

Achucarro Basque Center for Neuroscience  
**Code of Good Scientific Practice**

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## 1. Foreword

The research process fundamentally relies on the integrity and trust between researchers, research stake holders, and society in general. This trust is founded in ethical conventions, called Rules of Good Scientific Practice that researchers respect. Most of the rules are common-sense and intuitive, whereas others may not be straightforward, and may vary between research institutions and laboratories. Although the rules of good scientific practice are usually not legally binding, they are of outmost importance, and breaching them is commonly associated with direct and measurable consequences. To uphold and encourage good work practices, research facilities increasingly formulate and openly state the rules and principles under which they operate.

Achucarro Basque Centre for Neuroscience (hereinafter, ACHUCARRO) strives to carry out scientific activities to the highest international standards. Our aim is to create and maintain a working atmosphere conducive to high-quality research and collaboration between scientists in a trustworthy, all-inclusive and non-discriminatory manner.

The present document called “*ACHUCARRO Code of Good Scientific Practice*” (*GSP Code*) represents the set of principles underlying the scientific activities at our organisation. It complements and extends documents and policies that we have previously endorsed and implemented (see Annex A). The *GSP Code* was firstly drafted by the general manager of ACHUCARRO Jaime Sagarduy and the researchers Maria Kukley and Jan Tønnesen, with valuable input from the members of the ACHUCARRO Steering Board. Then was reviewed by the Scientific Director – Ignacio Torres Alemán, then assessed by Juan M, Encinas, Mazahir T. Hasan and Jan Tønnesen.

It is based on the similar documents from other research organizations, specifically:

- Code of Good Scientific Practice of the Barcelona Biomedical Research Park
- Guidelines for Safeguarding Good Research Practice of the German Research Foundation

## 2. The ACHUCARRO Good Scientific Practice Working Group

The GSP Working Group at ACHUCARRO is made up of nominated representatives. The aim of the group is to formulate and disseminate the rules of good work practice and scientific integrity within ACHUCARRO, to implement the development of educational initiatives and to act as an independent support and consultancy panel in cases of scientific misconduct or professional conflicts.

The Code of Good Scientific Practice will be regularly updated in response to feedback, and to incorporate any changing tendencies in ethical work conducts of society in general.

The members of this Working Group will be published and updated in the AchucarroWIKI.

## 3. The ACHUCARRO Code of Good Scientific Practice

### Part 1: Professional ethics

#### **Principle 1: Commitment to implementation and dissemination of the GSP Code**

Each member of ACHUCARRO, independently of career level, is encouraged to familiarise themselves with the GSP Code and to commit to its implementation. Senior researchers are responsible for disseminating this document to junior researchers. Each group leader makes sure that all members of her/his group have read and understood the context and contents of the GSP Code.

#### **Principle 2: Creating inspiring working environment**

Work environment directly influences the quality and quantity of work of researchers at all levels.

ACHUCARRO encourages the employees to develop professional relationships based on trust, to maintain open communication, to appreciate efficiency at work, and to foster new ideas. The centre was recently awarded the "HR Excellence in Research" by the European Commission, acknowledging its formal commitment to provide a supportive environment for its staff.

ACHUCARRO strives to offer a family-friendly work schedule for employees by offering employees the opportunity to work remotely and freely choose the time frame for completing the contractual 8-hours working day.

ACHUCARRO plans to put increasing focus on fostering social interactions, for example through retreats and informal social events.

ACHUARRO staff are encouraged to respect the 37,5-hour work week; working late hours, weekends, and official holidays should be considered a last resort. The project work plans must be designed accordingly. Electronic communications (by e-mail, WhatsApp, Telegram, etc.) can be sent at any hour, but employees are free to disregard these outside normal work hours. Employee requests to not receive work-related communications outside regular work hours must be respected.

### **Principle 3: Mentoring, coaching and conflict solving**

Mentoring, coaching and general conflict solving are additional activities to a given PI's obligation to train younger scientist in all the aspects of the scientific career (including experimental design, data collection and analysis, presentation and discussion of results, divulgation, problem solving and career development).

