

ESTONIAN CODE OF CONDUCT FOR RESEARCH INTEGRITY

PREFACE

The Estonian Code of Conduct for Research Integrity describes the conduct expected from researchers and the responsibility of research institutions in ensuring research integrity, thus contributing to the increase of credibility of research in the eyes of the individual and the public. The Code of Conduct for Research Integrity is meant to complement the Estonian Researcher's Code of Ethics adopted in 2002. The new document is needed because the development of research has brought forth new themes and perspectives not reflected in the Code of Ethics and added new points of consideration.

The Code of Conduct for Research Integrity has two levels that define the responsibility of researchers and research institutions. The model for this division is the Danish document of research integrity¹. The division helps to emphasise that responsibility for research integrity lies with everyone active in research: individual researchers, research groups, institutes, universities, research journals, financiers and assessors of research, and organisations uniting researchers. Researchers alone cannot ensure research integrity. For researchers to behave ethically, necessary conditions have to be created at the level of the organisation and the system.

The Estonian Code of Conduct for Research Integrity has been created as a framework document applying to the whole of Estonian research. The aim of the framework document is to be of help to and serve as model for Estonian universities and research institutions in formulating and adopting their own codes of conducts, based on which each institution could, according to agreed procedures, enforce the principles of research integrity and to deal with cases of misconduct. Each institution will have sufficient autonomy for formulating its own document and the related rules of procedure depending on the peculiarities and needs of the institution, considering that these principles would be in harmony with the Estonian Code of Conduct for Research Integrity.

The Estonian Code of Conduct for Research Integrity consists of core values of research, standards of research, examples of problematic cases² and explanations of terms³ used in the Code. The values form the basis for standards to be followed while conducting research with integrity. The chapter of standards has been divided into parts corresponding to stages of research. The section of explanatory cases gives examples of situations and differences between fields of research where there is no common agreement among

¹ The Danish Code of Conduct for Research Integrity (2014) <http://ufm.dk/en/publications/2014/the-danish-code-of-conduct-for-research-integrity>

² To be added later

³ To be added later

researchers or where it is difficult to achieve it. The explanatory glossary defines the concepts used in the document. At the end, there is a list of normative documents that regulate research integrity in Europe and the world.

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STANDARDS

The standards of research integrity concentrate on what researchers (both individual researchers and research groups) or research institutions should do to follow the ideal of research integrity. Still, it should be remembered that the activities of individual researchers and research institutions are influenced by many other institutions (e.g. financiers and assessors) and the environment where they operate. The broader framework to the activities of researchers and research institutions is determined by the local and international legal space.

I PLANNING

1.1. Objectives and impact of research

The objective of research is collection and interpretation of knowledge, elimination of ignorance, and solving of practical problems. The impetus for initiating research can be perception of social necessity, a concrete commission or the researcher's own curiosity. Awareness of the motives behind each particular study and considering its objectives helps to ensure the justification of research, adequate control of risks and adherence to the principles of research integrity. This, in its turn, helps to ensure the trust and support and society.

Researcher

The researcher is free in setting the aims of research, deliberating how necessary the research is for achieving the aims set and if there are alternatives to the planned research.

The researcher weighs the potential benefits and harms to all the parties involved in research, including:

- the future generations, natural and cultural environment, indigenous peoples, humankind and the Estonian society;
- subjects and/or other persons involved in research;

researchers and research institutions.

If necessary, the researcher involves in planning, in addition to colleagues, the subjects of the research or groups influenced by the research planned.

The researcher ascertains the planned or unplanned applications and potential threats of misuse of the research results.

The researcher decides whether the expected benefits from research outweigh the potential harms and threats of misuse.

The researcher is free to decide whether to participate in research if s/he does not comply with its objectives or potential use.

The researcher takes into consideration that some research results can have dual use – the knowledge received can be used for civilian, military or terrorist purposes. In the case of dual use, it is the responsibility of the researcher to inform the financiers and shapers of research policy that the achieved knowledge can be used for the benefit of humankind or against it. Informing is necessary for shapers of research policy so that they could, in critical cases, establish the necessary limitations on access to research results and rules for their use.

