



MUGBERIA GANGADHAR MAHAVIDYALAYA



Presents
**A One Day Faculty Improvement
Programme**
On
“Research Ethics and Practice”

Welcome students & Faculty



RESEARCH ETHICS & Practise

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UGC notices : dt 03.08.2018

**UNIVERSITY GRANTS COMMISSION
NOTIFICATION**

- **UNIVERSITY GRANTS COMMISSION (PROMOTION OF ACADEMIC INTEGRITY AND PREVENTION OF PLAGIARISM IN HIGHER EDUCATIONAL INSTITUTIONS) REGULATIONS, 2018**

New Delhi, the 23rd July, 2018 F. 1-18/2010(CPP-II).—

- **Preamble**
- *Whereas, University Grants Commission (UGC), as per UGC Act, 1956, is mandated to coordinate and determine the standards of higher education;*

Attributed to Confucius

- "A man who has committed a mistake, and does not correct it, is committing another mistake"



Confucius (551 - 479 BC) was a Chinese teacher, editor, politician, and philosopher of the Spring and Autumn Period of Chinese history.

WHAT IS ETHICS ?

Ethics is a branch of Philosophy that tries to define what is fundamentally right & wrong regardless of the cultural differences.



WHERE WE LEARN ETHICS/MORAL ?

- At home, school, work place, church, other social settings (club, play ground, meetings etc)
- Norms of conduct in society
- Hippocratic oath : First of all do not harm
- Ten Commandments : Thou shalt not kill



ETHICAL & UNETHICAL BEHAVIOUR

- Honesty
 - Truthfulness
 - Hard work
 - Concern for others
- Cheating
 - Lying
 - Laziness
 - Self centered



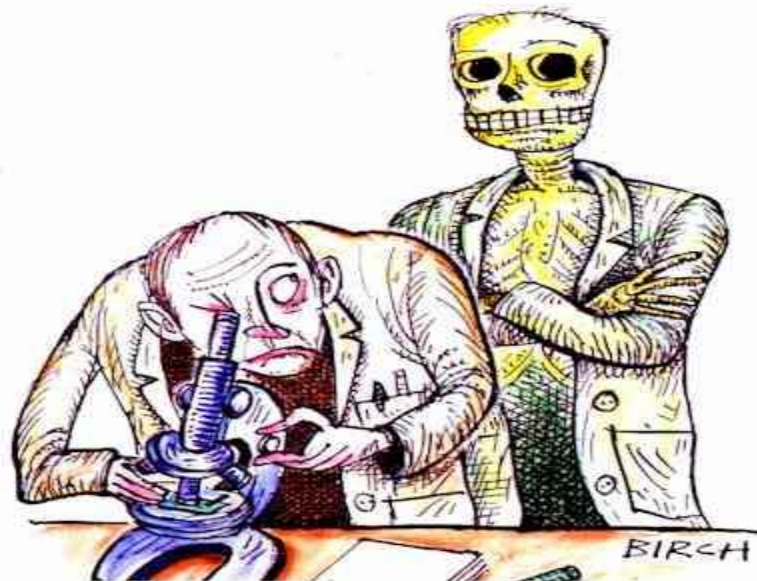
ETHICS & LAW : NOT THE SAME

- An action may be legal but unethical or illegal but ethical.
- Peaceful civil disobedience is an ethical way of expressing political viewpoint (Mahatma Gandhi)



WHAT IS RESEARCH ?

- **A systematic investigation to establish facts.** An enquiry that involves seeking of evidence or increase knowledge.



AIMS OF RESEARCH

- To generate (new) information, knowledge, understanding or some other relevant cognitive good and does by means of a systematic investigation.



VALUE OF RESEARCH

- A better quality of life & increased welfare
- Life saving through research (Covid Vaccine)
- Earth saving through research
- Research makes a perfect human being academically, mentally, socially, spiritually.



WHAT IS RESEARCH ETHICS ?

- Research Ethics (RE) involves the application of fundamental ethical principles to a variety of areas of scientific research such as planning, conduct, reporting of research involving animal/human experimentation, various aspects of research misconducts such as fraud, fabrication of data, plagiarism etc.

