

**King Fahd University of Petroleum  
& Minerals**

*Office of the Vice Rector for Research*

**Guidelines for Research Ethics  
& Integrity**

April 2016

## TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	RESEARCH INTEGRITY.....	3
3.0	RESEARCH MISCONDUCT.....	4
3.1	FABRICATION .....	4
3.2	FALSIFICATION.....	4
3.3	PLAGIARISM .....	4
4.0	SUPERVISION OF RESEARCH.....	6
5.0	JOINT RESEARCH PRACTICES .....	7
6.0	PEER REVIEW.....	8
7.0	HUMAN AND ENVIRONMENTAL PROTECTION.....	9
8.0	CONFLICT OF INTEREST .....	10
9.0	INVESTIGATION PROCEDURES AND PENALTIES .....	11

## 1.0 INTRODUCTION

This document has been prepared by office of the Vice Rector of Research at King Fahd University of Petroleum & Minerals (KFUPM). KFUPM emphasizes the importance of high ethical values regarding research conducted by its faculty, researchers and students. These apply to both internally and externally funded research and consultation. It is necessary for all the University stakeholders to ensure that the research conducted under its aegis is done according to all generally accepted ethical practices.

The scientific community of the University is expected to adhere to exemplary standards of intellectual honesty in reporting, conducting and supervising scientific, applied or contract research.

The following reasons highlight the importance of ethical practices in an institution:

- i. The research improves in quality and integrity;
- ii. It ensures that the rights and safety of the research participants are protected;
- iii. It allows the researchers the right to legitimize investigations regarding the research;
- iv. The possibility for statements of negligence against the institution and its collaborating bodies are minimized; and
- v. The reputation of the University and all its members are protected.

The importance of conducting research under a set of standardized ethical practices serves many purposes. First, these practices serve to define the goals of research, such as facts, accuracy, and avoidance of error. These help deter the stakeholders against fabricating, altering, or distorting research data. Second, since research often requires people from different disciplines and/or organizations to work together, the existence of a defined set of practices help streamline the collaborative work, enforcing values such as honesty, accountability, respect and objectivity. These standards also make researchers accountable to their organizations and to the public at large. The protection of human and animal subjects, is an issue that ethical standards can address by providing suitable guidelines.

It is also the responsibility of an institution to ensure integrity and ethical practice in research that is to be manifested through the role of administrators, faculty members, researchers and students undertaking funded or other research or supervising research. A very effective way to ensure integrity and ethics in research is to develop clear policies based upon the highest standards of integrity, accountability and responsibility.

Due to emergence of an immense volume of research and reports of several conflict of interest issues, guidelines for ethics and research integrity have been developed by most funding agencies, universities and research organizations. Since research efforts at KFUPM have increased several fold in the last few years, it is wise to develop

guidelines for research integrity and ethics that are to be utilized by faculty, researchers and students.

A faculty member/researcher is expected to sign a statement confirming that he has read and understood the Research Integrity and Ethical guidelines before he applies for a research grant.

This document covers the following subjects:

- Research integrity
- Research misconduct: fabrication, falsification, and plagiarism
- Supervision of research
- Peer review
- Joint research
- Human and animal protection
- Investigation procedures and penalties

The procedures outlined in this document apply to all faculty members, researchers and students conducting all forms of research, basic, applied or contractual, supported by KFUPM or external agencies.

## **2.0 RESEARCH INTEGRITY**

### **2.1 Definition of Research Integrity**

For an individual researcher, research integrity entails a range of good research practices and conduct, including the following:

- i. Honesty, accuracy, efficiency and objectivity must be observed while proposing, performing and reporting research proposals, reports and findings.
- ii. Conduct research with integrity and as per ethical procedures.
- iii. Peer reviews must be conducted with fairness and impartiality.
- iv. Maintain cooperative relationship amongst colleagues in scientific interactions, including communications and sharing of resources.
- v. Any conflict of interest, or potential conflict of interest, must be made transparent from the beginning.
- vi. Human participants must be protected throughout the course of research.
- vii. Animal rights' laws must be observed during the conduct of research.
- viii. Observance of mutual responsibilities between investigators and their research participants.
- ix. Protection of the university's reputation while maintaining regular course of work.