ACHUCARRO offers all employees a workplace mentoring program and encourages senior researchers to participate as mentors and junior researchers as mentees. The goal of the mentoring program is to help junior researchers grow and develop their skills, to discuss opportunities for career advancement within and outside the academia, to help establishing professional networks, and to provide coaching in case of doubts and problems. These and other goals may be specifically defined by each mentor-mentee pair depending on what the mentee wants to achieve.

In the event of issues related to the good scientific practice, any Achucarro staff is encouraged to seek to resolve this through open dialogue with all involved parties. If the issue persists staff is advised to seek the advice of the ACHUCARRO Good Scientific Practice Working Group.

In the event of an issue or problem that cannot be resolved within the ACHUCARRO, an impartial ad-hoc committee or ombudsman may be appointed, preferably in agreement with all involved parties.

## **Part 2: Organization and supervision of the research work**

### **Principle 4: Organizational and management responsibility of the Scientific Director**

The responsibility of the Scientific Director of ACHUCARRO is to define the research strategy of the centre on the medium to long time scale, to take key decisions regarding changes in staff composition (including hiring and contract termination), and to work for the continuous development of the centre, in terms of economy, infrastructure, scientific quality and visibility. The Scientific Director must further assure 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.

The Scientific Director keeps up to date and informs the employees regarding 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.

### **Principle 5: Responsibility of the Steering Board**

The responsibility of the Steering Board is to raise and discuss specific or general matters relevant for the ACHUCARRO, and to serve as a consultant body to the director.

### **Principle 6: Responsibility of the Research Group Leaders and the Project Leaders**

Each Research Group Leader, or each Project Leader, takes responsibility for the junior scientists (master and rotation students, pre-doctoral and postdoctoral researchers, national and international exchange scientists) and the technical personnel assigned to his/her group or project, and is considered as the Research Advisor. The Research Advisor strives to provide the best possible work and career development conditions for his/her scientific and technical employees. Specifically, the Research Advisor:

- Ensures that the employees receive appropriate health and safety training (including first-aid, biosafety, laser security) before starting their work, and monitors that working conditions are at all times suitable for each employee in accordance with actual individual health conditions (considering persons with chronic illness, pregnant women, persons with disabilities, etc.);
- Provides the trainees with up-to-date information regarding legal requirements affecting scientific activities;

- Directly interacts with his/her scientific and technical employees on a regular basis in order to advise on the assigned tasks and to ensure that those tasks are completed;
- Encourages presentation of project progress reports by junior scientists at the regular meetings of the Research Group and/or at the Internal Seminars of ACHUCARRO, in order to get constructive input from the colleagues and to ensure best possible flow and development of the research project;
- Ensures that junior scientist enrolled into the University Programs in parallel to working in the lab have sufficient time to attend lectures/seminars and to study for their courses;
- Ensures that employees are not unwillingly involved in the activities that are not assigned to them within their working contract or training agreement (e.g. teaching load is minimized for scientists joining the lab solely for research purpose, participation in collaborative projects with industry that put restrictions on data publishing is minimized for scientists who aim to publish their research findings, etc.);
- Makes certain that the total number of scientific and technical employees for whom they act as the Research Advisor is compatible with the extent of all his/her obligations and commitments.

ACHUCARRO has defined the "Letter of Understanding" to explicitly state the mutual expectations of the Research Advisor and scientific/technical employees (see Annex 1). Both parties are encouraged to sign the "Letter of Understanding" before starting to work together.

## **Part 3: Designing, performing, and documenting the research work**

### **Principle 7: Research design and preparation of research plans**

Success of research projects depends on the quality of research design. Hence, the responsibility of researchers is to define the major goal, to formulate the objectives, and to determine the initial experimental steps for each project, upon familiarising themselves with available knowledge on the topic.

All researchers involved in a project, independently of their experience and academic rank, are encouraged to participate in the design of research plans. When research project involves several scientists from different research groups (within ACHUCARRO or external institutions) all parties are encouraged to contribute to the research design. It is recommended that the terms and conditions of collaboration are formalised in writing before the start of the project.

