

# CODE OF ETHICS FOR SCIENTIFIC RESEARCH IN BELGIUM



Académie Royale des  
Sciences, des Lettres  
et des Beaux Arts de  
Belgique



Koninklijke Vlaamse  
Academie van België  
voor Wetenschappen  
en Kunsten



Académie Royale de  
Médecine de Belgique



Koninklijke Academie  
voor Geneeskunde  
van België



The “Code of Ethics for Scientific Research in Belgium” is a joint initiative of the Académie Royale des Sciences, des Lettres et des Beaux Arts de Belgique, the Académie Royale de Médecine de Belgique, the Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten and the Koninklijke Academie voor Geneeskunde van België, supported by the Federal Public Planning Service Science Policy.

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# Introduction

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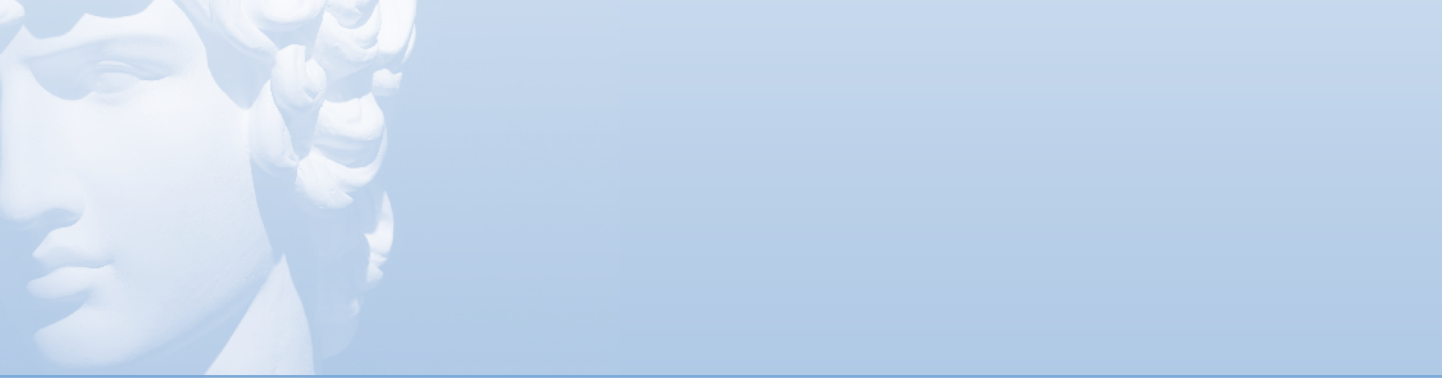
This “Code of Ethics for Scientific Research in Belgium” establishes the major principles of ethically justified scientific practice. Despite the great diversity of subjects and methods of scientific research, there are general principles and standards of behaviour to which researchers are obliged to conform. The code of ethics presented hereafter stipulates that researchers must carry out their research in a rigorous manner and that they must faithfully publish the relevant information by describing the methods and the results in such a way that they can be verified. A code of ethics does not only contribute to the quality of the scientific research, but also to its legitimization: it demonstrates to citizens, who finance the majority of research and reap the benefits, that the world of research is developing its own tools to guarantee responsible research.

This code applies to all disciplines–, thus endowing it with a greater reach and strength of conviction, and allowing it to reinforce the existing codes or the codes to be developed at a later date by individual or separate institutions or for specific disciplines. This code exists within a broader movement at an international level aiming to develop national codes.

Publications by the OECD, the European Science Foundation, the European Commission, and the Dutch “Gedragcode Wetenschapsbeoefening”, were important sources of inspiration alongside other texts.

This code does not explicitly refer to the laws and regulations in force (for instance, as regards privacy protection or the domain of biomedical research) that must, in any case, be respected.

A code of *ethics* offers advantages in relation to legal or statutory standards. Indeed, it is impossible to elaborate precise rules covering all cases and circumstances. Furthermore, a code, which is based on the values shared by researchers, has a greater moral legitimacy than the rules imposed top down. At the same time, such an approach invites researchers to reflect both on an individual level and within the framework of their research institutes and their professional associations. Such a reflection must relate to the way in which they carry out their work, but also to the relations that are maintained within the broader social context, even from an international point of view.



The code aims to encourage researchers to think in a responsible way about the conditions and consequences of the social integration of their research activities as well as the close association between sciences, technologies, economics and ethics.

The aim is that this code should be respected unreservedly in all forms of fundamental, policy-driven and applied research financed by the government, but furthermore that all other forms of research (contractual research, research in the private sector, etc.) should apply it in the best way possible.

A limited deviation in relation to the principles of this code must not necessarily be seen as a breach. Cases may occur where one or other of its aspects cannot be applied. In such a case, the researcher is recommended to explicitly state this fact.

