"This a translation of the `Satzung der Justus-Liebig-Universität Gießen zur Sicherung guter wissenschaftlicher Praxis in der Fassung vom 29. Mai 2002`. Only the German original is legally binding in a court of law."

#### "The JLU Code of Good Scientific Practice

### **Contents**

Preamble

Section One: Ensuring good scientific practice

§1 Preface

§2 Workgroup configuration

§3 Authorship of scientific publications

§4 Junior researchers

Section Two: Scientific misconduct

§5 Scientific misconduct from researchers

§6 Co-responsibility for misconduct

Section Three: Ombudsman and permanent commission

§7 Ombudsman

§8 Tasks of the ombudsman

§9 Appointing the permanent commission

§10 Tasks of the permanent commission

§11 Presidency and procedures of the permanent commission

Section Four: Procedures with scientific misconduct

§12 Report of suspicion

§13 Response of the suspects

§14 Preliminary examination through the chairman of the permanent commission

§15 Formal investigation procedures

§16 Decision in the formal investigation procedures

§17 Care for other suspects and informants

Section Five: Possible decisions and penalties for scientific misconduct

§18 Decisions of the president

\$19 Employment- and work-related consequences

§20 Civil consequences

§21 Academic consequences

§22 Criminal consequences

§23 Information about third parties needing protection and the general public

Section Six: Coming into force, transition procedures

§24 Coming into force, transition procedures

#### **Preamble**

Honesty among researchers is a basic requirement for scientific work. As opposed to errors, dishonesty in scientific work contradicts the essence of science.

Honesty among researchers cannot be replaced with any system of rules. On the other hand, misconduct in scientific work cannot, as in other areas of life, be completely hindered by prescribing the basic conditions, but it can be limited.

Based upon these considerations and the recommendations of the German Research Association (DFG) (Recommendations for ensuring good scientific practice. Bonn 1997) as well as the collegiate rectors' conference (Handling scientific misconduct in colleges. Recommendation of the 185<sup>th</sup> Plenum of the collegiate rector conference from July 6<sup>th</sup>, 1998. Articles for collegiate politics, 1998); the permanent commission for organizational questions; research and junior researcher affairs according to §18 Para. 2 No. 2 of the Hessian University Law (HUG) in the edition from March 28<sup>th</sup>, 1995 in its session from May 19<sup>th</sup>, 1999; and the senate of the Justus Liebig University Giessen according to §16 Para. 2 No. 6 HUG in its session from July 14<sup>th</sup> 1999 issued the Code for Ensuring Good Scientific Practice via agreeing resolutions.

The senate of the Justus Liebig University on May 29<sup>th</sup> 2002 agreed to the following new edition of the code according to §39 Para. 2, No. 2 of the Hessian Collegiate Law (HHG) in the July 31<sup>st</sup> 2000 edition:

## Section One: Ensuring good scientific practice

### §1 General

- (1) The JLU Code of Good Scientific Practice was installed to improve the quality of scientific work and to prevent scientific misconduct.
- (2) The following requirements for good scientific practice are required:
  - 1. Experiments must be conducted according to state-of-the-art knowledge and therefore require the knowledge of recent literature and methods.
  - 2. The methods used and the results must be documented and stored for the duration of 10 years. Exact description and documentation is especially required for experimental work where reproducibility of experiments is an important trait.
  - 3. Results shall be questioned until they appear plausible.
  - 4. Results must be communicated to the scientific public in form of scientific publications. These are products of the scientists.
  - 5. Basic rules of scientific work specific to each discipline must be adhered to.
- (3) The JLU takes responsibility for its graduates by informing students during their induction about the rules of scientific work and good scientific practice, by demanding honesty and responsibility in science and by explaining scientific misconduct.
- (4) Among the staff of each institute the code of good scientific practice must be circulated and the members of an institute must confirm with their signature that they have been notified about the content of the Code of Good Scientific Practice.
- (5) Post-doctoral students are required to adhere to the Code of Good Scientific Practice and a signed declaration is prerequisite for the admission as a post-doctoral student (still to be integrated into all dissertation rules).
- (6) Newly employed professors and lecturers will be required to adhere to the code just as every other researcher here already is.
- (7) The executive committee of the Justus Liebig University ensures through this code that clear rules for leading, supervising, conflict resolution, and quality control exist and are adhered to. The basis of this code requires that the deanships of each department clearly assign the leadership, supervisory, and quality control tasks through a suitable organization, and that they ensure these are in fact administered.