CODES & POLICIES OF RESEARCH ETHICS

- Honesty, Objectivity, Integrity, Carefulness, Openness, Confidentiality
- Respect for colleagues, Responsible publications, Responsible mentoring
- Respect for Intellectual property, Social responsibility, Non-discrimination, Competence, Legality, Animal care, Human subject protection



ISSUES OF RESEARCH ETHICS

- Use of animals in research
- Use of human subjects in research
- Professional issues (Credit : Publications, authorship, acknowledgement, IP rights, etc.)



USE OF ANIMALS IN RESEARCH

● **CPCSEA**



Committee for the purpose of control and supervision of experiments on animals

**Animal welfare Division, Ministry of environment & forests,
New Delhi 110 001, January 2012
E mail : cpcsea@rediffmail.com**

**Standard operating procedures (SOP) for
institutional Animal Ethics Committee(IAEC)**

CPCSEA - SOP FOR IAEC

- **OBJECTIVES** : Prevention of cruelty to animals (PCA) act 1960 and CPCSEA is bound to take all measures to ensure that animals are not subjected to unnecessary pain or suffering before, during and after performance of expts on them.
- The objectives of SOP is to contribute to the effective functioning of IAEC so that a quality and consistence ethical process of research on animals are formed & followed.

IAEC : Definition & composition

- IAEC is a body comprising of a group of persons recognized & registered by the CPCSEA for the purpose of supervise and control of expts on animals performed in an establishment which is constituted and operated in accordance to the procedures set forth by CPCSEA.
- IAEC shall include eight (8) members : A biological scientist, two scientists from different disciplines, a veterinarian, a scientist from outside institute, scientist-in-charge of animal facility, a non-scientist socially aware member, a nominee of CPCSEA

IAEC : OBJECTIVES

- (1) Expt are performed under the supervision of a qualified veterinarian
- (2) Expt are performed with due care and humanity
- (3) Expt on animals are avoided where ever it is possible
- (4) Expt on large animals are avoided and to use small animals
- (5) Expts shall not perform to acquire skills
- (6) Expt animals are properly looked before /during/after the expts
- (7) animal records are properly maintained

Use of human subjects in research

ETHICAL GUIDELINE FOR BIOMEDICAL RESEARCH ON HUMAN PARTICIPANTS



INDIAN COUNCIL OF MEDICAL RESEARCH
ANSARI NAGAR, NEW DELHI 110 029

http: [//icmr.nic.in/ethical.pdf](http://icmr.nic.in/ethical.pdf)

PROFESSIONAL ISSUES

RESEARCH
PUBLICATIONS

FOLLOW TEN RULES & PUBLISH

- 1 Read many papers, critically analyze and learn from them
- 2 The more objective you can be about your work, the better that work will ultimately become
- 3 Good editors & reviewers will be objective about your work
- 4 Improve your English language (take lessons , if required)
- 5 Learn to live with rejection
- 6 Be objective with your write up ingredients
- 7 Start writing the paper the day you have the idea
- 8 Decide early where to publish
- 9 Involve your co authors for several stages of correction
- 10 Do not compromise with quality

FOLLOW THE STEPS IN PUBLICATION

- 1 Title page include : Title, authors, Place of work, short title, key words, corresponding authors email, fax, phone
- 2 2nd page : abstract (300W)
- 3 3rd - 10 pages : Introduction, materials & methods, results (including table, graph, photographs), Discussion, Acknowledgement, Conflicts of interests
- 4 References/Bibliography (follow journal style, you may use END NOTE software)
- 5 At the end put the table, graph, photographs
- 6 ***Run plagiarism software before submission (<10). Take care of the ethical issues in publication

Where & How to Publish ?

