Guidelines for handling suspicions regarding research misconduct and questionable research practice at DTU

Introductory remarks

Handling of cases of suspicion regarding research misconduct or questionable research practice is laid down in *Law on research misconduct etc.* (law No. 383 of 26/04/2017), where research misconduct constitutes the most severe violations of good scientific practice. The law regulates the procedures for handling cases of suspicions of research misconduct, which are decided by the Danish Committee on Research Misconduct (see section A) and of cases of questionable research practice, which are decided by the university (see section B).

Research misconduct is defined as fabrication, falsification and plagiarism committed wilfully or with gross negligence when planning, carrying out, or reporting research.

- *Fabrication* is undisclosed construction of data or substitution with fictitious data.
- *Falsification* is manipulation of research material, equipment or processes as well as changes or exclusion of data or results, whereby the research appears misleading.
- *Plagiarism* is appropriation of other people's ideas, processes, results, text or special concepts without giving appropriate credit.

Questionable research practice is a violation of generally acknowledged standards of good scientific practice including the standards in The Danish Code of Conduct for Research Integrity and other existing institutional, national and international practices and guidelines for research integrity.

Suspicion of breaches of good scientific practice is handled at DTU in accordance with the law based on whether the suspicion concerns A) research misconduct or B) questionable research practice:

A) Procedure for handling suspicion of research misconduct

The Danish Committee on Research Misconduct is only entitled to handle cases of misconduct either fully or partially financed by Danish public funding. If the research is privately funded, the company where the research took place, needs to approve the Committee's handling of the case.

1. Initial reporting of suspicion regarding research misconduct

Suspicions regarding research misconduct must be reported to the research institution, where the research took place (cf. article 10 (1) of the law). Reporting may be done by DTU employees and/or non-DTU employees

Reporting must be done in person and will be handled in confidence. Anonymous reports will not be investigated.

Reporting must be done to the Dean of Research.

<u>Suspicions involving research or staff from other institutions</u>

Should the suspicions relate to external partners – other research institutions, private businesses and industries, private foundations, public bodies, etc. – the cases must be handled according to the *Law on research misconduct etc.* (cf. article 2 (1) and (2)) and

reported via DTU. However, as described previously, it requires consent from the company before a case can be processed (cf. article 2 (2)).

2. Requirements for reporting a suspicion of research misconduct

When a case of research misconduct is reported to DTU, DTU must collect all relevant information concerning the case before the case can be referred to the Committee. The report to DTU must contain information about the scientific product, the researcher(s) the suspicion concerns, the allegations of research misconduct and the reason for these (cf. article 11 (1)). DTU must refer the case to the Danish Committee on Research Misconduct no later than three months after receiving the report.

3. Handling of cases by the Danish Committee on Research Misconduct

The Committee can reject a case if the allegations are considered unfounded or they are deemed unlikely to lead to a decision as to whether or not research misconduct took place (cf. article 13). The rejection must be made within three months.

Cases admissible to the Danish Committee on Research Misconduct must be concluded no later than 12 months after the Committee receives the case report (cf. article 15 (1)). Under special circumstances this deadline can be extended (cf. article 15 (2)).

4. Possible outcomes regarding cases of research misconduct

a. Acquittal of suspicion

The person under suspicion is deemed not to have committed any breach of the law on research misconduct and no further action will be taken.

b. Confirmation of suspicion of research misconduct

If the suspicion of research misconduct is confirmed, the Committee can decide the following (cf. article 16 (2)):

1) To advice the researcher to retract the scientific product.
2) To inform the involved research institution(s).
3) To inform the researcher's employer.
4) To inform the publisher of the scientific product, and, if relevant, recommend that the scientific product is retracted or similar actions are taken.
5) To inform relevant funding bodies that have fully or partially financed the research in question.

Thereafter, DTU will decide on further sanctions at both institutional and academic level (see section B (7b) in the guidelines).

B) Procedure for handling suspicion of questionable research practice

1. Initial report or discussion of suspicion

Suspicions of questionable research practice performed by DTU employees and DTU students must be reported to DTU. Reporting may be done by DTU employees and/or non-DTU employees.

