IBEC
Institute for Bioengineering of Catalonia

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HR EXCELLENCE IN RESEARCH

IBEC Code of conduct for research integrity

Content

IBEC Code of Conduct for Research Integrity

Introduction

The research community and the community at large rightly expect adherence to exemplary standards of intellectual honesty in the formulation, conduct, and reporting of scientific research.

Researchers themselves also benefit from a culture of integrity and constructive mutual relationships: if they can trust their colleagues worldwide, they will feel free to cooperate in a fruitful manner and will cherish creativity. Similarly, the academic community as a whole is dependent on their reliability and honesty in the eyes of society.

IBEC is a research centre whose purpose is to carry out interdisciplinary research at the highest international quality level which, by creating knowledge, helps to improve health and quality of life and generate wealth.

Consequently, IBEC has the responsibility to ensure that its research environment fosters the generation of new knowledge and preserves the integrity of its research and the trust and confidence the public have in research.

At IBEC, good practice in research forms an integral part of its research strategy. Scientific and Social Responsibility is one of IBEC's values [1], guiding us in our working life.

This Scientific and Social Responsibility is understood at IBEC as commitment to the profession, and thus acting according to principles of good faith, integrity, honesty and transparent communication, seeking and maintaining an ethical code of clear behavior, and adhering to best practices in science. It is based on the individual assuming the consequences of decisions he or she makes, being aware of and responsible for them, and reporting them where necessary. It makes scientific freedom possible and helps us stay reliable and relevant in the research world.

IBEC adheres to the principles of the European Charter for Researchers, where general principles and requirements such as ethical principles and professional responsibility and attitudes are defined for researchers as well as of employers.

Purpose

Whilst the ultimate responsibility for good research practice lies with the individual researcher, IBEC understands that safeguarding research integrity is a shared task within the research community, hence this Code of Conduct for Research Integrity.

The Code is a framework for good research practice, setting the criteria for proper research behavior and establishing an environment conducive to high-quality research, thus ensuring that research is conducted according to international ethical standards.

The Code sets out the ethical standards and standards of research conduct of those engaged in research, and sets out principles, recommendations and commitments.

The Code complements IBEC policies and procedures such as those for health and safety, working conditions, intellectual property, and does not replace them. Its content is complementary to the laws in force.

Together with the promotion of the Code, IBEC wants to take a proactive role providing training to researchers in this respect throughout their careers and raising awareness on the subject, thus preventing future problems.

1 http://ibecbarcelona.eu/about-us/our-missions-2/

Scope

The Code of Conduct for Research Integrity applies to and should be known by all professionals linked to IBEC at all career stages, from Group Leaders to students, technicians or support members, including employees, affiliated researchers, associated researchers, PhD students, visiting scientists, collaborators under a collaboration agreement with another institution, or individuals associated with IBEC that are authorized to use facilities, funds and/or services when engaging in research activities. They should all be familiar with its content.

All professionals linked to IBEC should:

a) recognize their responsibility to conduct research of high ethical standards (ethical scientific research encompasses all stages of the research life cycle, ranging from proposal to dissemination);
b) be aware of IBEC's Code of Conduct for Research In tegrity;
c) make sure that their research complies with the code, and seek guidance from IBEC (the commission of research integrity) when necessary;
d) undergo training to carry out their duties and to develop their knowledge and skills throughout their career.

This Code doesn't cover all the regulations in detail. Instead, it provides a framework to guide researchers introducing the main relevant issues and topics, and where useful or necessary, refers to further reading. By making clear the conduct that is expected and considered effective, the Code contributes to an atmosphere of openness. It is a living document that will be updated on a regular basis. The most up-to-date version can be accessed on the intranet at Public Files/Code of Conduct for Research Integrity.

Supervision of researchers

Researchers involved in the supervision and development of other researchers should be aware of their responsibilities and ensure that they have the necessary training, time and resources to carry out that role.

Obligations of supervisors with their team members, especially with first stage researchers (R1) and new members:

a) to interact personally with them;
b) to supervise the tasks and ensure they are completed;
c) to organize regular meetings to discuss the progress;
d) to monitor the working conditions of his/her team members;
e) to mentor them and offer specific guidance;
f) to ensure that they receive appropriate training to develop their research;
g) to encourage their career development;
h) to foster a culture of research integrity;
i) to provide them with up-to-date information regarding legal requirements affecting scientific activities.