Research institution

The research institution respects the researcher's freedom to make a decision on conduct of research and participation in it. If the research institution considers it necessary to support and direct the researcher's activity by selecting and developing certain priority trends of research, the base for such decisions must be clear and transparent.

The research institution establishes a procedure according to which the leader of each research grant has to inform all the members of the research group about the objectives of research, its potential applications and threats of misuse.

1.2. Choice of the research method

An essential part of research integrity is that the choice of the method and the sample is clear and substantiated for other researchers as well. Transparency of the method and the sample helps to assess the reliability of results, the appropriateness of the method and the sample, to ensure higher quality of pre-reviewing and to repeat the research as closely to its original form as possible. This, in its turn, helps to identify and prevent falsification of research or biased interpretation of results.

Researcher

The researcher decides which method and which sample are appropriate for achieving the objectives of the research, considering to what extent the data can be collected openly and transparently, and considering the interests of all the parties involved in research.

The researcher weighs the potential ethical problems related to the method and the sample, and uses vulnerable groups or individuals in research only in well-grounded cases.

The researcher ensures the methodological transparency of research and describes the stages of data collection and their analysis as precisely as possible.

If possible, the researcher uses existing and available data and prefers reuse of data to conducting new studies; in the case of personalised data, the researcher considers the rules and limitations of secondary use.

Research institution

The research institution respects the researcher's freedom to select the method and the sample, and does not unfoundedly prefer one method of research to some other.

1.3. Use and planning of resources for research

Planning of resources for research contributes to the achievement of the aims set. If the resources available for the researcher are insufficient, s/he has to think how justified or substantiated the conduct of research is and what the quality of the result will be. When accepting financing for research, it is essential to consider to what extent the source of financing can cast doubt on the researcher's autonomy and the impartiality of research.

Researcher

The researcher assesses the sufficiency of existing resources and the resources applied for achieving the aims of research and avoids giving unrealistic promises to financiers and the society.

The researcher informs financiers about co-financing and avoids applying for double financing for the same research.

The researcher is free to decide from which partners to accept financing or not, and avoids sources of financing that would compromise the autonomy of the researcher or research group members and the impartiality of research results.

The researcher adheres to the conditions related to financing and, in the case of co-financing, informs the financiers, colleagues and partners about the potential contradictions between different conditions.

The researcher uses resources purposefully and sparingly.

Research institution

The research institution respects the researcher's freedom in choosing the source of financing, as long as this does not contradict the principles agreed on by the research institution.

The research institution ensures the objective, substantiated and transparent distribution of research financing within the institution.

The research institution provides open and equal access to all researchers to the information about financing, including the information about the origin of sources of financing.

1.4. Coordination of conduct of research

Coordination of conduct of research contributes to adherence to the existing norms, rules and laws. This is necessary to preserve trust in research in society, to protect the rights and interests of participants in research and to promote the principles of research integrity on a broader scale.

Researcher

The researcher is responsible for conducting research according to the local and international requirements of research ethics and, if necessary, applies for approval from the ethics committee.

The researcher takes care that s/he has the necessary agreements and approvals for research, considering which ethical questions and problems can appear during research.

Before the beginning of research, the researcher gets acquainted with the current principles and standards of research ethics and legal regulations considering the peculiarities of research. If necessary, the researcher asks for advice or help from colleagues, the research institution or the ethics committee.

The researcher takes into consideration that the rules and conditions applying to international partners can differ from those of his/her own research institution. As a leader of a research group, the researcher is responsible for ensuring that researchers from each country follow the code of research integrity and legal regulations of their countries and that they would not contradict the international research ethics standards in their research area.

The researcher ensures the necessary protection for intellectual property created during research.

Research institution

The research institution provides researchers with necessary advice, support and infrastructure for conducting and coordinating (including getting approvals) of research and for protection of intellectual property.

The research institution makes the necessary information on research ethics available for researchers and provides the necessary training.

The research institution establishes procedural rules for informing about breaches of principles of research integrity and establishes the order for dealing with suspected breaches of rules.