- Search for a suitable journal (in your area of research) with a good/high Impact factor >2
- Seek opinion of your mentor, finalize the journal & get a few reprints of that journal as reference
- After several drafts, finalize the manuscript for submission (on line)
- Take special care for Fig, table, Bibliography, AEC, Conflict of interests etc & your English
- You may check the progress on line and wait for editor's decision. **Accepted = Celebration & Party**
- **Revised (attend the quires); Rejected (analyse the rejection points; submit to another journal; this time more careful).**

You Should celebrate your 1st Paper



Impact Factor (IF)

- The impact factor (IF) is a measure reflecting the average number of citations to articles published in science/social journals.
- Examples of 2021 Science journals

1	Nature	36.18
2	Ann Rev Immunology	19.50
3	Science	41.80
4	Toxicon (Elsevier)	2.8
5	Ind J Med Research	1.8
6	Ind J Exp Biology	1.7
7	Ind J Physiology (1948)	0 ?
8	New England J Medicine	74.00

PUBLICATION ISSUES : CREDIT IN A PAPER

- Credit in a paper (1) Authorship (2) Co-authorship
- (3) Acknowledgement

(1) Authorship : Ordering of Authors ?

- Key position : First & Last

Different disciplines/culture follow different conventions

Lab director is co-author in all papers

GIFT OF AUTHORSHIP : PUBLICATION CRIME

Ref : Responsibility of Authorship, Chest, 2007, 2042-2045

CO-AUTHOR'S CONTRIBUTION

- 1 Providing key ideas.
- 2 Doing the implementation.
- 3 Running the expt & collect data.
- 4 Analyzing the data.
- 5 Writing up the paper.
- 6 Keep track on the publication process.



ACKNOWLEDGEMENT

- People who made positive contributions that does not merit co-authorship may be acknowledged.
- It is a good manner and costs nothing



WHOM TO ACKNOWLEDGE ?

- 1 Contribute a good idea
- 2 Provide resources : equipments, samples, kits,
- 3 Help in type settings, bibliography, illustrations data processing, etc.
- 4 **Funding agency, Place of work, HOD, Dept, etc**



WHOM NOT TO ACKNOWLEDGE ?

- 1 Scholar/Teacher with no Contribution.
- 2 Boy friend/girl friend.
- 3 Blood relation not involved in research.
- 4 Acknowledge from your heart and not from your emotion.

CITATION ETIQUETTE

- Cite other people work freely & often.
- Make new friends (scholars love to be cited).
- Encourage others to cite your work in return.
- Avoid antagonizing your reviewers by failing to acknowledge their contributions.
- Citation is good but stealing citation is not good.



OTHER ISSUES

- **Peer review** : Peer review is the evaluation of creative work or performance by other people of same field in order to maintain or enhance the quality of the work or performance in that field.
- **Conflict of Interests** : A conflict of interests is a situation in which financial/non financial considerations compromise or have the appearance of compromise an individual's professional judgment in proposing, conducting, supervising or reporting research.

RESEARCH MISCONDUCT



RESEARCH MISCONDUCT (1)

- Research misconducts defines as Fabrication, Falsification or Plagiarism (or FFP).
- It is important to remember, however, that misconduct occurs only when researchers intend to deceive.
- Ref : Research misconduct : the Poisoning of the well, J R Soc Med, 2006, 99, 232-237



RESEARCH MISCONDUCT (2)

- Publishing/Submitting the same paper to different journals
- Not informing your collaborator about paper/patent/etc
- Inclusion of your colleague on a paper as co- author with no contribution
- Discussing with your colleague confidential data/paper for review/report etc



RESEARCH MISCONDUCT (3)

- Using inappropriate statistics to enhance level of significance/digitally manipulating figures.
- By passing peer review process and announcing your results through press.
- Stretching the truth in a CV.
- Giving the same project to two students to assess who is faster.
- Overworking/neglecting/exploiting research students.



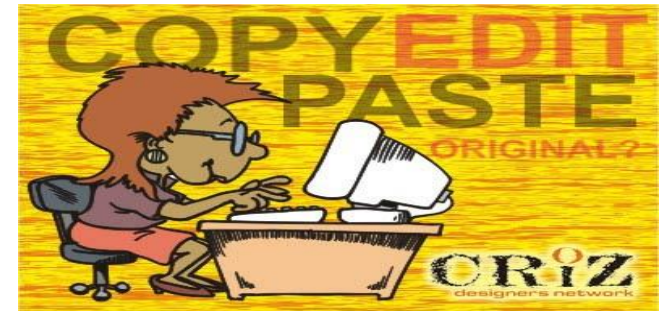
RESEARCH MISCONDUCT (4)