### **2.2 Importance of Research Integrity**

The importance of research integrity stems from the following obligations.

- i. Results of one research project can impact other scientists' findings, and therefore must be credible and reliable.
- ii. People use scientific research to make the world a better place to live in.
- iii. False or forged results can harm the person using the information.
- iv. An institution's reputation may be damaged if research is not conducted with integrity.
- v. The research should be methodologically sound and the purpose of research should be to contribute to the existing knowledge.

Therefore, to promote research integrity, researchers must ensure to uphold research values, and inculcate such values in junior faculty members.

### **3.0 RESEARCH MISCONDUCT**

Research misconduct is defined as fabrication, falsification, or plagiarism in representing, conducting, or reporting research.

Research misconduct means that the generally acceptable ethical standards of the institute are not being followed by a large margin. It must be noted that this error must be proven to be intentional for it to be deemed as research misconduct. Therefore, genuine error or subjective opinion do not fall under the rubric of research misconduct.

As stated earlier, research misconduct (or scientific fraud) is defined as intentional falsification of any form of scientific research data in a meeting, a manuscript written for the publication or research-grant proposals or reports. It also includes results of fake experiments (that never existed), or the manipulation of data to achieve intended results, or fabrication of physical evidence used in research. Furthermore, it also includes selective representation of data, or omitting results to report the data or results that do not support their factual conclusions.

#### **3.1 FABRICATION**

Fabrication of data is presenting fictitious research findings. It includes reporting data of research or experiments that were never conducted. Another form of fabrication includes referencing fabricated research to support one's own research idea.

#### **3.2 FALSIFICATION**

Falsification is misrepresenting research resources, tools, or procedures to achieve desired results. It also includes selectively omitting data or findings so that the research is misrepresented in some manner. It may also involve exaggerating or overstating the significance of research results. It may also involve concealing other research results that may, once revealed, weaken the core results of the research.

#### **3.3 PLAGIARISM**

Plagiarism, if done intentionally, is a form of research misconduct. It is the act of using work owned by some other individual and posing it as one's own. This work of the individual may be in any form, be it an idea, thought, picture, theory, etc. Plagiarism occurs when others work is not correctly cited or given credit for, and is used in some way during scientific research, or in reporting research results. It is becoming an increasingly common offense with the ease and accessibility of others' work via the internet.

Merriam-Webster Dictionary (2015) defines “plagiarize” to include self-plagiarism in the second definition below:

- To steal and pass off (the ideas or words of another) as one's own: use (another's production) without crediting the source.
- To commit literary theft: present as new and original an idea or product derived from an existing source.

The act of plagiarism undermines the credibility of not only the research article and the author, but the journal in which it is published as well. Legal action may be taken against the individual researcher caught plagiarizing. The journal in which the plagiarized work is published is also liable to legal action.

Plagiarism also includes **self-plagiarism**, which is when a person either republishes his own work completely, or uses some parts of his earlier work while presenting new work, thus creating an overlap of work. It must be noted that it will only be considered to be an act of self-plagiarism if this reuse of work is not properly cited. Self-plagiarism can lead to what is known as ‘**redundant publications**’. A redundant publication is defined as: “Redundant or duplicate publication is publication of a paper that overlaps substantially with one already published.”

Plagiarism can also mean literally copying a research report and submitting it as one’s own. However, it can also mean changing the writing style in some manner, or including a portion of someone else’s work in one’s own.

Plagiarism also includes the act of appropriating someone else’s ideas without giving credit to, or citing, the owner of the ideas. Therefore, it is very important to acknowledge the source of ideas through the proper citation means, which includes referencing the source in the research manuscript.

The act of plagiarism or self-plagiarism brings into question the integrity of the researcher, the institution, and all research conducted under the institution’s aegis, and therefore is a matter of great importance and consideration.