II CONDUCT OF RESEARCH

2.1. Subjects and persons involved in research

Protection of the interests and wellbeing of subjects and persons involved in research is one of the main focuses of research ethics. Respectful, caring and responsible attitude to objects and subjects of research contributes to the positive and trustful attitude of society to researchers' activities and allows sustainable functioning of research.

2.1.1. People

Researcher

The researcher respects the voluntary decision of human subjects in research and ensures their autonomy, human dignity, privacy and wellbeing.

The researcher informs the subjects about the research objectives, the benefits and potential risks, who is conducting the study and who is financing it, which data are collected from them, who can access the data, in what form and how long the data are stored. The researcher informs the subjects about their right not to participate in the study and to

withdraw their consent and about other circumstances that can influence the subject's consent to participate in the study.

In immediate studies of people (physical intrusion, collecting of data from a person), the researcher always asks for their consent and ensures that the consent is informed and unforced.

The researcher respects the subjects' right to withdraw their informed consent.

Research institution

The research institution provides opportunities for asking for advice on ethical questions and infrastructure which would support ethical research integrity.

The research institution ensures for all researchers the necessary knowledge for studies on humans, how people should be involved in studies, how they should be informed (informed consent), processing of data, including their collection and storage.

The research institution establishes common rules and principles for dealing with incidental findings.

2.1.2. Groups

Researcher

The researcher is aware that conduct of research and contact with the groups studied can influence the subjects' wellbeing and research results.

When studying vulnerable groups and indigenous peoples, the researcher considers cultural and social peculiarities that can influence the conduct of research and its results or limit further studies.

The researcher inconveniences the subjects and groups involved in research as little as possible to ensure the possibility of further studies and cooperation with researchers.

The researcher does not give higher priority to acquisition of new knowledge than to the interests of the groups studied.

While studying social groups, the researcher assesses their vulnerability, considering their potential stigmatisation, marginalisation or other damage to their interests.

The researcher compensates indigenous peoples for their contribution to research.

The researcher does as much as possible to ensure that the wellbeing of subjects would not deteriorate after the end of research.

2.1.3 Animals

Researcher

The researcher always applies for permission to conduct experiments with animals.

In animal studies, the researcher is guided by the 3R's⁴ principle (replacement, reduction, refinement), the broader aim of which is to ensure animals' wellbeing simultaneously with improvement of research.

If possible, the researcher replaces animal studies with alternative techniques not to harm animals.

⁴ http://ec.europa.eu/environment/chemicals/lab_animals/3r/alternative_en.htm.

In experiments, the researcher uses the minimum number of animals necessary for getting the results or tries to get more information from the same number of animals.

The researcher treats the animals in a way that does not cause unsubstantiated pain to animals participating in research. The researcher refines the procedures of research to diminish the present and future sufferings and pain caused to animals.

The researcher takes care of the good living conditions of animals and ensures animals' wellbeing in experiments, breeding, and transport.

Research institution

The research institution provides the necessary conditions and means for good and dignified treatment and keeping of experiment animals.

2.1.4. Environment

Researcher

The researcher attempts to preserve the natural environment, including the material and intellectual heritage, in its original form, except in cases when the objective of research is improvement of local environment (e.g. restoration of biodiversity).

The researcher respects the integrity of natural environment and intellectual and material heritage and does not remove the objects under study from their original environment, except in cases when this is substantiated.

2.2. Data management

The essential factors in data management are integrity, precision, safety and confidentiality. Careless management and treatment of data can cause errors in results and their interpretation and harm the rights of the persons participating in research.

Researcher

The researcher does not fabricate or falsify data and does not replenish incomplete data.

The researcher ensures the transparency and precision of data collection, enabling verification of the quality of data and repetition of their collection if possible.

The researcher records the collection and analysis of data as precisely as possible.

When using data, the researcher is critical, does not draw unsubstantiated conclusions from them, does not make unsubstantiated assessments and does not present examples with a bias or selectively.

The researcher ensures as broad access to the collected research data as possible, simultaneously considering substantiated limitations to access to the data resulting from the need to protect personal data, promises given to the subjects and the interests of research.

When storing and using data, the researcher ensures their integrity and security, and follows the limitations of access to the data.