Collaborative research

As a part of its open innovation and internationalization strategies, IBEC fosters research in collaboration with its global network of partnerships with world-class research centres, hospitals and companies. Thus, IBEC will ensure that ethical principles are respected no matter where the research is physically carried out.

Collaboration between groups, either in our country or cross-border, should be formalized with the limits, terms and processes of the collaboration at the planning stage of the project.

It is recommended to include the following aspects in the research project proposal:

- definition of the relationships between the different researchers involved and the exchange of information during the project;
- distribution of responsibilities, rights, and obligations of the researchers involved both in relation to the tasks to be undertaken and the results obtained (i.e. intellectual property or publication);
- plan for the presentation and communication of the results;
- procedures for the storage and distribution of data and samples;
- prediction of possible commercial implications;
- relevant requirements on research integrity, misconduct and resolution of conflicts;
- stipulations relating to funding.

Use of resources

IBEC, as a foundation of the public sector, works under standards of transparency following the Charter of Fundamental Rights of the European Union and the Spanish Transparency, Public Access to Information and Good Governance Law. The law aims to transparency in public activity, guarantees access to information and establishes the obligations of good governance.

Researchers make proper and conscientious use of research funds in accordance with the principles of effectiveness and efficiency, responsibility and proper management to reach IBEC's ultimate goal of promoting better health and quality of life.

Researchers should take care to ensure that IBEC's public and professional reputation is not jeopardized. This is achieved, at the most fundamental level, by not entering into research agreements with individuals or groups who are engaged in illegal activities.

Specifically, when considering undertaking research for an external funder, researchers should take into account that no research should be undertaken that is knowingly (at the time the agreement was being negotiated and confirmed) supported by resources secured illegally.

Transparency and primacy of public interest needs to be fulfilled not only in publicly funded research but also in every collaborative partnership with another entity or company involving economic benefits.

Use of external infrastructures

The use of facilities and equipment requires the explicit consent of the institution (either IBEC or an external institution) who owns and runs the facility to guarantee work safety and proper use.

Conflicts of interest

A conflict of interest is a situation in which financial or other personal interests have the potential to compromise a researcher's professional judgment and objectivity in the design, conduct or reporting of research.

Conflicts of interest involve the use of a person's authority for personal, professional and/or financial gain. The consequence of conflicts of interest is the bias and loss of objectivity in research.

An academic conflict of interest could occur if an individual interferes with the peer-review process for some type of personal gain [2].

Conflict of interest may also occur when the research is sponsored by an institution that may prefer one outcome of the research to another [3]. These conflicts should be stated in any communication of the research results.

Researchers acting as peer reviewers must declare any relevant conflicts of interest. Likewise, researchers involved in dealing with violations and allegations of misconduct must declare any conflict of interest that may arise during the investigation.

In case a person which participates in an evaluation panel of a selection process finds there is a conflict of interest with any of the candidates will have no vote in the evaluation of this candidate.

Publications and scientific communications

Obligation to communicate science

In line with IBEC's mission, it is considered morally imperative to honestly publish and disseminate the results of the research carried out at IBEC, and this may include negative results. Scientific communication includes many channels: peer review publications, scientific conferences, press releases, interviews, outreach events, etc.

In any case, scientific dissemination should be made in a professional and accurate manner.

Peer review publications or scientific conferences will be the preferred manner prior to communication to the media or the general public.

In the communication with the media, authors should be rigorous in avoiding creating false expectations regarding the applications of IBEC findings to health or the market.

Open access

The global shift towards making research findings available free of charge for readers, so-called 'Open access', has been a core strategy in the European Commission to improve knowledge circulation and thus innovation. It is also covered in the Spanish Law of Science, Technology and Innovation from 2011.

IBEC needs to ensure that their publications are available to the whole community either by using open access journals or open version of regular journals or by storing them in public repositories.

2 For example, bias can cause a reviewer to respond positively to a manuscript because it presents results favoring a method or production in which the reviewer has a personal interest, or a reviewer may act to delay the publication of a competitor's manuscript to strengthen his or her own chances for publication or funding.

