KING CEASOR UNIVERSITY

RESEARCH ETHICS HANDBOOK

JUNE 2024

Foreword

It is with great pride that we present the King Ceasor University Research Ethics Handbook. Our commitment to academic excellence, innovation, and societal impact is underscored by this guide, which ensures that all research activities at our university are conducted responsibly and ethically. Guided by our vision of becoming an innovation-driven university and our mission to provide holistic education, we uphold our core values of progression, accountability, integrity, respect, and synergy. These principles guide us in our pursuit of ethical and impactful research. The purpose of this handbook is to provide comprehensive guidance on conducting research with integrity, respect, and fairness. It protects the rights and welfare of research participants, maintains public trust in research findings, and upholds our commitment to ethical scholarship.

Our objectives include guiding research practices, raising awareness about research ethics, fostering commitment to integrity, ensuring accountability, promoting research aims, encouraging collaborative values, attracting public support, and promoting broader moral and social values. This handbook applies to all individuals involved in research activities at King Ceasor University, including faculty, students, staff, and external collaborators. It covers all research activities, from faculty-led and student research to collaborative and funded projects, ensuring adherence to ethical standards.

The ethical principles underpinning our research include respect for persons, beneficence and non-maleficence, justice, integrity and accountability, confidentiality, and scientific rigor. These principles foster an environment that promotes ethical conduct, respects individual dignity and rights, and contributes positively to societal well-being. Several forms of scientific misconduct, including fabrication, falsification, and plagiarism that are pointed out in this handbook, are strictly prohibited. This handbook outlines the procedures for addressing such misconduct, ensuring that all research activities maintain the highest standards of honesty and integrity.

Join us in upholding these standards as we work towards our vision of an innovation-driven university, fostering a culture of ethical and responsible research for the betterment of society.

Dr. Charity Basaza Mulenga
Vice-Chancellor.

Acronyms

AEC: Animal Ethics Committee

COI: Conflict of Interest

FFP: Fabrication, Falsification, and Plagiarism

GCP: Good Clinical Practice

IRB: Institutional Review Board

KCU: King Ceasor University

MOU: Memorandum of Understanding

PI: Principal Investigator

PR: Peer Review

QA: Quality Assurance

QC: Quality Control

QMS: Quality Management System

RA: Research Associate

RCR: Responsible Conduct of Research

REC: Research Ethics Committee

SOP: Standard Operating Procedure

1.0 Background

The King Ceasor University Research Ethics Handbook serves as a comprehensive guide for conducting research responsibly and ethically within the university community. Research undertaken by King Ceasor University students and academic staff will adhere to the principles and standards outlined in this handbook to ensure ethical integrity and excellence in all research endeavors.

Ethics is the study of moral values and duties, focusing on ideal human character, actions, and ends. It provides norms for conduct that distinguish acceptable from unacceptable behavior, often expressed through rules, professional codes, religious creeds, or wise sayings. Examples include the Golden Rule, the Hippocratic Oath, and the Ten Commandments. These ethical norms are learned mainly at home, school, religious institutions, or social settings and continue to develop throughout life.

While ethics and law are related, they are distinct; ethical norms are broader and more informal, whereas laws enforce widely accepted moral standards. An action can be legal but unethical, or illegal but ethical. Organizations or research institutions often issue a Code of Ethics to guide their members' actions according to primary values and ethical standards.

Research involves systematic, diligent inquiry to establish facts or principles and includes imparting ethical values to ensure researchers contribute positively to society. In the competitive world of science and technology, morality is crucial to maintain integrity.

Research ethics encompass both the values of science and scholarship and the standards of conduct in scientific practice, guiding research from inception to publication and beyond. Different disciplines and institutions have specific norms to coordinate actions and establish public trust. In many countries, the principles of ethical code of conduct in research are several and may include; integrity, loyalty, transparency, and accountability. These principles also govern research organizations and institutions, but additional codes of conduct are necessary due to the unique nature of the research environment.

Research organizations must avoid fraud and misappropriation, requiring specific codes and policies relating to research ethics. Individual researchers must act responsibly, adhering to scientific values and fostering a strong research culture that emphasizes honesty, integrity, objectivity, respect for participants, animals, and the environment, good stewardship of resources, collegiality, justice, openness, and responsible communication of results. A code of research ethics is essential for developing and nurturing an ethical organizational culture.

1.1 Vision

An Innovation driven University.

1.2 Mission

To provide a holistic education through inventive teaching, learning and research aimed at fostering socio-economic transformation.