The researcher preserves the collected data as long as necessary and for as short time as possible, ensuring, on the one hand, their verifiability and, on the other hand, protecting of the privacy of subjects.

In research, the researcher follows the principles and regulations of protection of personal data.

Research institution

The research institution provides the necessary infrastructure for secure data management.

The research institution agrees with the researchers on common principles of data management and their observation.

The research institution provides the necessary training and guiding materials for observation of principles of data management and checks adherence to these principles.

The research institution ensures as simple and broad accessibility and use of data as possible.

III PUBLISHING OF RESEARCH RESULTS

3.1. Publishing

Publishing of research papers is the main way of sharing research results with other researchers and the public. While using other researchers' papers, a certain quality is expected from them; therefore, the publications ignoring research integrity diminish the credibility of research.

Researcher

The researcher avoids publishing in a research journal or with a publisher that does not meet the quality requirements.

The researcher avoids publishing if there are doubts about the quality of pre-reviewing by the journal.

The researcher avoids unsubstantiated repetitive publishing of the same results and does not simultaneously submit the same article for reviewing to several journals.

The researcher refers accurately to his/her own and other researchers' works.

When assigning authorship, the researcher is guided by the criteria of authorship, assessing each author's contribution to research and assigning authorship only to researchers who meet all the criteria.

According to the Vancouver guidelines⁵, the criteria of authorship are:

- 1) Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
- 2) Drafting the work or revising it critically for important intellectual content; AND
- 3) Final approval of the version to be published; AND
- 4) 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.

The researcher does not use authorship in exchange for data, use of equipment or any other benefits and lists as authors only researchers who have sufficiently contributed to research.

When publishing research results, the researcher indicates who financed the research.

⁵ International Committee of Medical Journal Editors – Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals, December 2013. <http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html> (accessed 24.11.2016)

As a reviewer, the researcher ensures the quality and impartiality of reviewing and confidentiality of research results that have become known to the reviewer.

If possible, the researcher prefers open-access journals.

The researcher takes care that scholarly thinking and published research results would reach the broad public and, if necessary, cooperates with other parties to popularise research.

Research institution

The research institution takes care that, while publishing the research paper, each author's contribution would be fairly evaluated, acknowledging it with authorship or noting it in some other way.

The research institution takes care that the principles of authorship (including ranking of authors) are negotiated in the institution and they are adhered to, contributing to the solution of possible conflicts.

The research institution agrees on the procedure for disputing authorship and dealing with suspicions of plagiarism.

The research institution monitors and documents the breaches of principles of publication among the researchers of the institution and informs the public about the ascertained breaches.

The research institution provides the researchers with instruments (e.g. plagiarism detector software) for ascertaining of misconduct and supports the processing of corresponding cases.

The research institution contributes to the prevention of misconduct in publishing by informing about the potential hazards and providing the researchers with guidelines for assessment of the reliability and quality of research journals and publishers.

The research institution takes care that the researchers understand their obligation to indicate the financier of research in publications.

IV RESEARCHER IN THE INSTITUTION OF RESEARCH

4.1. Conflict of interests

The conflict of interests can appear at any stage of the researcher's work when s/he must take decisions considering the interests of research, the research institution or the research group, but s/he has his/her own interests while taking the decision. In addition to self-interest, the conflict of interests may involve any profits or benefits for the researcher, his/her close relatives, supervised students, colleagues or other close persons. The researcher assesses critically the impact of the conflict of interests on his/her own and the colleagues' decisions, taking into consideration that not all the conflicts have an inappropriate influence on decisions. The occurrence of a conflict of interests is not condemnable in itself, although ignoring it is. Condemnable decisions include those not based on the interests of research, using research resources in private interests, deliberate influencing of the objectivity of decisions and causing deliberate harm to competing researchers or research institutions.

Researcher

At any stage of research, the researcher avoids conflicts of interest resulting from his/her private interests that can have inappropriate influence on his/her decisions as a researcher.

If the conflict of interests cannot be avoided, the researcher informs the colleagues about it.

Research institution

The research institution creates common agreements for dealing with conflicts of interest and transparent rules of procedure.

The research institution provides the necessary information and training for recognition and critical assessment of conflicts of interest.