3 For example, with contracts with the industry or when researchers act as consultant

Content, authorship and acknowledgements

IBEC is fully aligned with the European Code of Conduct for Research Integrity, specifically to what refers to publications and authorship:

- All authors are fully responsible for the content of a publication.
- Authorship is based on a significant contribution to the design of the research, relevant data collection, or the analysis or interpretation of the results. Each author should be able to state its particular contribution to the publication. Honorary (including a person only on the basis of hierarchical position or professional relationship) and ghost (omitting a person that has significantly contributed to the results) are unacceptable practices.

  As a general rule, the order of authors should be as follows:

  a) the first author should be the person who has made the greatest contribution to generating the results of the study;
  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;
  d) The corresponding author is responsible for dealing with the editorial process and future correspondence arising from the publication of the study. In some cases, it denotes seniority in the development of the research.

  To indicate shared responsibility in generating the results of a study, or in the leadership of a project, main or corresponding authorship (respectively) can be shared among more than one author. In this case it has to be indicated in the publication. The researcher, when submitting the publication for consideration, should be aware of the conventions of authorship in use by the chosen journal.
- Authors acknowledge important work and intellectual contributions of others, including collaborators, assistants, and funders, and cite related work correctly.
- All authors disclose any conflicts of interest and financial or other types of support (see section Conflicts of Interest).

Peer review

Peer review is an important part of good practice.

Peer review means all requests to an individual in their position of expert to undertake an assessment, examination, or criticism 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 center. IBEC encourages researchers to act as peer reviewers.

Researchers who carry out peer review should do so to the highest standards of thoroughness and objectivity:

- Reviewers maintain confidentiality unless there is prior approval for disclosure.
- Researchers don't retain or copy any material under review without the express permission of the organisation which requested the review. They should not make use of research designs or research findings from a paper under review without the express permission of the author(s).
- While carrying out peer review, researchers may become aware of possible misconduct, such as plagiarism, fabrication or falsification, or have ethical concerns about the design or conduct of the research. In such cases they should inform, in confidence, an appropriate representative of the organisation which requested the review, such as the editor of the journal or chair of the grants or ethics committee.

Ethics in research

Within IBEC, all research activities respect fundamental ethical principles, as well as national legislation, relevant EU legislation and standards, international conventions and directives, and the opinions of the European Group on Ethics and Protection of Animals (e.g. 99/167/EC: Council Decision of 25/1/99 and EC Directive 86/609). National and local committees that judge the ethical aspects of the intended experiments have to give their explicit approval before any experiment starts.

Protection and confidentiality of human data

The use of human subjects (healthy and not healthy) in the research projects of IBEC will be done with the corresponding approval of their ethics committee.

The principles of anonymity and confidentiality of patients and their data will be adhered to throughout and being stored with an identifier, which does not identify the subject. There will be no collection or analysis of personal data as defined in the guidance coming from "Article 2(a) of EU Directive 95/46/EC" and not falling under the data privacy rules.

As a general practice, informed consent will be gained from all patients in the different phases of the projects and being all of them fully aware that they are free to withdraw from the research at any time. The consent will be given for a specific project and purpose. It will be necessary to sign a new informed consent for different purposes.

The identity, as well as any other type of information, regarding human volunteers and (if relevant) patients is treated as strictly confidential. Procedures to ensure the protection and confidentiality of data are based on sample anonymization, during which the physician in charge at the collaborating hospitals encrypts the samples and stores the personal data of the donors and the encryption code in manual files in a secured cabinet. Only limited anonymized data which is sufficient to describe the pathological state of the supplied tissue is provided to the tissue recipient.

For the secondary use of the research data, all direct identifiers (name, address, ID) or indirect identifiers (workplace, place of residence, age, profession etc.) will be removed or otherwise masked.

Human samples

Sourcing human samples requires ethical permission and informed consent. For each project, written informed consent is obtained by the investigator from all subjects prior to any protocol-specific procedure. Healthy donors and patients involved will be interviewed and informed of all the research activities to be performed with their materials, and then asked to sign informed consent before the beginning of the experiment.