1.3 Core Values

i. **Progression:** We recognize that learning never ends.

ii. **Accountability:** We hold ourselves accountable for our actions and conduct our affairs in ways that promote mutual trust and public confidence.

iii. **Integrity:** We hold ourselves collectively and individually, liable to do what is right.

iv. **Respect:** We treat all people with dignity, respect and impartiality.

v. **Synergy:** We are stronger and more efficient as a team than as individuals.

1.4 Purpose

The purpose of the King Ceasor University Research Ethics Handbook is to provide a comprehensive guide for conducting research responsibly and ethically. This handbook outlines the principles, standards, and procedures that ensure all research activities at the university are conducted with integrity, respect, and fairness. It serves to protect the rights and welfare of research participants, maintain public trust in research findings, and uphold the university's commitment to academic excellence and ethical scholarship.

1.5 Objectives

The major objectives for adhering to ethical norms in the research system are to:

i. **Guide Research Practices.**
Provide guidance to research centers and researchers for conducting responsible research.

ii. **Raise Awareness.**
Increase awareness within the research system about research and scientific ethics to help reduce breaches of scientific ethics.

iii. **Foster Commitment to Integrity.**
Encourage a genuine commitment to fairness, accuracy, and integrity in scientific research and development by establishing clear expectations regarding scientific ethics.

iv. **Ensure Accountability.**
Ensure that researchers can be held accountable to the public.

v. **Promote Research Aims.**

Promote the aims of research, such as knowledge and truth, while avoiding errors.

vi. **Encourage Collaborative Values.**
Promote values essential to collaborative work, including trust, accountability, mutual respect, and fairness.

vii. **Attract Public Support.**
Build public trust in the quality and integrity of research to attract support for research initiatives.

viii. **Promote Moral and Social Values.**
Promote broader moral and social values such as social responsibility, human rights, animal welfare, compliance with the law, and health and safety.

1.6 Scope and Application

The King Ceasor University (KCU) Code of Research Ethics applies to all individuals involved in research activities associated with the university. This includes, but is not limited to, faculty members, researchers, postgraduate and undergraduate students, administrative staff, and external collaborators. The guidelines outlined in this document are applicable to research conducted on campus, as well as research carried out off-campus, including field studies and collaborations with other institutions or industry partners.

These ethical standards are designed to ensure that all research activities uphold the principles of integrity, objectivity, and respect for the subjects and communities involved. Adherence to this Code is mandatory for all research participants at KCU, and compliance will be monitored and enforced by the university's Research Ethics Committee.

This handbook therefore applies to all research activities and reporting, conducted under the auspices of King Ceasor University, including but not limited to:

i. Faculty-led research
ii. Graduate and undergraduate student research
iii. Collaborative research with external institutions
iv. Funded and unfunded research projects
v. Research involving human participants, animals, biological materials, and sensitive data

All members of the university community engaged in research, including faculty, students, staff, and external collaborators, are expected to adhere to the guidelines and procedures outlined in this handbook. Research undertaken by King Ceasor University students and academic staff will adhere to these comprehensive ethical standards to ensure responsible conduct and academic integrity.

1.7 Principles

The ethical principles that underpin the research activities at King Ceasor University include:

1. **Respect for Persons**
   i. **Informed Consent:** Ensuring that all research participants are fully informed about the nature, purpose, and potential risks of the research before they agree to participate. Research undertaken by King Ceasor University students and academic staff will adhere to the highest standards of informed consent to respect participant autonomy.
   ii. **Autonomy:** Respecting the autonomy of individuals by allowing them to make informed decisions about their participation in research.

2. **Beneficence and Non-maleficence**
   i. **Maximizing Benefits:** Conducting research that aims to maximize potential benefits to individuals and society. Research undertaken by King Ceasor University students and academic staff will strive to achieve beneficial outcomes while minimizing risks.
   ii. **Minimizing Harm:** Taking all necessary precautions to minimize the risks and potential harm to research participants and others affected by the research.

3. **Justice**
   i. **Fairness in Recruitment:** Ensuring equitable selection and recruitment of research participants without discrimination or bias. Research undertaken by King Ceasor University students and academic staff will adhere to principles of justice to ensure fairness.
   ii. **Distribution of Benefits and Burdens:** Striving for a fair distribution of the benefits and burdens of research among all groups in society.