As a rule, all research plans are subject to evaluation by independent external reviewers before initiation of the work. Exceptions may be considered for pilot projects for the reason of confidentiality or external competition.

Exceptionally urgent research may be considered when situations relating to public health or safety require an immediate action. In this case, a well-grounded research design may be presented in a concise form. If internal evaluation of the research plans is required, it should be prioritised and carried out in a time-efficient mode.

### **Principle 8: Research materials and research subjects**

Research projects may involve living human subjects, fluid or biopsy material from living human subjects, human embryonic material, post-mortem human tissue, experimental animals, crustaceans, insects, or plants. The leaders of the projects involving these subjects and materials are responsible for obtaining a written approval of all experimental steps by the Ethics Committee on Clinical Research and/or Animal Experimentation of the Basque Country ("*Comité de Ética de la UPV/EHU*"), prior to project initiation.

Living human subjects, fluid or biopsy material from those: Project leaders are responsible for registering all research projects involving human participants initiated after October 2013 in a publicly accessible database before recruitment of the first subject. Collecting, use, sharing and storage of human biological samples (biopsy material, body fluids, etc.) is done only upon written agreement of the donor ("*Consentimiento informado*"), and must comply with current legislation on Biobanks and treatment of human biological samples for biomedical research.



Decision regarding access to and use of personal data and clinical history of human subjects (patients, volunteers) is done upon mutual agreement of clinicians and the principal research investigator. Both parties are responsible for accurate information sharing with the employees working on the project and ensuring the anonymity of the participants in accordance with current regulations on data protection when the results of the project are made public in any form.

Human embryonic material: After attaining an approval by the Ethics Committee, project leaders are responsible for obtaining permission from the Spanish Ministry of Health (*Instituto de Salud Carlos III*) for collection, handling, and/or storage of human embryonic material.

Post-mortem human tissue: After obtaining permission from the local Ethics Committee at UPV/EHU project leaders should ensure the anonymity of the donors in accordance with current regulations on data protection.

Experimental animals: Only scientific and technical employees with appropriate training may participate in projects involving experimental animals. All employees are in charge of following the 3R principle (Replacement, Reduction and Refinement) when working on the projects involving experimental animals.

Crustaceans, insects and plants: After obtaining the corresponding ethical approval, only scientific and technical employees with corresponding training may participate in projects involving this type of experimental models.

### **Principle 9: Acquiring research data**

It is essential that all researchers and technical personnel involved in data acquisition understand the goal of their experiments and possess expertise with methods and techniques they apply. Time-planning, choice of research subjects and materials, use of software and equipment is performed in a way that continuously assures high quality of the collected data. If using a method or equipment requires specific expertise, training must be arranged with the responsible personnel (e.g. facility managers) and the corresponding regulations must be respected (e.g. use of booking calendars, time-sharing).

All data must be acquired in amount and number of reiterations that ensure sufficient experimental material for statistical analysis and reliable interpretation of the results. To avoid subjectiveness and experimental bias during data acquisition, use of blinding in experiments must be considered where possible.

Any errors occurring during data acquisition must be documented and reported to the project leader.

Project leaders are responsible for identifying the biosafety level for each experiment, ensuring that only the personnel with appropriate training and appropriate current health conditions are involved in data acquisition, and that experiments are carried out in the facility approved for the specific biosafety level. All experimental procedures involving genetically modified organisms (GMOs), biological agents, or chemicals of special hazard may be started only upon approval by the ACHUCARRO Facility Manager.

#### **Principle 10: Documentation of research and data storage**

Researchers performing experiments are responsible for proper detailed documentation of all data. Documentation must be carried out in writing or, even better electronically. The records include date, name of the person(s) performing experiments, all experimental steps, the outcome, and any other related information (errors, negative, unexpected, or conflicting results, etc). Records may be amended with indication of date, but never otherwise retrospectively altered.

Researchers are in charge of keeping at all times the raw data and the related documentation un-altered for a recommended period of 10 years.

