

**Principles for safeguarding good scientific practice
at Leibniz Institute for Plant Biochemistry (IPB)
and procedures concerning scientific misconduct**

Preamble

All research institutes are requested to protect science in the framework of their own responsibility and themselves from falsification and take action against misconduct and manipulation of scientific results.

The obligation to comply with principles of good scientific practice is a DFG [German Research Foundation] promotion criterion. Thus, the provisions below are based on „Suggestions for safeguarding good scientific practice“ of DFG commission „Self-Control in Science“ as well as respective WGL [Scientific Association Gottfried Wilhelm Leibniz] recommendations.

The compliance with such principles are standardised as express employment contract-related duty in IPB. The employees with current contracts will be obliged to principles' observance by written statements.

Section I

Principles of good scientific practice

§ 1 Good scientific practise

- (1) Good scientific practise means to work *lege artis* and always comply with up-to-date level of knowledge. It requires knowledge and utilisation of current literature, application of state-of-the-art methods and expertise.
- (2) Good scientific practise is distinguished by doubt and self-criticism, critical analysis of obtained findings and its control for instance by mutual review within a working group, but also by honesty against contributions of colleagues¹, employees, competitors, predecessors.
- (3) Careful quality assurance is an important trait of scientific honesty. It is – beyond honesty against itself and other ethic standards – the basis of scientific professionalism. It will be assured by (critical) collaboration in scientific working groups and clear responsibility structures.
- (4) Quality assurance and, thus, good scientific practise include furthermore documenting of all working steps and safekeeping of all records, ensuring reproducibility prior to publication as well as establishing access possibilities for entitled third parties.
- (5) The responsibility as (co-)author represents an essential aspect of good scientific practise. Authors of scientific publications are jointly responsible for their contents; honorary authorships are excluded. The author is accountable, identifies himself with the scientific result and assumes the guarantee for publication's content.

§ 2 Organisational structures

- (1) Department and working group heads are responsible for direction, supervision, conflict regulation and quality assurance of IPB scientific works. They ensure by appropriate instructions, that
 - Research work's tasks and individual scientist's assignments will be defined and distributed,
 - Each employee has got clearly assigned his competences (rights and duties),
 - Controls of compliance with defined goals will be executed at regular intervals,
 - Appropriate mentorship and advice of young scientists/PhD students/graduands will be ensured,
 - Copyrightable inventions will be timely registered in writing with IPB business management as invention prior to its publication,
 - Manuscripts will be submitted to publication only after approval by respective head of department (signature on one manuscript copy that shall be kept safe until publication) and
 - Third party funds applications will only be submitted after approval by respective head of department (acknowledgement on one application copy that shall be kept safe until decision on application).
- (2) In case of interdepartmental projects, a responsible project manager shall be appointed by agreement between involved departments, who assumes the tasks pursuant to (1).

¹ All office and function designations apply same way to women and men.

§ 3 Data

The responsible managers shall give clear instructions and rules on way of recording and data documentation. Primary data shall be saved and stored for 10 years.

§ 4 Training

Imparting principles of good scientific practise and turning special attention on their observance shall be ensured concerning training of new scientific generation and specialised promotion/mentorship.

§ 5 Evaluation criterions

The precedence of originality and quality over quantity upon nomination of performance and evaluation criterions shall be paid attention to. Productivity can only be considered in connection to quality indicators.

§ 6 Authorship

- (1) Only those authors shall be mentioned as scientific original publication authors, who themselves essentially contributed to conception of studies or experiments, preparation, data analysis and interpretation and manuscript wording, agreed to its publication and, thus, are sharing responsibility for publication.
- (2) Data collection, financing of researches, direction of department or working group, in which research has been carried out, or manuscript proofreading do not normally establish any authorship.

§ 7 Original works

- (1) Original works are notifications of new observations or experimental results including conclusions drawn from them. This means, that any multiple publication of the same results shall not be admissible.
- (2) The publication must include an exact description of methods and results to ensure verifiability of scientific researches, unless the special form of publication (abstract, short communication) does explicitly exclude it.
- (3) Findings that support the authors' hypothesis as also findings that reject the authors' hypothesis must be equally informed of.
- (4) The fragmentation of researches with the goal of separate publications shall be avoided.
- (5) Findings and ideas of other scientists' as well as relevant publications of other authors shall be cited appropriately.