- Failing to keep good research records.
- Wasting/stealing animals in research.
- Sabotaging someone's work.
- Stealing supplies, books, data, computer programs, making unauthorized copies of paper, **acceptance of bribes from suppliers.**
- Not reporting an adverse effect of drugs.
- **False promises for sexual favours.**



PLAGIARISM

- **Plagiarism**, a word derived from the Latin for kidnapping, involves the appropriation of author's work as one's own without the real author's permission or attribution.
- **Burrowing "Just a sentence or two" without attribution is plagiarism.**
- **But plagiarism is easily avoided : give the citation.**



Plagiarism : Punishment

- Ref : Vascular Pharmacology (2011), Elsevier
- Allegation : Figures digitally manipulated
- Evidences :
- Sheikpranbabu et al,(2009) Life Sci, 85,719-731
- Sheikpranbabu et al,(2010) Vas Phar, 52,84-94
- Kalishwarlal et al,(2011), Angiogen, 14, 29-45
- Punishment : Kalasalingam University, India
- A senior Professor resigned from the post
- Ph. D Registration of six students were cancelled

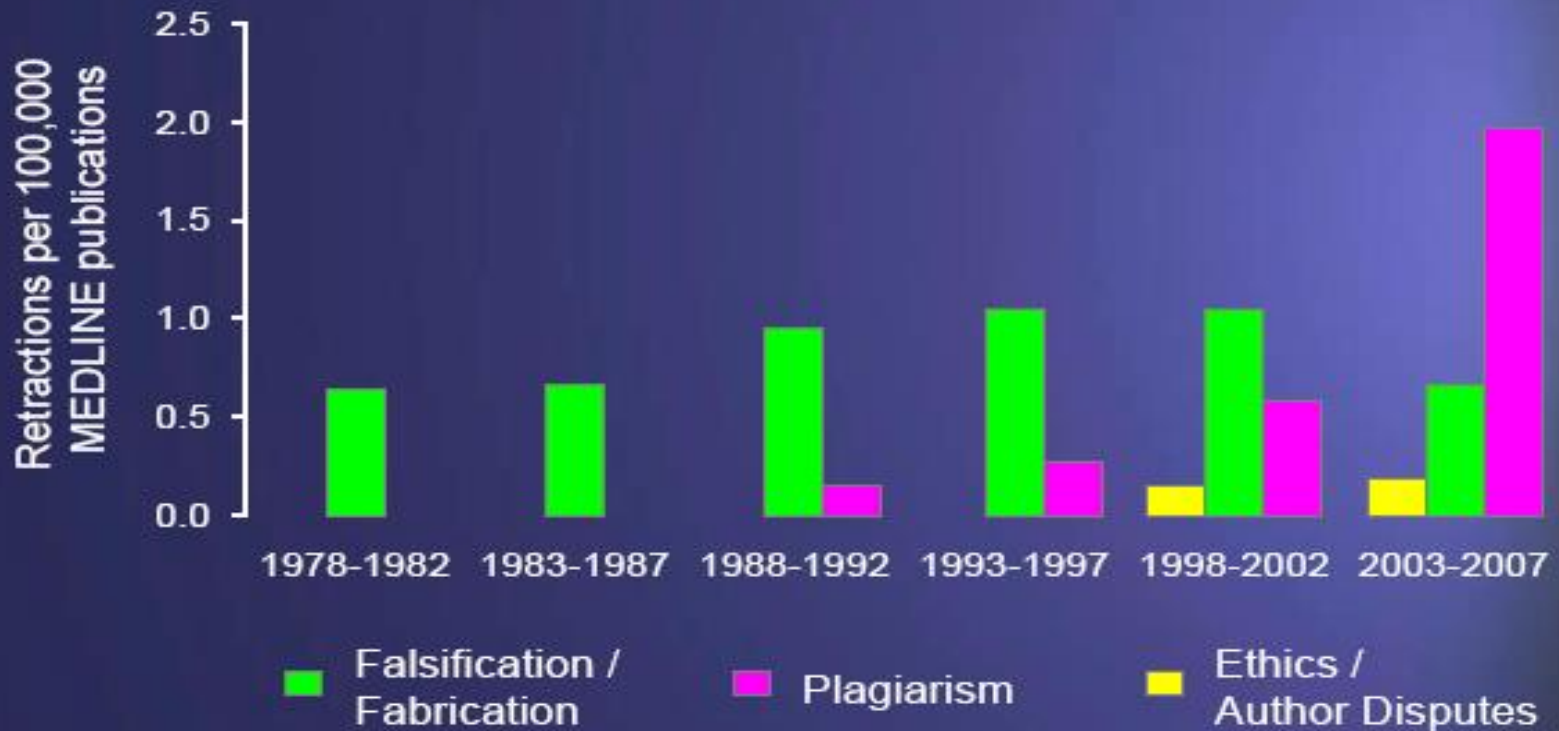
WHAT IS RETRACTION OF PAPER?