Reporting must be done in person and will be handled in confidence. Anonymous reports will not be investigated.
Allegations of questionable research practice should be made in line with DTU's general management structure, i.e. to the immediate superior. If, for some reason, this is not feasible, it is also possible to report a suspicion to superiors further up the management structure or to the head of department/head of centre.
It is always possible to take a suspicion to the Dean of Research.

Suspicions involving research or staff from other institutions
Should the suspicions of questionable research practice in DTU projects relate to external researchers from other universities, the matter should be handled at their university.
Should the suspicions of questionable research practice in DTU projects relate to collaborative companies an agreement on how to handle the matter must be reached between the partners at an appropriate level in the partner organization.

2. Report of suspicion

If an initial discussion of the suspicion with a superior reveals that the matter warrants further investigation, the superior will then report the matter to the Dean of Research.
The report must contain information about the scientific product, the researcher(s) the suspicion concerns, the allegations of questionable research practice and the reasons for these.

3. Preliminary investigation

The Dean of Research and the administrative person in charge of research integrity will initiate a preliminary investigation of the matter. If necessary for the investigation, the person under suspicion will be informed that a preliminary investigation is being conducted.
Based on the preliminary investigation, a decision will be made as to whether 1) the suspicion is deemed unfounded or does not fall within the scope of the code of conduct for research integrity, and that the matter will therefore be dismissed or 2) that there exist grounds to continue the process based on a well-founded suspicion.

4. Investigation

At this stage, the person under suspicion must be notified of the suspicion and the ongoing investigation, as well as of the person who made the initial allegation.
Relevant witness statements, data collection, a statement from the person under suspicion, etc. will be collected.
An ad hoc expert committee may be appointed which will draw on both DTU expertise as well as external expertise. The Dean of Research appoints the committee.

Referral to the Danish Committee on Research Misconduct
If the investigation of questionable research practice reveals findings of research misconduct, DTU is obliged to refer the case to the Danish Committee on Research Misconduct (cf. article 10 (3)). See procedure in section A.

5. Report

The investigation will end with the preparation of a report on the alleged or suspected questionable research practice, including substantiating evidence. If the report, or parts hereof, is prepared by an expert committee, the committee's findings and conclusions will be included, including minority statements.

6. Conclusion

Based on the report, the Dean of Research will make a final conclusion.

7. Possible outcomes

a. Acquittal of suspicion

The person under suspicion is deemed not to have committed any breach of responsible conduct of research and no further action will be taken.

b. Confirmation of suspicion of questionable research practice

Depending on the gravity of the breach of responsible conduct of research, various sanctions may be imposed, both at an institutional and/or academic level.

Institutional sanctions
Oral or written warning (according to employment legislation)
Change of job functions
Dismissal/termination of contract

Academic sanctions
Annulment of degree (PhD, Dr.Techn.)
Retraction of articles or correction of the scientific product
Notification of breaches of good scientific practice to collaborators, co-authors, etc.
Annulment of honourable degrees

In case of serious academic sanctions, such as annulment of a degree, a hearing of the DTU Academic Council will be conducted.

8. Other relevant information

a. Suspicions brought forth in ill faith

If a suspicion has been brought forth in ill faith with willful intention to harm or cast suspicion on a researcher, this will be regarded as misconduct in itself and may result in legal sanctions, cf. the possible institutional sanctions mentioned above.

b. Confidence

As long as a suspicion has not been confirmed, the investigation is to be kept as confidential as possible. If the investigation continues, involving more people, complete confidentiality cannot be expected. According to the Danish Access to Public Administrative Documents Act (Offentlighedsloven), access to files regarding disciplinary measures is prohibited.

c. **Duration of the process**
   Though DTU will strive to reach a decision as quickly as possible, cases regarding possible breaches of responsible conduct of research are often complex and the investigation can take a considerable amount of time. If at all possible, DTU aims to conclude cases within a year.
d. **Companions**
   All involved parties may have companions present at meetings, hearings, etc.
e. **Former DTU employees**
   It is possible to bring forth a suspicion against a former DTU employee, and it will be handled according to the guidelines above. However, DTU's authority to impose sanctions is limited in this case.
f. **Research misconduct or questionable research practice committed by an external party**
   If research misconduct or questionable research practice committed by external scientists or others may discredit a DTU employee, the DTU employee in question can ask the Dean of Research for assistance.