### 3.4 Citations

A citation refers to referencing a publication of an individual in other publications. Citation of a paper by others indicates its scientific importance. Consequently, only references that are essential to support the contents of the paper/proposal/reports should be used. It is best practice to avoid self-citations or citations of publications by colleagues, project team members and others with a conflict of interest

## 4.0 SUPERVISION OF RESEARCH

The duties of a supervisor include the following:

- i. Thorough commitment to provide help to students to the end of their theses/dissertations and research projects,
- ii. Highlighting potential ethical issues to the students while conducting research, and giving due consideration to the need for ethical approval,
- iii. Guide the students to pay attention to academic integrity and ethical issues,
- iv. Demand readiness to confront and correct unethical practices, and
- v. Make sure that the students refrain from participating in any research involving scientific misconduct.

## 5.0 JOINT RESEARCH PRACTICES

When there is more than one researcher committed to a research project, the following practices must be adhered to:

- i. There must be an initial agreement before research is initiated, whereby they agree upon each researcher's rights, duties, benefits and responsibilities;
- ii. They must agree amongst themselves the time of submission and publication of research;
- iii. All researchers must be aware and clear of their rights, responsibilities and mutual benefits;
- iv. They must be cognizant of the procedures involved with withdrawal from research after a stipulated interval of time;
- v. They must be aware of their individual duties and must communicate same to one another, and
- vi. In the event a member becomes inactive during the course of the research, the Principal Investigator (PI) must communicate this to him and discuss the effect this will have on the publications and other matters.

## 6.0 PEER REVIEW

When a researcher submits an article to a journal to be published, or a research proposal, or a report, the editor or the funding agency requests other experts in the field to review the submitted article/proposal. This is known as the peer review process, and the experts are referred to as reviewers.

The following questions are answered by the reviewers, as part of the peer review process:

- i. Importance – Is the research new and innovative?
- ii. Utility – Are the research findings of importance?
- iii. Applicability – Is the research relevant to the journal readers' interests?
- iv. Valid procedures – Were valid procedures undertaken for the research?
- v. Findings – Are the conclusions supported by the data provided?

In the case of a research proposal, the referees are required to ascertain the originality and need of the research work, the soundness of the proposed methodology, and the usefulness of the expected outcomes to the scientific community. Further, there should be no contact between the reviewer and the author/proponent.

The following is expected of the reviewers:

- i. Intellectual honesty, impartiality, and integrity when expressing opinion.
- ii. Present feedback only to the extent of one's expertise, and in the event he does not possess knowledge in the subject area, to recommend persons in possession of such knowledge
- iii. Submit all opinions, additional results, and criticisms to the journal/funding entity requesting the peer review.
- iv. Avoid peer review processes of any article/proposal which would present a conflict of interest.
- v. Evaluate the ethical soundness of the article, and search for any form of research misconduct.

## 7.0 HUMAN AND ENVIRONMENTAL PROTECTION

Researchers should be committed to the following should human and animal subjects be involved in their research:

- i. All rights of any human subjects must be protected, including their privacy, respect, and independence. Any harm or risk must be minimized. Risk and/or potential for harm must be minimized. (?)
- ii. Human subjects must be notified that they are part of a research project or an experiment.
- iii. Permission to conduct research involving human or animal subjects must be sought from the ethics committee.
- iv. Special precautions must be taken with vulnerable populations.
- v. Animal subjects must be handled with care and respect.
- vi. No redundant or poorly constructed animal experiments should be carried out.
- vii. The environmental aspects should be carefully monitored and effective measures should be put in place.

## **8. CONFLICTS OF INTEREST**

Conflict of interest may result when a person has two or more competing interests that may lead to the risk of bias or poor judgment. It includes actions or behavior that lead to financial or personal gain by a person using his position. The conflict of interest could be financial or non-financial. The latter may lead to the impairment of research integrity in projects, project proposals, publications, presentations, etc.

The conflict of interest should be disclosed to related parties. They should be made aware of the conflict details. “Related parties” may refer to journal editors, research-funding entities, conference organizers, publishers, etc.