4. **Integrity and Accountability**
   i. **Honesty:** Maintaining honesty and transparency in all aspects of research, from proposal to publication. Research undertaken by King Ceasor University students and academic staff will adhere to the highest standards of integrity and accountability.
   ii. **Responsibility:** Holding researchers accountable for adhering to ethical standards and the integrity of their work.

5. **Confidentiality**
   i. **Data Protection:** Safeguarding the confidentiality and privacy of research participants by securely managing personal and sensitive information. Research undertaken by King Ceasor University students and academic staff will ensure strict confidentiality protocols.
   ii. **Anonymity:** Ensuring that data is anonymized wherever possible to protect participant identities.

6. **Scientific Rigor**

i. **Quality and Validity:** Upholding high standards of scientific rigor and validity in the design, conduct, and reporting of research. Research undertaken by King Ceasor University students and academic staff will adhere to these standards to ensure the credibility and reliability of their findings.

By adhering to these principles, King Ceasor University aims to foster a research environment that promotes ethical conduct, respects the dignity and rights of individuals, and contributes positively to the body of knowledge and societal well-being.

1.8 Scientific Misconduct

Scientific misconduct encompasses both research misconduct and professional misconduct. However, honest errors due to sloppiness, poor record-keeping, miscalculations, bias, self-deception, and even negligence do not constitute misconduct. Reasonable disagreements about research methods, procedures, and interpretations also do not constitute research misconduct.

1.9 Research Misconduct

Research misconduct refers to actions during proposing, performing, or reviewing research, or in reporting research results, that nearly all researchers classify as unethical. This includes "Fabrication, Falsification, or Plagiarism" (FFP).

1.9.1 Fabrication

Making up results and recording or reporting them.

1.9.2 Falsification

Manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is inaccurately represented in the research record.

1.9.3 Plagiarism

Appropriation of another person's ideas, processes, results, or words without giving appropriate credit, including those obtained through confidential review of others' research proposals and manuscripts. Misconduct occurs only when there is an intention to deceive. It does not include honest errors, honest differences of opinion, differences in interpretation of scientific data, or disagreements involving experimental design.

1.10 Professional Misconduct

Professional misconduct includes, but is not limited to:

i. Exploitation of research associates

ii. Inappropriate conferring or denying authorship
iii. Duplicative publication
iv. Misstating one's research credentials
v. Failing to retain significant data for a reasonable period
vi. Unauthorized use of data
vii. Failing to publish significant data in a timely manner without reasonable cause

2.0 MISCONDUCT AND UNETHICAL RESEARCH

2.1 Theories of Misconduct

There are two main theories on why researchers commit misconduct:

2.1.1 Bad Apple Theory

Only morally corrupt, economically desperate, or psychologically disturbed individuals commit misconduct. Science's peer review system and self-correcting mechanisms eventually catch those who try to cheat.

2.1.2 Stressful or Imperfect" Environment Theory

Misconduct occurs due to various institutional pressures and constraints, such as the pressure to publish, obtain grants, career ambitions, pursuit of profit or fame, and poor oversight. Misconduct likely results from both environmental and individual causes, occurring when morally weak, ignorant, or insensitive people are placed in stressful or imperfect environments.

Training on research ethics helps individuals understand these stresses, sensitizes them to ethical concerns, and improves ethical judgment and decision-making. Many deviations in research may occur simply because researchers do not know or have not seriously considered some of the ethical norms of research.

2.2 Examples of Misconduct in Research

In conducting research and research process, the following are the examples of misconduct.

i. Making significant deviations from the approved research protocol(s).
ii. Recording false data.
iii. Failing to maintain research data for a reasonable period.
iv. Failing to keep good research records.
v. Not reporting an adverse event in a research experiment.
vi. Rigging an experiment for known outcomes.
vii. Changing research results.
viii. Stealing supplies, books, or data.
ix. Overworking, neglecting, or exploiting subordinates and technical assistants.

x. Promising a subordinate a better evaluation for sexual favors.
xi. Exposing staff to biological risks in violation of biosafety rules.
xii. Failing to report timely.
xiii. Abusing research resources.
xiv. Stretching the truth on a job application or curriculum vitae.
xv. Stretching the truth on a grant application to convince reviewers of the project's significance.