## § 2 Structure of Workgroups

- (1) In the experimental departments several people in each workgroup are responsible for the creation and editing of questions, the meaning of the results, and the report to the scientific public.
- (2) Workgroups should not exceed a specific size, so that the leader of the workgroup can administer the tasks according to Para. 3.
- (3) It is the task of the leader of the workgroup to define research topics, work flows and their control, to decide on the work program of doctoral students, to instruct scientific work, and to hold regular group meetings so that researchers, doctoral students, as well as undergraduates can report their progress. These people may only report on their methods and results with the express permission of the workgroup leader.

(4) The members of the work group submit to the instruction of the group leader about all issues concerning goal setting, publication, or use of research results.

## § 3 Authorship of Scientific Publications

(1) If several authors are working on a common paper or report, only persons can be named as coauthors who have contributed substantially to the hypothesis, research plan, realization of the research work, analysis and interpretation of research work, or the critical revision of the manuscript.

Mere technical support in the collection of the data, financial support, the general leadership of the department where the research work was done, or simply reading the manuscript is not sufficient input for a co-authorship. "Honorary authorship" is excluded.

(2) The release of a manuscript for publication should be confirmed by all authors by signature and the input of all persons or research groups should be documented.

Should the unpublished observations of another person be cited or the results of another institution be used in the manuscript, it is necessary to acquire their written consent – subject to other recognized scientific practices.

If a co-author feels excluded he/she can appeal to the Ombudsman. (The Ombudsman of the JLU currently is Dr. Andreas Oksche)

- (3) A co-author author accepts responsibility for the scientific standard of the co-authorized publication through his/her agreement to be named as co-author. This specifically applies to their personal contribution to the paper and its integration into the context).
- (4) If individual researchers find themselves named as co-authors without prior agreement and feel that they cannot accept the authorship after the fact, they must appeal against this co-authorship to the main author and the publishing journal. If this is not done, this is understood as acceptance of the co-authorship and co-responsibility for the publication.

## § 4 Junior Researchers

- (1) Junior researchers start their scientific work with the with their Diplom, Master, or Doctoral thesis. Together with their technical skills, they must be introduced to scientific work ethics, responsibility in the used of scientific results and the cooperation with other scientists.
- (2) Junior scientists have the right to regular scientific supervision, consultation, and support from the group leader.
- (3) It is the duty of junior researchers to:
  - (a) comprehensively record, document and store their research results,
  - (b) work responsibly and take into account the interests of their colleagues,
  - (c) regularly report about the progress of their work,
  - (d) participate in the internal seminars, and
  - (e) contribute to a certain degree to routine tasks of the research group.

### **Section Two: Scientific Misconduct**

## § 5 Scientific Misconduct by Researchers

- (1) Scientific misconduct occurs if a researcher in the area of science intentionally or irresponsibly states facts that are not true, violates the intellectual property of others, or severely interferes with their research work. This similarly applies to technicians
- (2) Scientific Misconduct is specifically:
  - 1. Incorrect claims, namely:
    - (a) Invention of data:
    - (b) Falsification of data by selection or by exclusion of non desired data without mentioning or by manipulation of graphs and pictures;

- (c) Incorrect claims in a job or funding application (including wrong details on publishing journals, or accepted or "in print" publications)
- (d) Naming of "honorary authors." According to §3 Para. 1 No. 2.
- 2. Violation of intellectual property regarding copyrighted publications (including illustrations, visual representations, etc.) or others' key scientific results, hypotheses, rules, and research approaches by:
  - (a) unauthorized use while claiming authorship (Plagiarism),
  - (b) using research approaches and ideas of others without naming sources (theft of ideas),
  - (c) claiming or accepting unjustified authorship or co-authorship,
  - (d) falsifying content, or
  - (e) unauthorized publication or allowing access to third parties as long as the paper, hypothesis, rule, or research approach is not yet published.
- 3. The naming of co-authorship of others without their consent.
- 4. Severe interference with the research work of others by damaging, destruction, or manipulation of experiments, equipment, documents, hardware, software, chemicals, or other items needed for scientific work.
- 5. The disposal of data when it violates legal regulations or §1 Para. 2.

# § 6 Co-responsibility for Misconduct

Co-responsibility for misconduct according to §5 can result from:

- (a) active participation in the misconduct of others,
- (b) knowledge of falsification by others,
- (c) co-authorship of papers containing falsification, or
- (d) severely neglecting one's mandatory oversight.