4.2. Researcher's different roles

In addition to being a researcher, the researcher can also have other roles in academic or personal life, like supervisor, teacher, leader, administrator, expert, populariser of research, parent or town council member. When the researcher performs different roles, situations can appear where s/he has to simultaneously consider conflicting requirements of roles. In these situations, it is very difficult to say which role the researcher should prefer to others. In such a case, it is essential to perform each role as well as possible. Role conflicts tend to grow into conflicts of interests; therefore, they cannot be ignored.

Researcher

The researcher is aware of his/her different roles and their requirements, and tries to avoid role conflicts if possible.

The researcher as a colleague takes care of good collegial relations in the work environment.

The researcher as a colleague is helpful, polite, considerate and benevolent to all the colleagues, avoiding discriminatory and unsubstantiated unfavourable treatment of colleagues.

The researcher assesses critically colleagues' research and gives substantiated feedback to colleagues' work regardless of the colleagues' academic status, research achievements or work experience.

The researcher as a teacher and supervisor communicates with students and supervisees cooperatively and benevolently; agrees on how s/he supports the supervisee and acknowledges the supervisee's progress.

The researcher as a student regards his/her supervisor respectfully, acknowledging and thanking the supervisor for his/her support to his/her research and personal development.

The researcher acts as an expert only in questions where s/he can rely on scientific knowledge and his/her research, making a distinction between personal opinion and expert assessment.

Research institution

The research institution supports open and cooperative organisational culture which supports everyone's development.

The research institution establishes a procedure for dealing with the breaches of equal treatment and other good collegial relations and bullying at work.

The research institution attempts to create good conditions for researchers for uniting of different roles.

The research institution establishes common principles defining in which cases the researcher can work in his/her speciality outside the research institution, and for which research done outside the research institution the researcher can ask for remuneration.

VALUES

The most essential values of research integrity are **freedom, responsibility, honesty and objectivity, respect and caring, equity, openness and cooperation.**

1. Freedom means that

- the researcher is free to study any problems or hypotheses;
- the researcher is free to search for new ideas and to criticise old ones;
- the researcher is free to choose the research group, research institution or sources of financing.

2. Responsibility means that

- the researcher is responsible for the results and consequences of the research and is aware that his/her work and decisions can influence other people and future generations;
- the researcher avoids harming society and nature and informs the public about potential damage;
- in research, the researcher follows all the pertinent rules and, in the absence of precise rules, follows the good practice of research;
- the researcher is aware that his/her conduct serves as a model for the present and future generations of researchers.

3. Honesty and objectivity mean that

- the researcher is honest, precise, impartial and independent in all activities;
- the researcher does not fabricate, falsify or plagiarise data;
- the researcher is objective in interpretation of research results and avoids their arbitrary interpretation;
- the researcher acknowledges his/her errors and, if necessary, reassesses his/her earlier work in the light of new research results.
- the researcher strives for transparency in research and shares information about the aims, financing, methods, data, and results of research, and about the course of analysis.

4. Respect and caring mean that

- the researcher respects the dignity of colleagues, subjects and cooperation partners and treats them respectfully;
- the researcher respects the dignity, autonomy and privacy of persons participating in research;
- the researcher is caring to experiment animals, avoids unsubstantiated harm to them and ensures their wellbeing;
- the researcher respects life and maintains a careful attitude to the environment, biosphere, biodiversity, and uses all resources sparingly.
- the researcher respects cultural diversity and maintains a careful attitude to the material and intellectual heritage of humankind.

5. Equity means that

- the researcher treats all colleagues and cooperation partners equally;
- when acknowledging colleagues, the researcher considers their actual contribution to research;

- in his/her judgements, the researcher is not influenced by the other person's gender, age, nationality, race, religion, school, status or other features that are not relevant to the judgement;
- the researcher is aware of the possible conflicts of interests and gives timely notice of them;
- the researcher uses the available resources efficiently, sparingly and purposefully; does not use them for personal benefit.
- the researcher takes care that the distribution of resources would be transparent and everyone would have equal opportunities to apply for them.

