interest

Reviews must be objective and based on scientific criteria rather than personal opinion and done in a transparent and justifiable manner. Reviews should be declined in the event of a conflict of interest—for instance, when there is a direct relationship between the author(s) and the reviewer or when the reviewer is in direct competition with the authors[17]—or if the invited reviewer does not consider that they are sufficiently prepared to perform the review.

7.4 Use and fate of documentation submitted for assessment

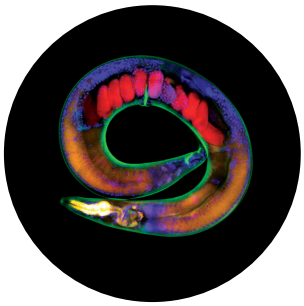
Reports and written documents that are subject to review are always confidential and represent privileged information. As a consequence, such documentation a) may not be used for the benefit of the reviewer until the information has been published; b) may not be shared with other colleagues except in specific circumstances or with the explicit permission of the editor or the authors/research organisation; c) may not be retained or copied except where this is allowed by those responsible for the editorial process or the research organisation for whom the review is requested. Common practice is to destroy or return the material once the review process is completed.

8. Main legal requirements affecting scientific activities

8.1 Responsibilities of the PRBB Centres

The directors of the centres must provide assurances to personnel that the infrastructure complies with legal requirements and that they have the relevant authorisation to undertake any scientific activity that is subject to specific regulations. Centres will keep up to date with relevant legislation and regulations in the following areas: scientific research involving human subjects, human embryonic material and storage of human biological samples in biobanks; the use of animals in scientific research; the use of, exposure to, and storage of radioactive material, genetically modified organisms, or any other potentially dangerous biological agent; the use of geolocation and other individual identification data.

17. For more detail on conflict of interest see ICMJE Recommendations, International Committee of Medical Journal Editors, *http://www.icmje.org*



8.2 Research involving human subjects
All research protocols, information sheets and informed consent forms involving the direct participation of human subjects or based on any form of information or biological samples obtained from such subjects must always have received, as a minimum requirement, approval from the corresponding clinical research ethics committee. Participants must also have been informed about how their data will be used, re-used, accessed, stored and deleted, in compliance with the EU General Data Protection Regulation (GDPR) or applicable data protection rules. When research involves patients, members of the research team who are not responsible for treating the study participants must collaborate and not interfere with any decisions made by the physician responsible for treatment.

8.3 Common requirements in all research involving human subjects and/or human biological samples
Particular diligence is required in relation to all information regarding the purpose, potential discomfort/inconvenience and risks, and the benefits of the research, in obtaining the express, specific, and written consent of the participants, and in attending to the confidentiality of data, samples, and results obtained. In addition, given that in clinical research the process of data collection is complex and cannot always be repeated, the research group must pay particular attention to the quality of data collection and the procedures for data storage.

8.4 Genetic research
All research protocols that include the collection, manipulation, and/or storage of biological samples for the purposes of genetic analysis will be prepared according to the applicable legislation. In particular, the privacy of the subjects and their right to be informed about their personal results must be guaranteed. The consent of the participating subjects can foresee the use of samples in other projects related to the initially proposed research. Consent must be renewed whenever biological samples are to be used for purposes other than those indicated in the informed consent at the time they were donated.

8.5 Research involving human embryonic material
All research plans that involve collection, manipulation, and/or storage of human embryonic material must receive the corresponding permission from the Spanish Ministry of Health or the applicable authority, following acceptance by the appropriate ethics committee for clinical research.

8.6 Research with human biological samples
All research involving the use of human tissue or other biological samples derived from humans requires the specific informed consent of the donor. Specific donor consent must also be given before research may be done on samples obtained as part of diagnostic or health care procedures.

8.7 Human samples
Storage, use and sharing of human biological samples of any kind, collected as part of a research project must comply with current legislation on biobanks and treatment of human biological samples for biomedical research. Where applicable, collections must be registered at the National Register of Biobanks of the Instituto de Salud Carlos III.

8.8 Protection of personal data
All research plans that involve the use of institutional computer records or the preparation of databases containing information relating to individuals must guarantee the anonymity of the participants and be subject to current regulations on data protection.

8.9 Research involving experimental animals
In accordance with national and European regulations, all procedures using animals must be previously approved by the Ethical Committee for Animal Research (CEEA-PRBB) or the applicable body. All animal protocols must be carried out in an accredited animal facility and by trained and accredited personnel.