#### Section Three: The Ombudsman and the Permanent Commission

## §7 The Ombudsman

- (1) The Justus Liebig University appoints an ombudsman/woman and an assistant ombudsman/woman as contact partners for members, former members, affiliates, and former affiliates of the university who have suspected scientific misconduct to report.
- (2) Researchers who are members or affiliates of the university, who have a large amount of experience in scientific fields as well as national and international contacts, and who on account of their position are not obligated to relevant negotiations, can be appointed as ombudsmen/women.
- (3) The president suggests suitable people to the senate according to Para. 2. The senate chooses an ombudsman/woman and assistant to begin their 3-year term in the upcoming winter semester with a majority vote in secret balloting. The choice requires not only a majority in the senate but also a majority of affiliated professors. A re-election is possible.
- (4) The president then appoints the winner as ombudsman/woman and obligates him/her to adhere to this code.
- (5) The Ombudsman/woman will be represented by the assistant in the case of prejudice or prohibition.
- (6) The names and addresses of the appointed ombudsmen, as well as their open office hours will be published in the lecture directory.
- (7) Should an ombudsman/woman leave office prematurely, another election will occur in order to fill the position for the remainder of the term. Paragraphs 2 through 4 still apply.

# §8 Duties of the Ombudsman/woman

(1) The ombudsman/woman has the following duties:

- 1. He/she advises trusted third party personnel of the Justus Liebig University and their members and affiliates by informing them about scientific misconduct according to §5.
- 2. He/she acts on appropriate tips received from the direct or indirect knowledge of third parties and attempts to clarify them.
- 3. He/she checks whether or not the accusations are plausible regarding concreteness and meaning as well as motive, and determines whether or not a possibility to dispel them exists (preappraisal according to §12 Para. 3).
- 4. He/she initiates the pre-appraisal procedure with the permanent commission according to §12 Para. 4.
- 5. After the formal investigation is complete, he/she oversees the suspects and informants according to the provisions of §17.
- 6. He/she is obligated to document the treatment and provisions of protecting informants and suspects
- (2) Every member and former member as well as affiliates and former affiliates of the Justus Liebig University has the right to personally speak with the ombudsman/woman within a limited timeframe.

# §9 Appointing the Permanent Commission

- (1) The Justus Liebig University appoints a permanent commission consisting of the following four members and assistant members:
  - 1. Three members and three assistant members from among the professors.

Professors primarily employed at the university, professors emeritus, and retired professors who have a large amount of experience in scientific fields as well as national and international contacts can be appointed. At least one member must be capable of acting as a judge.

2. One member and assistant member from among the researchers.

Only postdoctoral researchers can be appointed.

- (2) The president suggests suitable people to the Senate according to Para. 1. The senate chooses the individual members of the permanent commission along with their assistants, providing that at least one can serve as a judge, with a majority vote. §7 Para. 3 No. 2 and 3 apply. A one-time reelection is possible.
- (3) The president appoints the elected people as members or assistant members of the permanent commission and obligates them to adhere to this code.
- (4) The members of the permanent commission will be represented by their assistants in the case of prejudice or prohibition.
- (5) The names and addresses of the appointed commission members and assistants along with their open office hours will be published in the lecture directory.
- (6) Should members or assistants leave office prematurely, elections for the remainder of the term will take place; Paragraphs 2 through 4 apply.
- (7) The ombudsman/woman belongs to the permanent commission as a member with an advisory vote.

# §10 Duties of the Permanent Commission

(1) The permanent commission is responsible for investigating accusations of scientific misconduct. The chairman of the permanent commission carries out the pre-appraisal proceedings (§§13, 14) and the permanent commission itself carries out the formal investigation (§§15, 16). The permanent

commission can regulate the proceedings due to suspected scientific misconduct or suggest the method for which confirmed misconduct will be sanctioned (§§18 et seq.)

- (2) The permanent commission is activated upon request of the ombudsman.
- (3) The proceeding before the permanent commission does not replace other legal or code-regulated proceedings.

## §11 Chairmanship and Procedures of the Permanent Commission

- (1) The permanent commission chooses from among its members a chairman/woman and an assistant chairman/woman. The chairman or assistant in the case of prohibition invites the permanent commission to the sessions, leads them, and carries out their rulings.
- (2) The permanent commission is capable of rendering decisions as long as at least two members or assistants are present. The permanent commission decides with a majority of two-thirds of its members. If there is a split vote, the vote of the chairman decides. Protocols about the sessions which adhere to the session results must be completed.
- (3) The permanent commission can bring in up to two more people as voting members who possess special field-related knowledge concerning to the suspected scientific misconduct being judged or who have experience with related proceedings.
- (4) The specified deadlines for statements, hearings, negotiations, and decisions are to be set by the permanent commission in such a way that an efficient proceeding can occur.