6. Openness and cooperation mean that

- the researcher is open for cooperation with partners;
- the researcher takes care of the good creative atmosphere;
- the researcher is open to share ideas, data and research results with others;
- the researcher welcomes the success of students and colleagues;
- the researcher dares to contradict earlier knowledge and to seek for new knowledge;
- the researcher assesses critically his/her own and others' research and is open to substantiated criticism;
- the researcher considers the colleagues' and partners' interests and avoids unsubstantiated damage to them.

Freedom and responsibility

Freedom from both external and internal limitations is the precondition and guarantee for striving for new knowledge. Still, the freedom of research is not unlimited; it must consider social and cultural norms which can be criticised and reassessed from time to time, but which the researchers should not arbitrarily surpass. Freedom of research means understanding that greater freedom is a privilege that is accompanied by greater responsibility.

Freedom of research means that no unsubstantiated limitations are set to researcher's research and the researcher is free to study any problems or hypotheses. Freedom of research themes helps to form new schools and trends of thought and avoid the concentration of a large number of researchers around a few preferred research themes. Freedom of research means that search for new ideas or criticising of old ones should not be hindered by unsubstantiated limitations by the state, the society or the research community.

Responsibility means responsible research which is needed for ensuring the credibility of research. In his/her work, the researcher follows all the relevant rules and highest standards of research integrity, and does everything not to harm the credibility of research. The researcher is aware that his/her conduct serves as a model for future generations of researchers.

Responsibility means being aware of one's obligations to nature and society. The researcher is responsible for his/her own personal research and its results and weighs the potential benefits and harms of new knowledge for society, including the cases when the potential applications and undesirable influences of new knowledge are not known for certain or are difficult to assess. In such a case, the researcher assesses the potential impact objectively, does not hide essential information about research and informs the public about the potential threats.

Honesty and objectivity

Honesty as a principal value results from the aims of research itself and striving for truthful and evidence-based knowledge. The achievement of these aims is significantly hampered by fabrication and falsification of data or research results. Interpretation of results is more complicated as one should remain objective and critical, but different research areas and disciplines can have different traditions or standards of drawing conclusions.

Honesty also presumes **precision, impartiality and independence** at all stages of research. The researcher has to be precise to avoid errors in data or results caused by carelessness. Precision is also essential for critical assessment of the research of others to discover errors and contradictions. Impartiality is primarily essential in interpretation of assessments given by the researcher and results where the researcher must not bend interpretations according to his/her own value assessments or prejudices. Independence means that the researcher does not allow his/her research to be influenced and will not conduct research in the interests of a company, interest group or public institution. Although full independence is not possible, the researcher should always be attentive and critical of his/her own work and avoid potential conflicts of interests.

Honesty means honesty to oneself. The researcher dares to admit his/her errors to others and to reassess his/her earlier conclusions. It is essential to differentiate deliberate falsification and fabrication from making of errors. Making of errors is human and they should be admitted. Deliberate denial of errors, however, can be as harmful for research as falsification or fabrication of data.

For the researcher, honesty means telling the truth and striving for **transparency**. All participants in research, from students to partners outside the institution, should clearly understand for which purpose, for whose money and how research is conducted. Transparency is essential in managerial decisions like recruitment of researchers, allocation of pay and bonuses, formation of research groups and use of research funding. Transparency is also essential in each researcher's own research, particularly concerning data, methods and results. This is the precondition for the research community to be able to critically assess research.

Objectivity means that the researcher's work is always based on evidence and s/he requires this from colleagues. The researcher makes a clear distinction between factual statements, assessments and personal opinions. When presenting facts, the researcher is precise and refers to the source of facts. In the case of assessments, the researcher strives for objectivity and indicates clearly what his/her assessments are based on. The researcher indicates clearly in which area s/he has professional expertise and does not act as a researcher or expert in questions that are outside the scope of his/her research.

Respect and caring

Respect as a fundamental value results from each person's right to life, equal treatment and dignity, and it also includes the more general reverence for life. For the researcher, dignity means respect for and dignified treatment of subjects, colleagues and cooperation partners. Dignity is particularly essential in the research areas where people and their health are studied, animal experiments are conducted or nature is interfered with.