- **RETRACTION** = Withdrawal of a paper from a journal by the author due to scientific misconduct (plagiarism, falsification, error, etc).
- .Retraction Watch is a blog (2010) that reports on retractions of scientific papers.



RETRACTION : PATTERN CHANGED

Plagiarism retractions have increased over the past decade



RETRACTION FROM INDIA

- 2014 :IMTECH: CSIR scientist used faked data in four papers (Plos-1) & job terminated in 2016.
- 2014 : Cancer journal retracts article by NIPER scientists.
- 2014 : The Journal of International Oral Health has retracted a paper on dental pain by a group from India.
- 2008 : Research paper by dental researchers from India retracted for plagiarism.
- Scientific Misconduct in India: An Analysis of Retracted Papers in PubMed : T. A. Abinandanan

GOOD MENTORING

- Effective mentoring is essential to promote a positive attitude and understanding of the responsible conduct of research.

Mentoring is a shared professional responsibility of all scientists/Teachers. Scientific trainees have a complementary responsibility to take an active role in their own development & commitments in Ethical & social issues.

Society needs Good Mentors.

Ref : Gomes et al, Ind J Pharmacology
(2013), 45(5), 540-541.



R.E : Promotional strategies

- (1) To organize seminar, workshop, conference, training programme, lectures, class teaching etc.
- (2) Compulsory training/course/Exam for M.Phil/Ph.D students in RE.
- (3) Formation of R.E cell/ training centre in every research institute/Universities.
- (4) Introduction of RE syllabus in PG/Ph.D/NET examination.
- (5) To initiate research on research ethics

CONCLUSION

- **Ethics education should help you to :**
 - (1) Understand the rules of professional behavior, and the reasons for them.
 - (2) Know your rights & Meet your responsibilities.
- **Most basic rule for all :**

Don't do anything that would embarrass you if people found about it.



Acknowledgement

- 1 The Principal, Mukberia College, Midnapore
- 2 The HOD, Dept of F & N, Mukberia College
- 4 The President, Convenor, Jt-Convenor
- 5 My Ph.D Students (32)
- 6 Google.com

References

- 1 Gomes et al (2003).Ind J Pharmacology, 45(5), 540-541.
- 2 CPCSEA guidelines for laboratory animal facility (2010), CPCSEA, New delhi.
- 3 The Director General Indian Council of medical Research,ICMR, New Delhi.
- 4 Benos et al (2005), Adv Physiol Edu, 29, 59-74,
- 5 Epstein Y (2002), I Appl Physiol,92, 2226-22267.
- 6 Resnik et al (2015),J Med Lib Asso, 103(3), 136-139.

UGC Notices (48 pgs) : 22.01.2021

Mentor-Mentee Relation vis-a vis Life Long Learning

One of the recommendations of National Education Policy (NEP)2020

is to develop a system of mentorship by experienced, distinguished and retired faculty. *A National Mission for Mentoring shall be established, with a large pool of outstanding senior/retired teachers.*

- Awareness about the professional ethics / code of conduct
- Sensitization to dealing with students, academic and non-academic staff

সম্পর্ক চিরদিনের : ধন্যবাদ



মাস্টারমশাই