§ 8 Ombudsperson

- (1) The IPB scientific staff members will elect an ombudsperson to arbitrate or settle disputes or disagreements in connection with good scientific practise, which do not already contain any reproach of scientific misconduct. All paid employees with degree employed at IPB who execute research jobs are scientific staff members.
- (2) The ombudsperson shall be elected from the circle of IPB scientists; in exceptional case, a non-institute scientist can be elected. Senior IPB scientists (Geschäftsführer [managing director] and heads of department) are non-electable.
- (3) The term of office is 3 years, re-election is admissible. The ombudsperson exercises his office in an honorary capacity, independent of and free from instructions. He shall be assisted by all persons involved concerning exercising his office.
- (4) All IPB scientific staff members are entitled to nominate a candidate. Any nomination will be considered first then, when the nominee has declared his readiness to accept the office.

Section II

Procedures concerning scientific misconduct**§ 9 Scientific misconduct**

- (1) Within a context of scientific importance, a deliberate or grossly negligent falsification or fabrication, infringement of intellectual property rights or impairment of another person's research work in any way constitute scientific misconduct. This includes, in particular,
- (2) This includes, in particular:
 1. Misrepresentation by
 - a) Fabrication of data
 - b) Falsification of data and sources, for example by
 - being selective with and rejecting undesirable results without clearly disclosing the fact,
 - manipulating representations or diagrams,
 - c) Supplying incorrect details in a letter of application or an application for funding including misrepresentation concerning the means of a publication or articles awaiting publication).
 2. Removal of primary data as far as this violates statutory provisions respectively other accepted principles of scientific work.
 3. Infringement of intellectual property rights relating to any pieces of work protected by copyright, substantial scientific findings, hypotheses, teachings or approaches to research established or made by someone else by
 - unauthorised use or claiming authorship (plagiarism)
 - exploitation of approaches to research and ideas, in particular as an expert (theft of ideas)
 - undue or unjustified claim to authorship or co-authorship of a scientific publication
 - falsifying the content, or
 - unauthorised publication or providing unauthorised information access to third persons before the work, the results, the hypothesis, the contents of the teaching or the scientific approach has been published,
 - using the (co-)authorship of another person without his/her permission.
 4. Compromising of research activities by
 - a) sabotage of research work (including damaging, destroying or manipulating the set-up of experiments, devices, documents, hardware, software, chemicals or other matters required by another person to conduct an experiment)
 - b) grossly incorrect, deliberately untrue or misleading expert evaluation on research activity of another person and preparation of courtesy expert opinion.
- (3) Joint responsibility for scientific misconduct can arise – among other things – from:
 - active involvement in the misconduct of others
 - knowing about falsifications committed by others
 - co-authorship at falsified publications
 - gross negligence of the obligatory supervision.

§ 10 Institution of proceedings

- (1) The IPB business management shall be informed of tangible suspicious facts for scientific misconduct. The business management shall inform section's speaker of WGL section C in appropriate cases. The information shall be made in writing; the business management shall draw up a written note upon verbal information.
- (2) Should the executive director being accused of misconduct, the scientific advisory board chairman shall be informed, who will involve - if necessary - the chairman and deputy chairman of foundation board.
- (3) The facts on which the suspicion is based on shall be investigated. The detailed incident determination shall be immediately carried out. The investigations will be arranged respectively carried out by business management respectively scientific advisory board chairman. Investigations shall be carried out under strict observance of confidentiality and protection of all persons involved.
- (4) The person under suspicion of misconduct shall be given opportunity for statement to designate inculpatory facts and evidences at least one week after the suspicion has become known. The respective time period shall not exceed one week. Without his consent, the informant's name shall not be disclosed to the concerned person during such stage of procedure.
- (5) After receipt of suspected person's statement respectively after deadline expiration, business management respectively chairman of scientific advisory board shall decide within one week's period, whether the current findings have refuted the suspicion of any misconduct or the suspicion has consolidated or misconduct has to be considered as proven. Such decision shall be documented as written note.
- (6) In case of suspicion has consolidated, the business management shall decide on need of further measures especially the participation of WGL investigating commission.