Respect means honouring of people's autonomy and privacy. The researcher has to respect the subjects' will, inform them about the research and their rights as subjects. The researcher observes the regulations and principles of data protection and informs the subjects about any collection, application and storage of personal data. Dignity presupposes caring and polite communication with subjects and other persons participating in research. The researcher pays particular attention to dignity when dealing with children or persons belonging to vulnerable groups.

Respect means reverence for life, which includes caring treatment of experiment animals. The researcher avoids unsubstantiated harm to experiment animals and causes pain to animals only if there are no alternatives. Respect presupposes carefulness when using any living resources. The researcher takes care that living resources are used purposefully, only to the necessary extent and avoids wasting them.

Respect means protection and careful use of cultural and historical heritage. The researcher supports cultural diversity and ensures the preservation of the material and intellectual heritage of humankind for the future generations.

Equity

Equity means both fair treatment of people and fair distribution of resources. In treatment of people, the researcher observes the principle of equality. **Equality** means considering a person's real contribution to work, his/her real knowledge or skills, not personal relations or merits. In acknowledging and ascribing of authorship, everyone's actual contribution to research is taken into consideration. Equal treatment also means avoiding discrimination – no one should be preferred or disadvantaged because of their research school, worldview, gender, age, nationality, race, religious or political convictions.

The researcher is fair in distribution of resources. Depending on the situation, this can mean either equal treatment of all parties or treating someone differently based on substantiated needs. When establishing the needs, the researcher is impartial and objective and considers the interests and needs of all the parties without unsubstantiated preference of one to some other.

The researcher uses resources sparingly and avoids their self-interested use. One should be aware that, under the conditions of limited resources, there is not always sufficient money or equipment for everyone. The researcher must strive for as fair distribution of resources as possible, greater transparency of the decision-making process and careful consideration of decisions.

Equity also means that the researcher should be aware of all kinds of **conflicts of interests**, try to avoid them and inform others about them. It is particularly essential to avoid conflicts of interests in decisions affecting research and its results, like distribution of research funding, election and appointment of staff, granting of approvals, permits and agreements, reviewing of publications and giving expert assessments. Conflicts of interests may arise from earlier joint research, parallel research, interests of financiers and from personal connections with some enterprise or organisation.

Equity also means that the researcher takes all the obligations and roles seriously and strives for their balance. The researcher does not give empty promises and does not take on

obligations that s/he cannot fulfil. The researcher should avoid situations where some of his/her roles (researcher, teacher, supervisor, administrator) will be neglected.

Openness and cooperation

Openness means that the researcher dares to think differently, seek for new knowledge and doubt earlier knowledge. The researcher is open to cooperation with researchers from other countries, other research institutions and other disciplines.

The researcher is open to cooperation with different partners with the aim of research, higher education, knowledge transfer and popularisation of research. When communicating with different parties, the researcher is ready to explain the essence and aims of research. In the situation where different partners have opposite interests, the researcher always observes the interests of society and research.

Cooperation in research is the more essential, the more of research is conducted in large research groups and several research institutions, and the more researchers cooperate with the private sector. The value of cooperation emphasises the researcher's need to consider different interests and to ensure trusting relations with colleagues, partners and the broader society.

Cooperation also means openness and sharing of ideas, data and research results with cooperation partners and colleagues. Free spread of knowledge is a precondition for critical assessment of the newest knowledge by the research community. Simultaneously, researchers should be aware that resulting from the need to protect intellectual property, privacy, security or some other value, limitations can apply to conducting research and distribution of results. It is the researcher's obligation to observe such limitations and agreements between partners and to respect the confidentiality of all the cooperation parties.

The researcher promotes a good creative atmosphere, acknowledges the success of colleagues and helps them as far as practicable. A precondition for good research is that the researcher is critical of his/her own and colleagues' work. The researcher does not abstain from substantiated criticism even if it concerns close colleagues or renowned researchers. In criticism, the researcher is always impartial and precise and presents his/her standpoint benevolently, politely and well-groundedly. The researcher takes care that the requirements of research integrity are followed and in the case of breaches of them, draws the colleagues' attention to it.