All data acquired in the electronic form must be stored in at least two copies using reliable electronic media (e.g. PC, external hard drives, server with automatic backup, data repository). Data with limited access (e.g. information from human patients) are stored password-protected.

The acquired raw data, the analysed data, and all related documentation must be stored in accordance with the regulations of data ownership and protection specifically defined for each project.

#### **Principle 11: Ownership, usage rights, and sharing raw data and newly created tools within the scientific community**

As a general rule, universities and research centres own the data created by faculty or students within a project with internal or external funding. However, data ownership may depend on the policies determined by the government, funding agency, sponsors, research centres, universities, etc. Policies regarding intellectual and data ownership, as well as responsibilities for maintenance and retention of the data, should be explicitly clarified for each research

project. Project leaders are responsible for informing all involved parties about the related policies.

ACHUCARRO encourages open data sharing. Generally, three types of data repositories may be considered: institutional repositories, domain-specific repositories, and general repositories. Researchers may select the most suitable repositories for their data type. When publishing their findings, researchers conform to the policy of the scientific journals regarding deposition of the raw data, on which the conclusions are made. Embargo policies should be respected.

If research data include information subject to data protection (e.g. personal information regarding the patients), researchers must conform to the corresponding policies of data protection under the European Law when depositing and sharing their research findings.

ACHUCARRO also encourages sharing newly created tools and resources, e.g. new technical tools, new cell-lines, new transgenic animals, new software scripts, etc.

When using the data of other researchers available from the repositories, the contributions of data creators should be recognized and acknowledged.

### **Principle 12: Discussing research findings**

Research transparency is of primary importance for the scientific process. It includes production transparency (i.e. the collected data) and analytical transparency (i.e. the methods used to acquire, manipulate, and analyse data, the applied statistical approaches, etc.). ACHUCARRO encourages emphasizing the efforts for data reproducibility in the discussions.

The responsibility of Research Advisors is to promote regular project progress reports by the junior scientists within the research group, at the internal seminars of ACHUCARRO, as well as remotely (via Skype, Zoom, etc) especially if multiple collaborators from different institutions are involved. If a project or part of it is ready to be discussed within the scientific community, Research Advisors encourage junior scientists to attend national and international meetings and conferences with posters or oral presentations.

## **Part 4: Communicating and publishing research findings**

### **Principle 13: Publication of research findings**

Researchers must make all reasonable efforts to publish their work in sound, peer-reviewed journals. Researchers should strive to publish complete stories rather than fragmented pieces. Publication of negative results is also encouraged. If research results are a subject to protection on the basis of their commercial interest, the project leader manages the issue accordingly and communicates to the directorate of ACHUCARRO. All authors listed in a publication are responsible for the thorough screening of content and form prior to submission.

If otherwise equal, an open-access journal is given a preference as a media for reporting the scientific findings because it reaches the broader audience of scientists worldwide independently of their financial situation and that of their research organisation.

When releasing data in any form (manuscript, thesis, patents, etc.), the previous printed (electronically or in hard-copy) work of others is recognised by including the corresponding references. Plagiarism, defined as copy and usage of any information from other sources without acknowledgement, is research misconduct and will be sanctioned.

The institutional affiliation(s) shown in a publication is the affiliation(s) where the work has been conducted, even the authors have changed the affiliation(s) by the time of the publication. An author may list several affiliations that need not overlap in time.

All authors are responsible for recognising and acknowledging the funding organisation(s) and the help of others in the corresponding section of manuscript defined by the publishing journal.

### **Principle 14: Authorship**

Authorship criteria are based on the International Committee of Medical Journal Editors (ICMJE) Uniform Requirements for Manuscripts Submitted to Biomedical Journals, as well as the specific requirements of the publishing journal. The ICMJE indicates four conditions for authorship recognition. Authors must meet all four criteria in order to be listed:

- Substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data, AND
- Drafting the article or revising it critically for important intellectual content, AND
- Final approval of the version to be published, AND
- Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

If a contribution is not sufficient to justify authorship, the support of a person may be recognised in a foreword or an acknowledgement. Mere participation in data collection, mere providing resources and materials of any kind (including reagents, experimental animals, financial support, etc.), merely leadership or supervisory function do not automatically justify the authorship. Honorary authorship based on these criteria is not permitted.