8.10 Biosafety
All procedures involving the use of genetically modified organisms (GMOs) or biological agents or chemicals of special hazard should be presented for approval to the PRBB Biosafety Committee (CBS-PRBB) or the applicable body, which will undertake a risk assessment of the experiment within the context of the proposed research setting and equipment.

8.11 Good laboratory practice
Non-clinical studies intended to test health or environmental safety and in which results must be presented to the competent regulatory authorities must be performed in accordance with current legislation on good laboratory practice.

9. The PRBB Good Scientific Practice Working Group

9.1 Definition
The GSP Working Group is made up of nominated representatives of all PRBB Centres. The aim of the group is: *To actively share learning and good practice in scientific integrity amongst PRBB institutes, to catalyse the development of cross-institute educational initiatives and to act as an independent support and resource for PRBB institutions in cases of research misconduct, if so required by the institutions.*[18]

9.2 Contacting the PRBB GSP Working Group
The GSP Working Group Chairperson and Secretary can be contacted at *goodpractice@prbb.org.*

10. Commitment to dissemination and implementation

10.1 Dissemination
The leadership of each PRBB Centre will distribute the new PRBB Code of Good Scientific Practice to all personnel, in particular to any new members when they join the centre. In both cases, individuals will be required to confirm receipt of their copy. The PRBB Centres will maintain a record of the provision of the Code of Good Scientific Practice, including the date of receipt and the name of the individual. Likewise, the PRBB Centres will post a link to the current contents of

18. Full Terms of Reference and membership of the GSP Working Group can be consulted at *https://www.prbb.org/ciencia.php#Buenas-practicas*

the Code of Good Scientific Practice on their website so that they will be readily available and can be freely consulted.

10.2 Implementation

The PRBB GSP Working Group will oversee the regular review and discussion of the contents of the Code of Good Scientific Practice as part of postgraduate studies and activities undertaken by trainee scientists and other staff affiliated with PRBB Centres.

11. Violations of research integrity

11.1 Transparency

All centres at the PRBB should have clear policies and procedures on good research practice and the transparent handling of suspected research misconduct. These should include the assumption of innocence until proven otherwise, as well as the protection of *bona fide* whistleblowers.

11.2 Definitions

Research misconduct is traditionally defined as fabrication, falsification, or plagiarism (the so-called FFP categorisation) in proposing, performing, or reviewing research, or in reporting research results. However, there are further violations of good research practice that damage the integrity of the research process or of researchers: data embellishment even without the intention of deceiving, manipulating authorship, citing selectively, withholding results, etc. For more examples see section 3 of the ALLEA code.

11.3 Procedures in case of misconduct

In the event of inquiries concerned with good scientific practice, each PRBB Centre has nominated the contact person(s) indicated in their internal rules (for the purposes of this Code, GSP Centre Contacts). Any member of staff working in a PRBB Centre who has an enquiry regarding good practice should follow their centres' research integrity protocol[19] or contact the Centre Contact of their affiliated institution in the first instance. In the rare event of an issue that cannot be resolved by the centre(s), and if requested by that centre(s), an ad-hoc committee with representation from all PRBB Centres may be constituted under the leadership of the Director of the PRBB. The participation of PRBB centers on such ad-hoc Committee remains voluntary.

11.4 External advice

Alternatively, any concerns can be addressed to CIR-CAT[20] (Catalan Committee for the Integrity of Research), a consultative independent body at the Catalan level, or to any other applicable body.

19. The policies and procedures to be followed at each centre can be found on the following websites:
ISGlobal:
https://www.isglobal.org/en/research-integrity
CRG:
https://crgcnag.sharepoint.com/sites/intranet_policies_regulations
MELIS-UPF:
https://www.upf.edu/recercaupf/etica
IBE (UPF-CSIC):
https://www.ibe.upf-csic.es/organisation/good-practices
Hospital del Mar Research Institute:
https://www.imim.cat/comitesetics/cir/en_index.html
FPM/BBRC:
https://www.barcelonabeta.org/index.php/en/bbrc-research-center/commitment

20. The CIR-CAT can be contacted at *bustia.circat.reu@gencat.cat*

Code of Good Scientific Practice of the PRBB
First edition: July 2000
Second edition: June 2002
Third edition: February 2007
Fourth edition: January 2009
Fifth edition: October 2014
Sixth edition: November 2023

Images:
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Adam Klosin (CRG), Josep Lloreta (IMIM), Masha Plyuscheva (CRG)

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