Human samples may only be preserved as long as it is necessary for the particular research project.

Human embryonic material

Regarding the use of human embryonic stem cells and human induced pluripotent stem cells, according to the current legislation in Spain, the Law 14/2007, of 3 July, on Biomedical Research and the Royal Decree 1527/2010 of November 15th, by regulating the Guarantee Commission for the Donation and Use of Human Cells and Tissues and the Register of Research Projects, any researcher that aims to perform research involving pluripotent cell lines (hESCS/hiPSC,generation or use) must have the corresponding research project approved by the competent authority (Department of Health of the Government of Catalonia). For this reason all projects involving human pluripotent stem cells use or human induced pluripotent stem cell line derivation are first presented to the organisms authorized by the government, and after further approval to the Commission of Guarantees for the Donation and Utilization of Human Cells and Tissues from the Instituto de Salud Carlos III-Ministry of Science, to finally obtain approval by the Department of Health of the Government of Catalonia.

Research involving genetically modified organisms

All research procedures involving experimentation with genetically modified organisms must comply with Royal Decree 178/2004 of January 30th, which approves the general Regulation for the development and implementation of Law 9/2003, of April 25th, by which the legal regime is established regarding the confined use, voluntary liberation and commercialization of genetically modified organisms, and other legal provisions that may be applicable.

Animal experiments

All experiments involving animals will be registered with and approved by an Ethical Committee on Animal Experiments. All animal experimentation carried out at IBEC shall be performed according to the existing European legal framework for the protection of laboratory animals (Dir. 86/609/EEC and the European Convention for the Protection of Vertebrate Animals used for experimental and other scientific purposes).

IBEC will respect the principles of Reduction, Refinement and Replacement (Amsterdam Protocol).

Data management

Transparency and primacy of public interest must also rule the management of the data and materials arising from a research project to facilitate external review and scientific collaboration.

All data and materials arising from a research carried out in IBEC or by people linked to IBEC is the property of IBEC and has to be at the disposal of IBEC staff if required.

All data and materials arising from experiments must be accurately recorded and safely stored respecting ethical principles for a period of at least 5 years from the date of the first publication of the results, except human biological material, that will be stored only until the end of the specific research project. The records must also include changes, errors, and negative, unexpected, or conflicting results as well as an indication of the person who made or observed them and the equipment and procedures used.

The ultimate responsible of the collection and storage will be the group leader of the research group where the experiment is carried out. He/she will be responsible to identify and keep data and materials from people leaving the institution.

In case of collaboration with other research institutions, an agreement will be set to regulate the transfer of data and materials.

In case that the group leader change institutions, the process of change and possible transfers of knowledge, materials or equipment derived from the research of the group shall be carried out under the responsibility, supervision and approval of IBEC.

Unless duly justified in terms of privacy, intellectual property, future commercial use or interest for the project, data and materials resulting from a research project should be publicly available and in a condition to be shared with third parties.

Misconduct, unacceptable practices and violation of research integrity

When the integrity of research fails, that is termed research misconduct.

Everybody can commit misconduct, and researchers have to self-regulate themselves to make sure they do what is right, even when it is difficult.

Research misconduct is described as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.

Specifically:

a) Fabrication is making up data or results and recording or reporting them as if they were real;
b) Falsification is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record;
c) Plagiarism is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit to the original source, thus violating the rights of the original author(s) to their intellectual outputs.

Research misconduct does not include honest error or differences of opinion.

Individual or collective research misconduct can cover a broad spectrum of acts which ranges from a carelessness research or unconscious biases to fraud going through and questionable research practices. Unacceptable or questionable research practices include, but are not confined to the following examples:

- Manipulating authorship or denigrating the role of other researchers in publications;
- Re-publishing substantive parts of one's own earlier publications, without duly acknowledging or citing the original ('self-plagiarism');
- Citing selectively to enhance own findings or to please editors, reviewers or colleagues;
- Conducting research in humans without informed consent or without justifying why consent was not obtained from an ethics committee;
- Not disclosing a conflict of interest;
- Withholding research results;
- Secrecy of a research plan or any part of such plan. Differs from restriction of access for reasons of competition or confidentiality;
- Accusing a researcher of misconduct or other violations in a malicious way;
- When writing a paper, expressly excluding those results that contradict your main hypothesis;
- Exaggerating the importance and practical applicability of findings;
- Delaying or inappropriately hampering the work of other researchers.