The order of authors on scientific publications is a sensible issue that requires special attention as it may significantly influence the career of researchers. As a general guideline:

- The first author is the person who, in addition to the senior author, made the most significant intellectual contribution to the work, including contribution to the design of the study, AND acquiring and analysing the data from experiments, AND writing the draft of the manuscript.
- The senior author is the person who made the most significant intellectual contribution to the work, including contribution to the conception, design of the study, supervision of the experimental data acquisition and analysis, and writing the final version of the manuscript.
- The corresponding author is the person who takes main responsibility for communication with scientific community, and who assumes final responsibility for the quality and integrity of the data. Often, the corresponding author is also the last or the first author.
- Corresponding author is not to be understood merely in the context of the publishing process, but in general for communicating with the scientific community. It is the one who assumes responsibility for the quality and integrity of the data.
- The sequence of intermediate authors is determined by the relative overall contributions to the manuscript in the order of importance (although this may differ between various scientific disciplines).

When two researchers made equal contribution to the study according to the criteria above, they may share the first or the last authorship. Sharing authorship between more than two researchers is possible.

Any person who requests authorship based on hierarchical position or professional relationship violates the principles of academic freedom. Likewise, the omission of names of any individuals who have made significant contribution to the research project is inappropriate. These actions are amount to misconduct and are sanctionable.

All authors listed in a publication are responsible for the thorough screening of content and form prior to submission.

If personal or financial conflict of interest occurs in relation to a study, it should be declared in the manuscript.

The authorship in memoranda, technical and work reports, or other written documents for the attention of the third parties follows the same rules.

The formulation of the author list is usually entrusted to the project leader, in dialogue with all involved parties including candidates that were at any stage considered as authors but ultimately not included. This is not considered a privilege of hierarchy, but reflects a broader experience and a better overview of the individual contributions which the senior researcher holds.

Project leaders are responsible for formulating the authorship criteria to all participating researchers at the beginning of the project. Changes and concerns regarding the authorship should be posed and resolved at the earliest convenience. If the authorship dispute cannot be resolved, seeking advice from the third parties is encouraged, i.e. colleagues that all authors previously agree to. All researchers keep respectful and polite tone and conduct, aiming to continue working together for the success of science rather than personal interests.

### **Principle 15: Peer review process**

Peer review of manuscripts by scientific experts prior to publishing is a pillar of research publications. The purpose of the review process is to make sure that a manuscript is of sufficient quality and interest to be published in a given journal. The review process relies on trust and integrity and should not be associated with perceived biased opinion, unfairness, and confounding conflicts of interest.

When acting as a reviewer, the main task is to improve the manuscript at hand. This is a complex task that may involve:

- Before accepting the invitation from the editor to act as a reviewer, verify the absence of the conflict of interest with the authors and ensure the aptitude to complete the review within the time-frame set by the editor. Otherwise, decline the invitation;
- Constructively point out weaknesses and suggest how to strengthen the scientific value of the manuscript;

- Keep the review process confidential. It may be acceptable to consult a trusted researcher, or to involve a student aiming to teach the reviewing process; Contribution of any person beside the invited reviewer should be communicated to the editor;
- Keep in mind that not all feedback is valuable and that only critical and necessary additional experimental work should be suggested, not the experiments that are merely interesting or add value;
- Rejections must be well justified and should allow the authors to improve the manuscript for further publication;
- The tone of the review report should be collegial. When writing a report, a reviewer is encouraged to imagine writing it for someone they know even if it is a rejection.

ACHUCARRO encourages all staff to get familiar with online guidelines for reviewers of scientific manuscripts (e.g. from PLOS <https://plos.org/resource/how-to-write-a-peer-review/>).

Some scientific journals offer the reviewers to disclose their name and/or sign their report, after the review process is over and the manuscript has been published. ACHUCARRO encourages this as this strategy improves research quality and ensures transparency.