§ 11 Further procedure, investigating commission

- (1) WGL investigating commission consists of the chairman and one deputy chairman, the scientific advisory board chairman and/or the responsible section's speaker, two arbitration advisors that shall be members of different sections; one representative with judicial expertise shall be investigating commission member. The chairman as well as deputy chairman – both shall not be members of WGL institutes – shall be elected by WGL senate for a three years' term of office. The other members shall be appointed for the respective procedure by WGL president in concordance with chairman.
- (2) The investigating commission may consult in single cases experts specialised in the factual frame to be judged as well as experts experienced in handling such cases as additional members with advisory vote.
- (3) The bias of an investigating commission member can be asserted at any time by himself or the accused person or other involved persons. Upon asserted bias, the exclusion from procedure shall follow on decision of investigating commission.
- (4) The investigating commission convenes in verbal session in camera. The investigating commission arranges further researches in agreement with business management and examines in free assessment of evidence, whether any scientific misconduct exists. The arranged researches and procedure steps, ascertained facts, findings and results shall be disclosed to the person concerned, who may claim examination of all records and information at any time. The person concerned shall be given opportunity for statement at any stage of procedure; he may involve a person of his confidence as counsel. The hearing of further persons shall be admissible.
- (5) All persons involved shall be obliged to handle confidentially any committee document and procedure finding.
- (6) The investigating commission shall execute and complete its investigations within two weeks. The individual procedure steps shall be taken down and documented.
- (7) In case of the investigating commission considers any misconduct as not proven, it stops its activity and informs all persons involved.
- (8) In case of the investigating commission considers any misconduct as proven, it submits its investigation result to business management respectively scientific advisory board chairman.

§ 12 Proven misconduct

- (1) In case of any misconduct shall be considered as proven, business management respectively scientific advisory board chairman shall decide on need of further measures according to best judgement.
- (2) Depending on any individual case's circumstances and especially the gravity of determined misconduct, sanctions from various fields of law are possible, also - if need be - cumulative, e.g.
 - a) Consequences under to job legislation
 - Formal warning
 - Extraordinary termination of employment
 - Cancellation of contract
 - b) Academic consequences
 - Revocation of Doctor's degree
 - Revocation of teaching qualification
 - c) Consequences under civil law
 - Releasing an off-limits order to prevent the person from entering IPB property,
 - Rights to recover possession against the person concerned, for example right on surrender of removed scientific material
 - Remedy claims and prohibitory injunctions arising from copyright law, personality rights, patent law and competition law
 - Claims for reimbursement e.g. of scholarships or third-party funding
 - Claims for compensation for any damage suffered by IPB or any third parties
 - d) Consequences under criminal law,
 - e) Revocation of scientific publications.
- (3) Scientific publications that are incorrect by virtue of proven scientific misconduct shall be withdrawn as far as they are unpublished and to be rectified as far as they are already published (revocation). Cooperation partners shall be informed in an appropriate form as far as necessary. The author(s) and involved publisher are basically obliged to such information; if they shall omit to react within an appropriate time, the business management will take suitable measures according to its capacity.
- (4) In cases of grave scientific misconduct, the business management shall inform other concerned research institutions respectively research organisations and – if need be – also professional organisations.
- (5) The business management may be obliged concerning protection of third parties, maintenance of trust in scientific honesty, restoration of IPB's scientific reputation, prevention of subsequent damages, as also in general public interest to inform third parties and the public

§ 13 Entry into force

These „principles for safeguarding good scientific practice at IPB and procedures concerning scientific misconduct“ enter into force upon their inner-institute publication.

Halle, 19 November 2005

Prof. Dierk Scheel
Executive Director

Lothar Franzen
Head of Administration