IBEC is intended to enable allegations of research misconduct to be processed fairly, confidentially, and promptly.

When dealing with research misconduct following principles must be followed:

- Disclosure of the identity of the person who made an allegation and the person accused of research misconduct is limited to those who need to know, to protect those involved in the investigation.
- Anyone accused of research misconduct is presumed innocent.
- No person should suffer any unnecessary penalty when accused of research misconduct before the allegation is proven.
- The rights of 'whistleblowers' will be protected during investigations and ensure that their career prospects are not endangered.

Allegations of research misconduct are handled through a two-stage process:

1. **Assessment** of the allegation:
   a) If a person is unsure whether a suspected incident is considered research misconduct, he/she may also contact any member of the Commission for Research Integrity or the Human Resources Unit to discuss it informally and confidentially.
   b) **Allegations** of research misconduct may be communicated through any means to any member of the Commission for Research Integrity or the Head of the Human Resources Unit, who will determine whether the situation could be treated in the HR Unit or will be referred to the Commission for Research Integrity or to the Commission for Harassment Prevention and Treatment (CoPTA). Where possible, the allegation should be provided in sufficient detail to enable the commission to assess it appropriately.

      The Commission for Research Integrity appoints an Instructor [4] who usually interviews the parties and key witnesses, as well as examining relevant research records and materials.

      Based on the information recapped by the Instructor, the Commission will decide if the situation falls within the definition of research misconduct and, in consequence, decides to start an investigation or not.

      Allegations of misconduct may also refer to any person that has left IBEC.

2. **Investigation**:

   The purpose of the investigation is to develop a record by exploring the allegation(s) in detail and examining the evidence in depth, leading to recommended findings on whether research misconduct has been committed, by whom, and to what extent.

   The Commission for Research Integrity is responsible for preparing a written report for the Investigation, which includes a statement of findings.

   The Commission will determine any recommended actions to be taken, if any, in response to accepted findings of research misconduct. When a final decision has been reached, the Commission will notify the person who made an allegation and the person accused of misconduct.

   If the Commission decides that the investigation is outside its field or cannot be analyzed with sufficient impartiality it will be derived to be dealt with by an external experienced committee.

Sanctions:

Sanctions against individuals will need to be considered on a case-by-case basis and in any case, will be proportionate to the severity of the violation.

Sanctions depend on the seriousness of misconduct (intent, consequences, mitigating factors): ranging from a written letter of reprimand or warning, retraction or correction of published papers, termination of a grant or exclusion of the individual from applying for further grants, to dismissal.

The entire process and possible consequent sanctions will help encourage good practice and reassures the public that IBEC takes the issue of research misconduct seriously.

4 He/she can be a member of the Commission, or a member of IBEC or someone external to IBEC

IBEC commission for Research Integrity: roles and responsibilities

The Commission for Research Integrity is a body with a double role: on the one hand it has an advisory role; on the other it makes decisions on misconduct cases.

Its main responsibilities are:

- To promote and safeguard good research practice at IBEC.
- To deal with allegations of research misconduct.
- To promote awareness and training for researchers at all career stages.
- To monitor compliance with the Code and update it regularly.

The Commission is formed by a gender balanced team with the following members: the Director, the Managing Director, the Head of the Strategic Initiatives Unit, three Group Leaders, one senior researcher, one postdoctoral researcher and one PhD student.

The members of the Commission shall be appointed for a period of three years. One of the Commission members will be appointed as a Secretary.

The Secretary of the Commission will have the same responsibilities mentioned above, plus:

- receiving and managing in the first instance, consultations sent via email.
- preparing the report and guarding records of the assessment of the allegation of misconduct and the investigation.

IBEC is committed to informing and making this Code available to the IBEC community.

The Code is published on IBEC's web page: www.ibecbarcelona.eu/charterandcode/integrity

Contact email integrity@ibecbarcelona.eu. Communications via this email will be received by the Secretary of the Commission.

References

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