When submitting manuscripts and addressing reviewers' questions, ACHUCARRO recommend involving students with a goal to teach them how to deal with the feedback of the reviewers and how to respond in a constructive way.

Still more predatory publishers emerge, and before publishing and reviewing Achucarro staff is encouraged to make a best effort to verify the soundness of the journal. Among journals considered dubious are members of the major publishers such as MPDI. Researchers should get informed about the potential consequences of using editorials to publish articles which later can be excluded from their CVs in evaluations.

### **Principle 16: Public outreach**

Communication with the public and news media is important because:

- It provides the public with understanding of the research process and informs about the newest scientific findings;
- It encourages people, not directly involved in science, to think actively about science and to recognise its relevance to them in their daily lives;
- It may help scientists to shape their research agenda and to ensure that they are asking the most useful questions.

ACHUCARRO encourages researchers to actively participate in public outreach, whether in person or in print.

The presentation of scientific results in the news media should include an appropriate level of explanations. The names of the authors should be linked to their institutions, and financial support should be acknowledged. Communications emerging from ACHUCARRO acknowledge key involved researchers and research groups.



## **Part 5: Evaluation and assessment criteria**

### **Principle 17: Assessment of performance**

Assessment of researchers, research groups, and research facilities is performed with a goal to promote excellence in research and education.

Assessment is based on all relevant information collected and analysed in a timely manner. This information may include: publication records, acquired national and international funding, teaching duties, training of early career researches, editorial and reviewer activity, duties related to national and international grant evaluation panels, contribution to scientific meetings, outreach efforts, performance trajectory, and other relevant factors.

Assessment accounts for external factors which may delay performance of a researcher, e.g. illness, parental leave, caring of a family member, societal events and problems. Researchers are encouraged to clearly state the impact of such events on their performance record.

## **Part 6: Non-Compliance with the Code of Good Scientific Practice**

### **Principle 18: Data falsification and fabrication**

Falsification and fabrication of research data and ideas is a serious misconduct which is associated with strict consequences as determined by the involved contracting institution(s), and/or grant agencies, and/or publishing journals, and/or additional parties.

Falsification is defined as modification and/or incomplete or inaccurate reporting of ideas and findings. Fabrication is defined as intentional misrepresentation of research results by invention of experiments that were not conducted and/or findings that were not obtained.

### **Principle 19: Falsification or misrepresentation of achievements**

Falsification and misrepresentation of achievements is similarly serious misconduct which is associated with strict consequences.

Falsification and misrepresentation of achievements may refer to the untrue or misleading presentation of facts, whether oral or written, with a goal to appear superior during academic evaluation. This includes e.g. enclosure into the curriculum vitae of posts, degrees, scientific publications, that have not been accomplished, making falsified health claims, obtaining medical or other certificates under false pretences, etc. These offenses may involve misconduct by individual employees or occur at the level of research groups and centres.

Whoever discovers such misconduct in their roles as supervisor, colleague, reviewer, evaluator, or other, is morally obliged to notify relevant parties, such as the contracting institution of the fraudulent person.

**Principle 20: Consequences of non-compliance and misconduct**

While research misconduct may not always be punishable by law, it is routinely associated with severe consequences for involved parties. The consequences may include dismissal (firing) from the position, retraction of papers, discontinuation of funding, etc. Beyond the direct measurable consequences, research misconduct is expected to severely taint the career of the researcher or the status of the institution.

Each case of potential research misconduct must be thoroughly evaluated; a decision regarding the consequences may be made only upon clearly available evidence for misbehaviour. Researcher or institution may appeal to the corresponding authority upon the decision.

## **Annex 1 - Letter of understanding**

## **ACHUCARRO STUDENT-SUPERVISOR LETTER OF UNDERSTANDING**

This document has been prepared for use at the Achucarro Basque Center for Neuroscience (hereafter: Achucarro), as a resource for facilitating the completion of pre-graduate student projects, primarily MSc and PhD degree work.

