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**HANDOUT**  
**Guidelines for Safeguarding Good Scientific Practice**

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DFG: Guidelines for Safeguarding Good Research Practice, Code of Conduct, 2019  
Safeguarding Good Scientific Practice, 2013:15

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### **INTERNATIONAL RULES AND REGULATIONS**

- The European Code of Conduct for Research Integrity (2010, updated 2017)
  - Singapore Statement on Research Integrity, 2nd World Conference on Research Integrity (2010)
  - The Montreal Statement on Research Integrity in Cross-Boundary Research Collaborations, 3rd World Conference on Research Integrity (2013)
  - Statement of Principles for Research Integrity, Global Research Council (2013)
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### **GUIDELINE 1 / RECOMMENDATION 2, 3**

Preamble Code of Conduct

*“ The constitutionally guaranteed freedom of research is inseparably linked to a corresponding responsibility. Taking this responsibility into full account and embedding it in individual conduct is an essential duty for every researcher and for the institutions where research is carried out.”*

#### **Guideline 1: Commitment to the general principles**

- ▶ Higher education institutions and non-HEI research institutions, with the participation of their members, work together to define rules of good research practice, ensure that their employees are made aware of these guidelines and related policies and regulations, and require their employees to comply with them with due regard for the type of research undertaken in the relevant subject area. Individual researchers are responsible for ensuring that their own conduct complies with the standards of good research practice.

#### **Basic Values and Norms in Science**

Honesty  
Trust  
Fairness  
Objectivity  
Independence  
Transparency  
Openness  
Confidentiality

Assumption of responsibility towards patients, subjects, animals, matters, for future generations and the environment, for the team, the students, mentors and for the scientific community

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## GUIDELINE 3, 4 / RECOMMENDATION 4

### Guideline 4: Responsibility of the heads of research work units

► The head of a research work unit is responsible for the entire unit. Collaboration within the unit is designed such that the group as a whole can perform its tasks, the necessary cooperation and coordination can be achieved, and all members understand their roles, rights and duties. The leadership role includes ensuring adequate individual supervision of early career researchers, integrated in the overall institutional policy, as well as career development for researchers and research support staff. Suitable organisational measures are in place at the level of the individual unit and of the leadership of the institution to prevent the abuse of power and exploitation of dependent relationships.

- Consideration of rights and obligations
- Obtaining the necessary permits and an ethical vote
- Documented agreement on usage rights
- Comprehensible documentation of all relevant information for the creation of a research result
- Documentation of the individual results which do not support the research hypothesis -> no selection and manipulation
- Adequate storage on central materials or using research software for an appropriate period of time
- Usually 10 years (depending on the respective subject area) accessible and traceable in the institution where they were created or in multi-location repositories
- Good and understandable documentation should indicate the process, not just the results or findings or final conclusions
- Criteria for adequate documentation:
  - immediately and directly
  - Truthful
  - complete, leading
  - Readable
  - Forgery-proof
  - in accordance with the standards of the specific discipline
- 3-2-1 rule: 3 copies, 2 on different storage media, 1 external location

### Discuss and insure as early as possible about:

- What are original (primary) data, ideas, sources that have to be saved?
  - How and where must the data be saved / stored?
  - How can you ensure secure data backup?
  - Who is responsible for good data management?
  - Who does the data that is collected belong to?
  - What rights do you have to publish the data?
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## GUIDELINE 13, 14, 15 / RECOMMENDATION 11, 12

### Guideline 14: Authorship

- ▶ An author is an individual who has made a genuine, identifiable contribution to the content of a research publication of text, data or software. All authors agree on the final version of the work to be published. Unless explicitly stated otherwise, they share responsibility for the publication. Authors seek to ensure that, as far as possible, their contributions are identified by publishers or infrastructure providers such that they can be correctly cited by users.

### Responsibility for:

- Data validity and quality
- Authenticity and originality
- Correct implementation
- Correct citation
- Reproducibility (data backup)

### ***DFG 2013: Safeguarding Good Scientific Practice, p. 82f.***

### „Recommendation 11: Authorship:

Therefore, the following contributions on their own are not sufficient to justify authorship:

- merely organisational responsibility for obtaining the funds for the research,
- providing standard investigation material,
- the training of staff in standard methods,
- merely technical work on data collection,
- merely technical support, such as only providing equipment or experimental animals,
- regularly providing datasets only,
- only reading the manuscript without substantial contributions to its content,
- directing an institution or working unit in which the publication originates

### ICMJE Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals (updated December 2017), p. 2

#### *“2. Who Is an Author?*

The ICMJE recommends that authorship be based on the following 4 criteria:

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.”

## AREAS OF CONFLICT IN RESEARCH

- Research on humans
- Animal experiment
- Research with dangerous substances
- Contract research and scientific cooperation
- Military research

- Handling of data
- Publication process and authorship
- Acquisition of research funds
- Hierarchy, dependencies and organizational culture

Misconduct can occur in all of these areas.

There are no hard lines between appropriate behavior and wrongdoing!

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## **GUIDELINE 13, 14, 15 / RECOMMENDATION 11, 12**

### **Guideline 6: Ombudspersons**

► HEIs and non-HEI research institutions appoint at least one independent ombudsperson to whom their members and employees can turn with questions relating to good research practice and in cases of suspected misconduct. They take sufficient care to ensure that people are aware of who the ombudspersons at the institution are. For each ombudsperson there must be a designated substitute in case there is any concern about conflicts of interest or in case the ombudsperson is unable to carry out his or her duties.

- Neutral and qualified
  - Confidentiality and secrecy
  - Transparency and fairness
  - Solution-oriented conflict mediation
  - Note must be verifiable
  - Conflicts of interest must be disclosed
  - Avoid: quick judgments, "rumor mill"
  - Anonymous conflict resolution not (hardly) possible
  - Free choice of ombudsperson or institution
  - No parallel processing of several ombudsman offices / persons
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## **PREVENT MISCONDUCT**

### Individually and in work groups:

- Good, timely and secure documentation
- Keep primary data, make copies if necessary
- Good care
- Regular work meetings, professional communication, contracts
- Early arrangements / agreements on authorship
- View raw data (e.g. from co-authors)
- Opportunities for advice
- Leadership responsibility
- ...

### Institutional / structural and / or systemic level:

- Fair reward system

- Positive error culture
- Support and adequate monitoring
- Good working atmosphere
- Appropriate (helpful) control mechanisms, infrastructure
- "Deceleration"
- ...