Mistakes may occur without the author having made any moral error. In this case, colleagues or research institutes must react in the appropriate manner, while respecting the princi-

ple of innocence until proved guilty. Knowingly and wrongly accusing someone of unethical behaviour is, in itself, a form of unethical behaviour. Then again, whistle blowers (anyone who has issued criticisms and sounded the alarm in good faith) must be protected.

Proper supervision of less-experienced researchers is necessary, without harming their freedom of research. Young researchers must be familiarised with the ethics of research right from the beginning. It is important that the teaching and support of young researchers explicitly focuses on the ethical aspects of scientific practice. Ethics committees, but also scientific academies, higher education institutions, foundations and associations have a responsibility in this respect.

Neither the pressure to transpose the research results as quickly as possible to exploitable applications, nor the concern to protect the results justifies constraints to ethical behaviour when carrying out research. The same applies to a researcher's desire for recognition.

# Rigour and caution

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## A. RIGOUR

A researcher's work is deemed to be rigorous when he/she applies the generally acknowledged rules of his/her discipline with precision.

1 The researcher acts in a precise and nuanced manner when carrying out research and publishing its results. The obligation to obtain results should not interfere with this principle.

2 Researchers must conceive and undertake their protocols as precisely as possible. In their research work, researchers must take into account the latest state of the art in their domain. They must obtain the necessary skills beforehand in terms of knowledge and mastery of the techniques, while developing a critical mind. Assignments for which they are not qualified or that can be reasonably considered as impossible to execute must be refused.

3. The researcher must check whether the tools he/she intends to use (for instance, laboratory equipment, measuring material, standard questionnaires) are adapted to the work to be undertaken and ready to be used in optimum technical conditions.

4. The person in charge of the research must exercise sufficient control over the implementation of the research by his/her team members. The responsibilities pertaining to this research must be clearly defined and always respected.

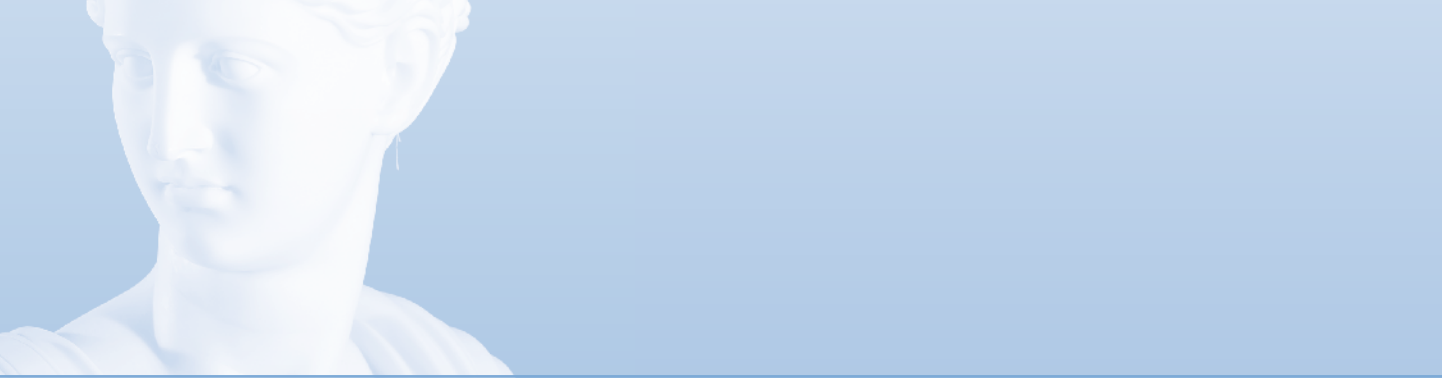
5. In media communications or presentations, the researcher must present his/her research results in a truthful and comprehensible way. He/she must avoid arousing unjustified fears or hopes.

6. A researcher assumes his/her responsibilities as regards the development of his/her discipline and, consequently, commits oneself to participate in peer review.

## B. CAUTION

A researcher's behaviour is deemed to be cautious when he/she acts with foresight and precaution and is guided by the concern to avoid harm to anyone else.

1. Although the researcher's primary concern is to acquire or increase his/her knowledge, caution requires him/her not to impose unnecessary or disproportionate risks.



A careful analysis of the advantages but also of the short- and mid-term risks of a research project must be done and, in case of a risk for third parties, must be submitted to a peer review (or, if necessary, the ethics committee if it exists).

2. The researcher must show respect for the subjects/respondents of experiments, investigations and surveys, all the more so if the subjects are in a vulnerable position. The subjects of experiments and respondents must give their informed consent: they have the right to know they are the subject of research, they must be given the most complete information possible and give their prior consent with full knowledge of the facts. Any deviation from this principle must be submitted for approval of the persons or the institutions qualified to provide an opinion on both the scientific aspects and the ethical aspects of the matter (ethics committee, programme monitoring committee, academic authorities, etc.).