2.3 Additional Examples of Misconduct in Publishing

1) Reviewing Literature:
    - Conducting a review that fails to acknowledge others' contributions or relevant prior work.
2) Duplicate Submissions:
    - Publishing the same paper in two different journals without notifying the editors.
    - Submitting the same paper to different journals without informing the editors.
3) Patent Filings:
    - Not informing a collaborator about the intent to file a patent to ensure sole inventorship.
4) Authorship Manipulation:
    - Including a colleague as an author in return for a favor, despite minimal contribution.
5) Confidential Data:
    - Discussing confidential data from a paper under review with colleagues.
6) Data Manipulation:
    - Trimming outliers from a data set without explaining the reasons.
    - Using inappropriate statistical techniques to enhance research significance.
7) Bypassing Peer Review:
    - Announcing results via press conference without peer review.
8) Unprofessional Reviews:
    - Making derogatory comments and personal attacks in manuscript reviews.
    - Rejecting a manuscript without reading it.
9) Sabotage and Theft:
    - Sabotaging someone's work.
    - Making unauthorized copies of data, papers, or computer programs.

2.4 Consequences of Unethical Research

Ethical lapses in research can significantly harm human and animal subjects and the public. Researchers have three sets of obligations that motivate their adherence to professional standards.

i. **Obligation to Colleagues:**

Honor the trust placed by colleagues. Research is cumulative, building on previous results. Inaccurate results waste resources and impede progress. Responsible conduct is crucial for mentoring the next generation of researchers.

ii. **Obligation to Themselves:**

Irresponsible conduct can prevent achieving personal goals like earning a degree, renewing a grant, achieving tenure, or maintaining a reputation. Adhering to standards builds personal integrity.

iii. **Obligation to Society:**

Scientific results influence society significantly, affecting health and well-being, policy-making, and informed decision-making. Researchers must act in ways that serve the public interest.

2.5 Impact of Unethical Research

Unethical research has severe consequences, damaging the scientific community, public trust, and societal well-being. It is crucial for researchers to maintain high ethical standards to ensure the integrity and reliability of scientific endeavors. The following are some of the impacts of unethical research.

1) **Clinical Trials.**
    - Fabricated data can harm or kill patients.
2) **Policy and Public Trust.**
    - Misleading results can influence critical issues like climate change and stem cell research.
    - Taxpayer-funded research necessitates adherence to safety regulations to protect health and safety.
3) **Agriculture.**
    - False recommendations on fertilizers, pesticides, or crop varieties can damage crops, bankrupt farmers, and harm the national economy.
    - Misleading data can misdirect future research and undermine scientific integrity.

2.6 Code of Research Ethics for King Ceasor University

The code of ethics at King Ceasor University (KCU) serves as a tool for self-regulation among researchers. It ensures that all faculty and staff adhere to high standards of conduct and feel protected from unethical practices. Research centers are responsible for promoting awareness of this code and fostering an environment of responsible and ethical research. The major principles of KCU's Code of Research Ethics are outlined below.

a) Commitment to Scientific Knowledge

Researchers at KCU must dedicate themselves to the pursuit, promotion, and advancement of scientific knowledge. This includes:

i) Being fair and honest in all scientific communications.
ii) Maintaining and enhancing professional competence through continuous education and learning.
iii) Honestly reporting data, results, methods, and publication status.
iv) Avoiding fabrication, falsification, or misrepresentation of data.
v) Complying with relevant laws and institutional policies.

b) Integrity in Research

Researchers must conduct, manage, judge, and report scientific research honestly and thoroughly, without conflicts of interest. This involves:

i) Prioritizing scientific honesty and public interest over personal gain or organizational loyalty.
ii) Documenting research methods thoroughly to enable reproducibility.
iii) Striving to eliminate bias in all aspects of research.
iv) Disclosing any personal or financial interests that might affect research objectivity.
v) Avoiding negligence and maintaining accurate records of research activities.
vi) Using novel investigative approaches responsibly and transparently documenting any data modifications.

c) Ethical Use of Resources

Researchers should prevent the misuse of resources and treat research subjects humanely, following established guidelines. This includes:

i) Ensuring public benefit outweighs any damage to public interest from resource use.
ii) Conducting animal experiments only when necessary and ensuring they are well-designed.

d) Professional Conduct

Researchers must not hinder the research of others or engage in dishonesty, fraud, or professional misconduct. This includes:

i) Avoiding actions that obstruct others' research.
ii) Providing access to research resources unless it compromises the scientific validity of ongoing research.
iii) Sharing data, results, and resources fairly and transparently.

e) Constructive Criticism and Peer Review

Researchers should welcome constructive criticism and offer the same to colleagues respectfully. This includes:

i) Engaging in open, honest debate to advance scientific knowledge.
ii) Ensuring the peer-review process is free from personal biases and conflicts of interest.
iii) Respecting the confidentiality of the review process.