#### **Section Four: Procedures with Scientific Misconduct**

# §12 Reporting Suspected Misconduct

- (1) If individual members, former members, affiliates, or former affiliates of the Justus Liebig University have concrete suspicion of scientific misconduct, they must immediately inform the ombudsman or a member of the permanent commission. If a member of the permanent commission is informed he/she must immediately inform the ombudsman.
- (2) The suspected misconduct report should be made in writing and specify the incriminating facts and evidence; if an oral report is given, a written memorandum concerning the suspicion and its founding facts and evidence is to be recorded.
- (3) The ombudsman checks the accusation and attempts to dispel it by conducting a pre-appraisal. If this succeeds, he notifies the suspects and informants. If the informants do not agree with the decision of the ombudsman in the pre-appraisal, they can appeal to the permanent commission.
- (4) If the ombudsman cannot dispel the accusation, he refers the report of suspicion, or rather the written memorandum to the permanent commission and reports on his work during the pre-appraisal.
- (5) The confidentiality of the informants or suspects is to be safeguarded.

## §13 Response of the Suspected Individuals

(1) The permanent commission gives the individual suspected of misconduct an opportunity to make a response immediately upon naming the facts and evidence within a specified deadline.

The deadline for the response normally is three weeks – six during the semester breaks.

(2) Without express permission of the informants, their names may not be revealed to the suspects during this phase of the proceeding.

#### §14 Pre-examination Through the Chairman of the Permanent Commission

- (1) After the response of the suspected individual has been submitted or after the established deadline has been reached, the chairman/woman of the permanent commission decides, within 4 weeks 8 during semester breaks, the following:
  - (a) Whether or not the pre-examination proceeding must be ended (giving the reasons to the suspects and informants) because there is not enough evidence for the suspected scientific misconduct, the misconduct cannot be completely explained, or because the misconduct is not severe enough, or
  - (b) Whether or not the pre-examination proceeding should continue into a formal investigation with further clarification and decisions; the reasons for this must be adhered to in writing.
- (2) If the informants are not satisfied with the initial cancellation of the pre-examination proceeding, they can present their objections to the permanent commission orally or in writing within four weeks eight during the semester breaks. The chairman/woman of the permanent commission consults and decides about the objections through appropriate use of Para. 1, and if necessary §13 Para. 1, after hearing from the suspects again. The suspects and informants are to be informed about the decision.
- (3) Ending the pre-examination proceeding against this decision is grounds for a complaint to the permanent commission.

## §15 Formal Investigation Procedures

- (1) The chairman/woman of the permanent commission starts the formal investigation procedures by letting the suspected individuals know about the result of the pre-examination. He or she instructs the president about initiating the formal investigation.
- (2) The permanent commission deliberates in a closed, oral hearing.

They must ascertain both the incriminating and exonerating facts.

Through free consideration of the evidence, they check whether or not scientific misconduct exists.

(3) The individuals suspected of possible misconduct, the suspected workgroup, or the suspected institute shall be given the opportunity to respond.

The suspects' cases may be heard orally if they wish; for this they may bring someone they trust as an adviser.

This applies to anyone to be heard.

(4) The names of the informants are to be made known to the suspects when petitioned if no adequate defense for them is possible or if the reliability and motives of the informants are significant for clarifying the accusations. The informants are to be told when this happens.

## §16 Verdict in the Formal Investigation

(1) If the permanent commission finds no evidence for scientific misconduct, they end the proceeding. Part 1 also applies if the permanent commission considers the scientific misconduct to be minor.

The president is to be informed about the cancellation.

- (2) If the permanent commission finds there to have been scientific misconduct, they inform the president in writing about the results of their investigation and suggest in which way the proceeding should continue also in relation to protecting the rights of others (§§19 ff.).
- (3) The actual reasons for either cancelling the proceeding or referring it to the president are to be told to the suspects and informants.
- (4) It is not possible to file a complaint against the decision of the permanent commission.
- (5) The files for the formal investigation will be kept for 30 years.

# §17 Supporting Bystanders and Informants

(1) After the formal investigation is complete it is necessary to protect the innocent people who become involved in the events leading to scientific misconduct, keeping their personal worth and scientific integrity free from discrimination.