3. Animals used in experiments must be treated with care by minimizing the number used and their suffering, according to the three R's (reduction, replacement, refinement).

4. As regards experiments with a potential impact on the environment, the investigator must take into account the principle of precaution.

5. In the case of projects abroad, the researchers must apply the present code while also taking into account any existing codes and rules in force in the countries concerned. Within this context, respect for local culture and environment is of utmost importance. This concern will be even greater in cases where local rules and codes of ethics are absent or are not applied.

6. Responsibility must be taken for any errors or omissions made, as well as any resulting damage to third parties, and maximal compensation should be pursued.

# Reliability and verifiability

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## A. RELIABILITY

Researchers are deemed to be reliable when they act in such a way that third parties can trust them to proceed in a professional manner, both in their scientific work and in their manner of reporting on it.

1. Researchers will endeavour to present their expertise, work and results as accurately as possible and will, in all cases, avoid creating a misleading or overrated idea of their work among their sponsors and colleagues, the press or any other third party.

2. Data arising from observations, experiments or existing literature should not be invented nor falsified. Researchers should not give the impression that empirical data is available if this is not the case. Sampling, analysis techniques and statistical methods should not be chosen or manipulated with a view to obtaining or justifying a result defined in advance.

3. The research results must appear in full in publications, and unwanted results must not be selectively omitted. Results which do not correspond to the stipulated hypotheses must always be mentioned in the publication of the research results.

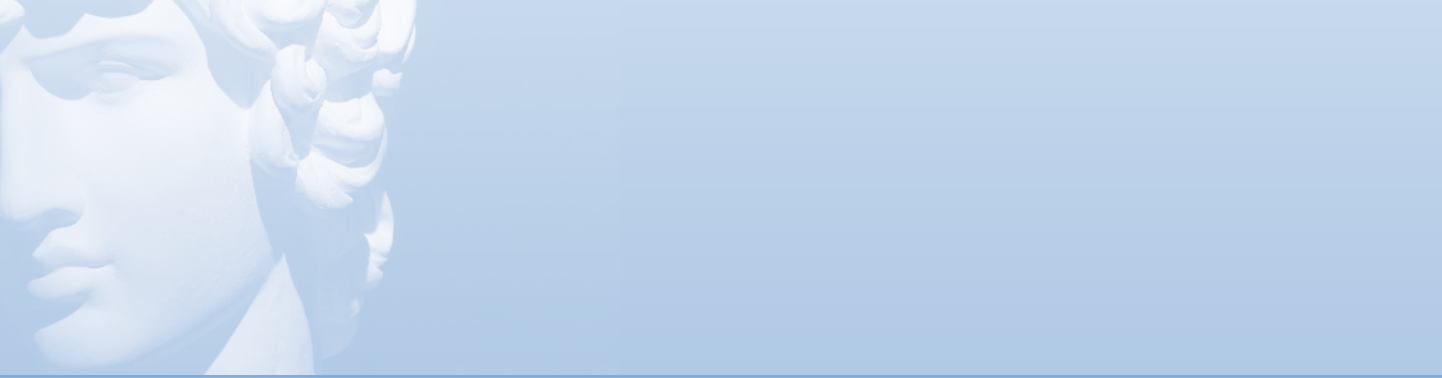
The level of uncertainty and the limits of the results must appear clearly in the publications, presentations and reports.

4. In their reports and communications, researchers must establish a clear distinction between the research results and the conclusions on the one hand, and hypotheses and speculations on the other.

5. The general principles in terms of intellectual property must be respected. Researchers may not present fieldwork, data and results obtained by other researchers as their own; they must not plagiarise other people's publications. People who have collaborated on a research project must be correctly cited; only those who have actually contributed to the research may be mentioned as (co-)authors.

6. Colleagues' and researchers' beliefs must be respected; their ideas must not be wrongfully appropriated. This is especially valid in the case of new themes in research, theories or technologies that are still in the development stage.

7. Researchers must not simultaneously publish the same test in several international scientific journals with peer reviewed. Neither should they submit the same text at the same time to several journals for evaluation.



## B. VERIFIABILITY

Researchers' work is deemed to be verifiable when it allows colleagues to follow the progress of the research and to reproduce it, if need be.

1. The information given should be verifiable. The results of the literature study, the hypotheses, the organisation of the research, the research and analysis methods, as well as the sources, are described in detail (in a research logbook, a laboratory diary or a progress report) so that other researchers can verify the accuracy of the process and reproduce it. If the subject of the observation is destroyed (for instance, during excavations), these observations must be recorded as well as possible. All the agreements and decisions must be written down and saved.