f) Recognition and Credit

Researchers must recognize past and present contributors and avoid claiming unauthorized credit. This includes:

i) Properly acknowledging contributions through citations, acknowledgements, or co-authorship.
ii) Educating and mentoring subordinates while promoting their welfare.
iii) Avoiding discrimination based on non-scientific factors.

g) Responsible Authorship

Researchers should claim authorship only if they are willing to take responsibility for the data and conclusions presented. This includes:

i) Ensuring those who have made substantial intellectual contributions are recognized.
ii) Understanding that co-authors share responsibility for the content of the manuscript.

h) Avoiding Honorary Authorship

Researchers should claim authorship only if they have made a significant intellectual contribution to the research. This includes:

i) Avoiding the practice of "honorary authorship."
ii) Recognizing contributions appropriately in position descriptions.

i) Protection of Intellectual Property

Researchers must not use original ideas, data, or unpublished findings of others without permission. This includes:

i) Avoiding plagiarism and respecting the intellectual property of others.
ii) Ensuring proper credit is given and maintaining confidentiality of unpublished work.

j) Avoiding Duplicate Publication

Researchers should refrain from publishing the same research findings multiple times to inflate their publication record. This includes:

i) Publishing to advance scholarship, not personal career goals.
ii) Avoiding wasteful duplication while recognizing legitimate reasons for multiple publications.

k) Preservation of Research Records

Researchers must diligently preserve and maintain research data and records. This includes:

i) Providing sufficient methodological details for reproducibility.
ii) Maintaining raw data for a minimum of five years after publication.
iii) Respecting and appropriately managing research materials and data generated by others.

l) Handling Allegations of Research Misconduct

Allegations of research misconduct at KCU will be handled in accordance with the institution's policies, possibly involving the formation of an Ethics Panel. Researchers suspecting misconduct must act promptly and adhere to the university's procedures for addressing such concerns.

This Code of Research Ethics at King Ceasor University underscores our commitment to integrity, accountability, and excellence in research, ensuring that our academic community upholds the highest ethical standards.

3.0 Reporting and Addressing Misconduct

3.1 Reporting Misconduct

At King Ceasor University, any individual who suspects or becomes aware of potential research misconduct is encouraged to report their concerns promptly. Reports can be made confidentially and anonymously to the Research Ethics Committee via a secure online form, email, or direct contact with committee members.

3.2 Investigation Process

Upon receiving a report of misconduct, the Research Ethics Committee will:

i. Conduct a preliminary assessment to determine if the allegation warrants a full investigation.
ii. Notify the individual(s) implicated in the report, providing them with an opportunity to respond to the allegations.
iii. Appoint an independent panel to conduct a thorough investigation if the preliminary assessment indicates potential misconduct.
iv. Ensure the investigation is fair, unbiased, and conducted in a timely manner.

3.3 Resolution and Consequences

If misconduct is confirmed, the university will take appropriate actions, which may include:

i. Retraction of published papers.
ii. Disciplinary actions such as suspension or termination of employment or academic status.
iii. Reporting the findings to relevant external bodies, including funding agencies and professional organizations.

4.0 Protection for Whistleblowers

KCU is committed to protecting individuals who report misconduct in good faith. Whistleblowers will not face retaliation or adverse consequences for their actions. Any form of retaliation against individuals reporting misconduct will be subject to disciplinary action.

5.0 Training and Education

To foster a culture of ethical research, King Ceasor University requires all researchers to undergo training in research ethics. This training will cover key aspects of ethical research practices, including data management, authorship, conflict of interest, and the treatment of human and animal subjects.

5.1 Mandatory Training

a) **New Researchers**:
   All new faculty members, researchers, and postgraduate students must complete an introductory course on research ethics within the first semester of their appointment or enrollment.

b) **Continuing Education**:
   Existing researchers and staff are required to participate in annual refresher courses to stay updated on ethical standards and regulations.

5.2 Training Modules

The training program will include:

i. **Introduction to Research Ethics**:
   Overview of ethical principles and the importance of ethics in research.

ii. **Data Management**:
   Best practices for data collection, storage, sharing, and disposal.

iii. **Authorship and Publication**:
   Guidelines for responsible authorship, avoiding plagiarism, and the peer review process.

iv. **Conflict of Interest**:
   Identifying and managing personal and financial conflicts of interest.

v. **Human and Animal Research**:
   Ethical considerations and regulatory requirements for research involving human and animal subjects.