In order to protect the personal and scientific integrity of bystanders, the following possibilities exist:

- (a) Consultation with the ombudsman;
- (b) A written explanation from the chairman/woman of the permanent commission saying that the bystander should not be charged with scientific misconduct (§5) or be held co-responsible (§6).
- (2) Informants are also to be protected from discrimination accordingly, provided their accusations do not turn out to be groundless.

#### Section Five: Possible Verdicts and Penalties with Scientific Misconduct

### §18 Decisions of the President

- (1) If the permanent commission ascertains that there was scientific misconduct and reports it according to §16 Para. 2, the president examines the recommendations of the permanent commission for the next proceeding. The criteria here are upholding scientific standards and the rights of all directly and indirectly affected people, the manner and severity of the confirmed scientific misconduct, as well as the necessity of its penalty.
- (2) Scientific misconduct cannot be judged according to set written laws; a suitable penalty depends on the circumstances of each individual case.

# §19 Employment and Public Service Legal Consequences

- (1) If the suspect has an employment relationship with the university, the following employment legal consequences can come into play in the case of scientific misconduct:
  - 1. Reprimand,
  - 2. Extraordinary dismissal (including dismissal due to suspicion),
  - 3. Ordinary dismissal
  - 4. Termination of contract
- (2) If the suspect works for the university as a public official, the following legal disciplinary consequences for public servants, among other things, can come into play in the case of scientific misconduct:
  - 1. Censure, fine, garnished wages,
  - 2. Removal from public office,
  - 3. Revocation of the appointment.

### §20 Civil Legal Consequences

The following civil legal consequences especially come into play in the case of scientific misconduct:

- 1. Issuance of a restraining order,
- 2. Claims for restitution against the suspects (mostly regarding stolen material),
- 3. Claims for disposal and injunctive relief based on copyrights, personal rights, patent rights, and competition regulations,
- 4. Claims for return (of scholarship or third-party funding),
- 5. Claims for punitive damages from the Justus Liebig University or from third parties in the cases of personal damages, destruction of property, or similar cases.

### §21 Academic Consequences

- (1) Academic consequences for scientific misconduct must be determined at different levels and with different target directions.
- (2) Within the Justus Liebig University stripping one's academic degree (Diplom, Masters, Doctorate, or habilitated Doctorate) or one's academic position (college lecturer, associate professor) comes into consideration if the academic degree or position was attained with publications containing falsified information or with some other form of falsification; if applicable, the removal of one's license to teach comes into consideration. If especially severe scientific misconduct is ascertained, the president informs the responsible committee with the request for examination and decision.
- (3) Scientific facilities and organizations outside of the university setting are to be informed by the president if the facilities and organizations are directly affected or if the suspected scientist holds a leadership position in the affected facility or organization or takes part in the decision committees of financial aid or similar organizations.
- (4) If the misconduct consists of negligent misrepresentation (§5 Para. 2 No. 1) or damaging intellectual property (§5 Para. 2 No. 2) or aiding such misconduct (§6), the affected author is obligated to recall the work. If the affected works have not yet been published, they must be deferred; if they have already been published, they or their affected sections must be recalled.

The author responsible for the publication containing the falsified information or a co-author who is partly responsible must compose a report for the permanent commission within a timeframe to be set, dealing mainly with the recall of the publication or work.

It is also necessary for the president to take the appropriate actions for recalling the affected publications or works.

Publications which are deemed by the permanent commission to contain falsifications are to be removed from the list of publications of the affected author or to be appropriately marked.

### §22 Penal Consequences

- (1) Penal consequences for scientific misconduct come into question when suspicion exists that a condition from the penal code or some other penal rulebook is fulfilled or a misdeed has occurred.
- (2) The president is required to examine whether or not and in what manner the university will press charges.

#### §23 Information about Third Parties Needing Protection and Public

Insofar as protection for third parties, keeping the trust in scientific fidelity, restoring the scientific reputation, hindering subsequent damages, or otherwise protecting the general public interest becomes necessary, affected third parties and the press are to be instructed about the results of the formal investigation as well as any further measures taken.

# Section Six: Coming-Into-Force, Transition Procedures

# §24 Coming-Into-Force, Transition Procedures

- (1) The edition of the code from May 29<sup>th</sup> 2002 comes into effect on the day after its publication in the governmental gazette of the State of Hessen.
- (2) The appointment of members and assistant members according to §9 Para. 1 No. 2 will occur for the first three-year office term starting in the Winter Semester 2002/3.

Giessen, July 11th 2002

Prof. Dr. Stefan Hormuth
President of the Justus Liebig University"