2. The publication of results is at the basis of the evaluation by peers. The results from a research project should be published and/or made accessible to other researchers as soon as possible. In some cases, agreements may be established concerning publication times.

3. The primary data of a research project and the protocols must be kept and made accessible during a determined and sufficient period of time. When publications, especially review and summary articles, do not contain all the necessary data for verification, the data should nevertheless be available.

# Independence and impartiality

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## A. INDEPENDENCE

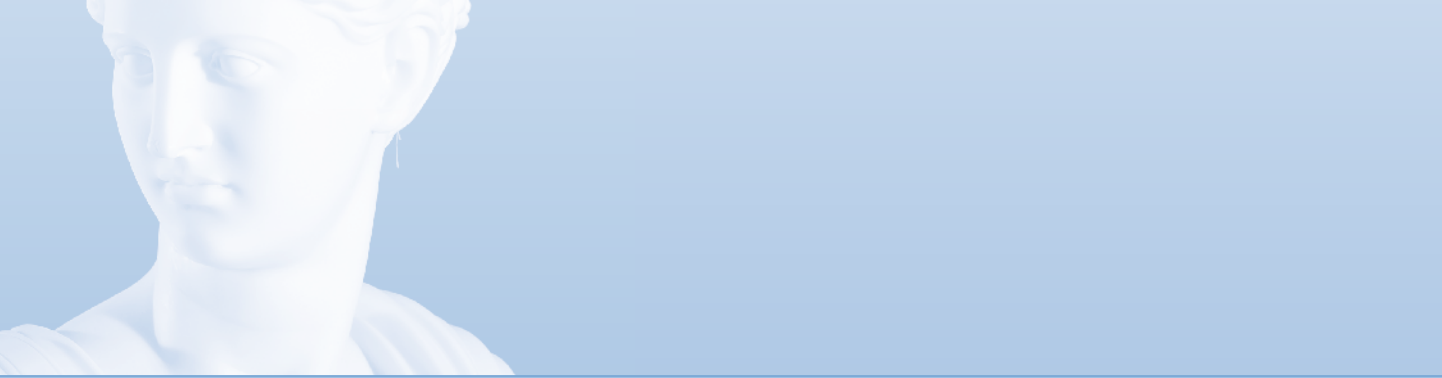
In their scientific activities, researchers are guided by rules of a scientific nature, which are a condition of their independence.

1. Researchers must be able to carry out their research in complete freedom and independence since their creativity depends on it.
2. Commissioned scientific research is carried out without interventions from the sponsor during the execution of the scientific work entrusted to the researcher. The sponsor's policy (public or private) is expressed in the choice of research themes. The researcher does not fail his/her independence by accepting contracts or in responding to calls for proposals within this context, insofar as he/she retains his/her freedom in the execution of the research, as regards the organisation of the research, the hypotheses, the methods used and the formulation of conclusions. A scientific conclusion can only be formulated on the basis of scientific arguments.

3. Commissioners and external sponsors, as well as their relations with the researcher, are mentioned in the publications of the results. The possible links between sponsors and researchers, such as their expert or advisory role, will also be mentioned. Any conflicts of interests must be mentioned in scientific communications and publications.

4. Commissioners institutions must elaborate clear contractual conventions, as regards, among other things, the freedom of publication and the ownership of the results. If restrictions on the freedom of the researcher have to be imposed, this will be explicitly mentioned.

5. If a project is carried out by a team, the rights and obligations of the various parties involved must be specified, including the research institution where the research is being carried out as well as the bodies that are the source of financing. The agreements relating to the ownership of results, their use and their dissemination must be clearly established.



## B. IMPARTIALITY

Researchers are deemed to be impartial when they do not allow themselves to be influenced by their preferences, sympathies, interests or personal prejudices in the execution of their scientific work.

1. Researchers have a right to their opinions and preferences (for instance, as regards the economic or societal usefulness of certain activities) though these should not interfere with their scientific work.

2. If there is a risk that there could be a conflict or a confusion of interests, the researcher can only accept to carry out the research if his/her impartiality will not be jeopardised. His/her solution to this problem will be explicitly mentioned during the presentation of the research results.

3. In the publication of the research results, especially the conclusions and recommendations for application that could be drawn from them, the researcher must make a clear distinction between his/her scientific judgements and his/her personal preferences.

4. By participating in peer review, the researcher should only be guided by considerations of a scientific order. The confidentiality of the information should be guaranteed.

5. The assessment of manuscripts for scientific journals must be carried out in an impartial manner and within a reasonable deadline.

6. Any disagreements with the scientific views of other researchers will only be discussed on the basis of scientific arguments.



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