6.0 Human and Animal Subjects

King Ceasor University is committed to the ethical treatment of human and animal subjects in research. Researchers must adhere to the following guidelines to ensure the rights, dignity, and welfare of research subjects are protected.

6.1 Research Involving Human Subjects

a) **Informed Consent**:
Researchers must obtain voluntary, informed consent from all human participants. Participants should be fully informed about the purpose, procedures, risks, and benefits of the research.

b) **Confidentiality**:
Researchers must protect the privacy and confidentiality of participants. Personal data should be anonymized or encrypted where possible.

c) **Ethical Approval**:
All research involving human subjects must be reviewed and approved by the KCU Institutional Review Board (IRB) before commencement. The IRB will assess the ethical implications and ensure compliance with relevant laws and regulations.

6.2 Research Involving Animal Subjects

i) **Humane Treatment:**
Researchers must treat all animal subjects humanely and follow the principles of the 3Rs (Replacement, Reduction, and Refinement) to minimize animal suffering.

ii) **Ethical Approval**:
All research involving animal subjects must be reviewed and approved by the KCU Animal Ethics Committee (AEC). The AEC will evaluate the scientific justification and ethical considerations of the proposed research.

iii) **Minimizing Harm:**
Researchers should design experiments to minimize pain, distress, and suffering. Proper veterinary care and use of anesthesia or analgesics are required where necessary.

7.0 Compliance and Monitoring

The IRB and AEC will conduct regular audits and inspections to ensure ongoing compliance with ethical standards. Researchers must report any adverse events or deviations from approved protocols promptly. By adhering to these guidelines, King Ceasor University aims to uphold the

highest standards of ethical research, ensuring the integrity and credibility of its scientific contributions.

8.0 Resources and Support

KCU will provide access to online resources, workshops, and seminars to support continuous learning in research ethics. The Research Ethics Committee will also be available to provide guidance and answer questions related to ethical research conduct.

9.0 Conclusion and Commitment

End the handbook with a concluding statement reinforcing the commitment of King Ceasor University to uphold the highest standards of research ethics. Encourage all members of the university community to adhere to these guidelines and contribute to a culture of integrity and excellence in research.

Glossary of Key Terms

Authorship: Authorship refers to the credit given to individuals who have made a significant intellectual contribution to a research project. Responsible authorship requires accountability for the content of the publication.

Confidentiality: Confidentiality in research involves maintaining the privacy of information, data, and communications, such as peer reviews and unpublished manuscripts. It ensures that sensitive information is not disclosed inappropriately.

Conflict of Interest: A conflict of interest occurs when a researcher's personal interests could compromise their professional judgment or integrity. This can include financial interests, personal relationships, or other factors that may influence research outcomes.

Data Privacy: Ensuring the confidentiality and security of research data, particularly personal and sensitive information.

Ethical Review Board: An Ethical Review Board (ERB), also known as an Institutional Review Board (IRB), is a committee that reviews research proposals to ensure that ethical standards are met, particularly in relation to the treatment of human and animal subjects.

Fabrication: Fabrication involves making up data or results and recording or reporting them as if they were real. It is a serious violation of research ethics.

Falsification: Falsification is the manipulation of research materials, equipment, or processes, or changing or omitting data or results in a way that misrepresents the research.

Informed Consent: The process of informing research participants about the nature of the study, their rights, and obtaining their voluntary participation.

Intellectual Property: Intellectual property refers to the creations of the mind, such as inventions, literary and artistic works, designs, and symbols, names, and images used in commerce. In research, it includes ideas, data, and findings that are protected by laws and agreements.

Mentorship: The guidance provided by experienced researchers to junior researchers or students, emphasizing ethical practices.

Peer Review: Peer review is a process by which a research manuscript or proposal is evaluated by experts in the same field. It ensures the validity, significance, and originality of the work before it is published or funded.

Plagiarism: Plagiarism is the use of another person's ideas, processes, results, or words without giving appropriate credit. This includes copying text, figures, or data from another source without proper citation.

Research Misconduct: Research misconduct refers to the violation of ethical standards in conducting research. This includes fabrication, falsification, plagiarism, and other practices that deviate from the accepted norms of scientific research.

Retraction: The withdrawal of a published research paper due to errors or ethical breaches discovered post-publication.

Whistleblower: An individual who reports misconduct or unethical behavior in the research process.