***The letter of understanding should be examined and signed together by the student and supervisor at the beginning of the project.***

### **ROLES & RESPONSIBILITIES**

The student is the main party responsible for the study program and the performance of related activities, such as the submission of a master's or doctoral thesis and should demonstrate a deep commitment to the project and interest in the selected research topic. The advisor/supervisor is mainly responsible for providing an adequate framework for the student to develop the chosen project, in terms of financing (hereunder salary, equipment, laboratory consumables), technical/experimental training, and guidance in theory and experimental techniques.

It is the supervisor's responsibility to initially outline the research project and go over this with the student. It is also the supervisor's role to proactively guide the student to best facilitate completion of the project, and/or other emerging projects during the studentship.

It is the student's responsibility to ensure scientific rigor in data collection, storage and analysis, with adequate and active guidance and supervision of the supervisor. While formally any published data are the responsibility of the corresponding author, both student and supervisor must show responsibility in the acquisition, analysis and presentation of data.

The supervisor must ensure that the student is given regular opportunities to present his/her data at internal and external conferences and seminars. At such seminars and meetings the student cannot disclose knowledge if prohibited by the supervisor.

It is the student's responsibility to arrange regular update meetings with the supervisor in a timely manner, to ensure satisfactory progress of the project. The supervisor must make him-/herself available to such meetings and participate in a prepared and facilitating way.

In case the project is not progressing in a satisfactory way to the student, it is the student's obligation to bring this up with the supervisor in a constructive way, and *vice versa* for the supervisor. In case of an irresolvable disagreement between the two parties, an objective third party appointed by Achucarro will mediate.

It is the responsibility of the student to perform experimental work in a responsible and solidaric manner, including leaving all workspaces tidy and clean, and participating in general lab chores, such as cleaning, tidying, and animal care where applicable.

The student must disseminate obtained knowledge within the research group and center, and make him-/herself available to help train other students in experimental and theoretical techniques. The supervisor must ensure that the student is recognized for such knowledge dissemination.

It is the student's responsibility to work towards concluding the given project at the end of the contract or deadline for thesis defence, with the guidance of the supervisor.

It is the student's responsibility to make preparations towards securing her/his following position upon defending the thesis, with guidance from the supervisor.

It is strongly encouraged that student and supervisor give advance notice to each other concerning planned holidays, and try to take into account practicalities of ongoing projects (e.g. to maintain the animal colony, ongoing cell cultures, etc).

It is the responsibility of Achucarro to provide training in general good-laboratory-practices, such as lab safety protocols, deposition of hazardous waste, data storage, and responsible conduct in a professional research environment.

It is the responsibility of the supervisor to finance obligatory training in animal experimentation for the student, if the nature of the project requires it. The student must acquire the necessary accreditation/license to handle laboratory animals according to EU/national regulations.

Where applicable, it is the responsibility of the supervisor to determine authorship contributions on publications, with input from the student and all involved participants. The authorship list must always follow written and unwritten ethical rules, and abide by norms set out by the handling journal, and more generally by competent independent bodies, such as the Office of Research Integrity (ORI).

While formally the decision about authorships fall on the supervisor, in case of a dispute between supervisor and student regarding authorship or work accreditation, this must be first discussed between these two parties. If a mutual understanding cannot be reached, senior members of Achucarro should be consulted.

Both student and supervisor must be professional and courteous to all colleagues, and treat these respectfully, with dignity, and in accordance with highest norms of equality.

The data and knowledge generated during any project, by both supervisor and student, formally belongs to the contracting institution (UPV/EHU or Achucarro), and in practice to the lab in which they are generated. Lab books, or corresponding traceable data record, must be kept by the student during her/his project and belong to Achucarro. Achucarro will readily provide lab books upon request. The lab book must be written in English or Spanish.

This agreement is for a project/internship for the degree of \_\_\_\_\_, and is entitled:

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The student salary is initially financed through \_\_\_\_\_, with a duration of \_\_\_\_\_ months.

By signing, I acknowledge that I have read and agreed to the contents of this letter.

Student

Supervisor

Date

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