The University on its part takes utmost care to avoid conflicts of interest in the participation of faculty/researchers in committee work, promotions and yearly evaluation and other activities. At the same time it expects its stakeholders to declare conflict of interest as and when it occurs.

## 9. INVESTIGATION PROCEDURES AND PENALTIES

The following procedure is intended to address scientific misconduct objectively, fairly, and confidentially. Objectivity facilitates the deliberations to be based on fact and not influenced by personal feelings, interpretations, or prejudice. The overall objective of the developed procedures is to fairly allow the appropriate addressing of the misconduct issue while protecting the participants from adverse consequences; and confidentiality protects concerned parties from the adverse effects.

The following are the definitions of the terms that are used in the investigative procedures and penalties.

**Complainant** - a person, group, or entity that makes a complaint of scientific misconduct.

**Respondent** – a person (defendant) against whom a claim of scientific misconduct is directed.

**Allegation** - any submitted written document, given to the appropriate office, describing possible scientific misconduct.

**Allegation Assessment** - The review and assessment of allegation documents that ensures that enough details are submitted to enable an inquiry and if proven correct constitutes scientific misconduct.

The complainant submits in writing with details sufficient to clarify the facts and circumstances that led him to submit the allegation. The allegation documents must be signed and submitted to academic department chair, dean, dean of scientific research, or the Vice-Rector for Research (VRR) according to the level of the scientific misconduct. The receiving entity assesses the submitted documents and determines if a true misconduct of research exists. If this is the case, the allegation documents are forwarded to the VRR for an inquiry, otherwise the matter will be closed and the complainant is accordingly notified.

### **Inquiry and Investigation**

The inquiry phase is necessary to analyze the allegation documents and make sure that all relevant documents are included and if necessary request missing information. All communications and deliberations should be conducted with complete confidentiality in order to protect all parties to the conflict. All communications with the respondent and other entities shall be through the Office of the VRR.

The following procedure is adopted in conducting the enquiry.

1. Should an inquiry be unavoidable, the VRR refers this to the standing committee on Integrity and Ethical Issues. This standing committee is chaired by the VRR with other members, the Dean of Research being the ex-officio member. This Committee analyzes the allegation documents and makes sure that all relevant documents are included to determine if there is enough evidence to require a full investigation.

2. The VRR notifies the respondent of the inquiry being undertaken by the Committee and a copy of the allegation is forwarded to him. The complainant and the respondent may be given a chance to submit a written reply to the Committee's report.
3. The purpose of the Investigation is to analyze, in detail, the documents of the allegation including the inquiry committee report, and to determine whether research integrity has been violated, who committed it and the extent of the misconduct. All communications and deliberations should be done with complete confidentiality protecting all concerns and information.
4. The Committee on analyzing the document may request further information or interview the concerned individuals. Upon due deliberation, the committee may arrive at the conclusion that scientific misconduct was committed. If so, the Committee should decide whether the misconduct was intentional, or did not accord with accepted practices of research, or was due to carelessness or ignorance or honest misinterpretation of rules.
5. Based on its findings, the Committee will prepare a report stating its findings and recommending disciplinary action/s should misconduct have been found, or closing the case if the evidence does not support the charge of misconduct. The respondent is to be given the chance to reply to the Committee report. Based on his reply the Committee makes recommendations to the VRR on possible sanctions.
6. The VRR will make a final decision whether to accept the report of the standing committee, its findings and the recommended Disciplinary Actions. These recommendations will then be forwarded to H.E. the Rector who will make the final decision. The VRR will be responsible for implementing the Disciplinary Actions approved by H.E. the Rector.

### **Disciplinary Actions (Sanctions)**

The sanctions recommended by the Committee may include one or more of the following actions:

- i. Letter to be included in the individual's personnel file
- ii. Letter to the Dean of Faculty and Personnel Affairs for consideration during the annual performance evaluation
- iii. Removal from a particular project or cancelling of the whole project
- iv. Denial of financial or other benefits from the research projects.
- v. Denial of a raise in salary.
- vi. Suspension from work.
- vii. Termination of contract.