

KSBB Research Ethics Guideline

Article 1 (Objective)

The objective of this provision is to establish research ethics of the Korean society for Biotechnology and Bioengineering (KSBB) for its members and to prescribe the basic matters related to the constitution and operation of the Research Ethics Committee (“the committee” hereinafter).

Article 2 (Definitions)

Research frauds refer to forgeries, falsifications, plagiarisms, dual publications, improper inclusion or exclusion of authors, etc., as seen in research proposals, performances, result reports, presentations, etc. Relevant definitions are provided below.

- 2.1. Forgery: Refers to the act of forging non-existent data or findings.
- 2.2. Falsification: Refers to the act of distorting research contents or results by fabricating, transforming, deleting or adding the data willfully.
- 2.3. Plagiarism: Refers to the act of representing others’ work as one’s own. Included is the case of self-plagiarism of using identical ideas or data in subsequent publications.
- 2.4. Dual publications: Refers to publishing identical research contents in different academic journals twice or more.
- 2.5. Improper inclusion or exclusion of authors: Refers to not qualifying, without reasonable reason, a person who has contributed to research contents or results in scientific or technical terms for authorship, or to qualifying a person who has not contributed to them in scientific or technical terms for authorship.
- 2.6. Act of proposing, forcing or threatening another person to commit fraudulent acts.
- 2.7. Other acts that seriously out of line with the scope normally acceptable in academic research.

Article 3 (Functions of the committee)

The committee deliberates and votes for the following issues related to research ethics of researchers who have been supported by research funds from academic-industrial cooperation projects (“research funding” hereinafter) through the KSBB.

- 3.1. Education and establishment of research ethics
- 3.2. Prevention and investigation of research misconduct

3.3. Protection of informants and maintaining confidentiality

Article 4 (Organization of the committee)

The committee comprises nine members, including president of the society. President of the society becomes the committee chairman. Secretaries and committee members can be appointed by the chairman among the society members for a one-year office term.

Article 5 (Committee meetings)

5.1. The chairman summons a meeting whenever deemed necessary.

5.2. A resolution shall be made with the participation of more than a half of registered members and the approval of a half (50%) of the participants.

5.3. If deemed necessary, the committee can invite relevant staff to participate the committee meetings.

5.4. In principle, committee meetings shall be held confidentially. However, a documentary resolution can be made for a minor agenda.

Article 6 (Investigation of research misconduct)

6.1. The committee shall investigate potential irregularities if there is a request or a significant suspicion of research misconduct.

6.2. The chairman can implement a preliminary investigation.

Article 7 (Organization of the investigation committee)

7.1. The committee shall summon an investigation committee meeting immediately upon a receipt of the request for the research misconduct investigation.

7.2. The investigation committee consists of three to seven committee members, and over a half of them should be professionals with expertise and experience in the relevant research field.

7.3. Members with conflicting interests in the investigated case cannot be appointed to the investigation committee.

Article 8 (Duties of the investigation committee)

8.1. The investigation committee can summon for attendance to the informants of irregularities, person(s) of investigation, witnesses, and testifiers, as well as request the submission of relevant materials.

8.2. If the subject of investigation refuses to attend the requested meeting or to submit relevant materials, he or she may be presumed to accept the charge(s).

- 8.3. The investigation committee can take applicable action to prevent loss, damage, concealment, or falsification of evidence or research records.
- 8.4. The investigation committee can take action to confiscate and keep relevant materials under the approval of the head of the corresponding research institute.
- 8.5. The investigation committee should be careful not to cause unreasonable treatment or disadvantage to the informants of irregularities or subjects of investigation.
- 8.6. The investigation committee should report the results of the deliberation to the Research Ethics Committee.

Article 9 (Period of prescription)

- 9.1. Research misconduct cases recognized within at least 5 years after the irregularities were initially notified will be investigated by the Research Ethics Committee.
- 9.2. In cases when research misconduct cases cause serious threats to public welfare or safety, or when research irregularities are continuously employed for grant applications or further research performances, a full-scale investigation will be launched.

Article 10 (Exclusion, Exception, Refrainment)

- 10.1. Under the circumstance when fairness cannot be ensured from certain committee members, the informant of irregularities or the paper contributor may file an exception against him or her, and, if accepted, the concerned person shall be excerpted from relevant investigation.
- 10.2. If a committee member is a directly interested party in the research paper at stake, he or she shall be excluded from the investigation procedure.
- 10.3. A committee member may refrain from the investigation if there is a justifiable reason for not being able to conduct an unbiased investigation (see 10.1 and 10.2).

Article 11 (Guarantee of the opportunity to state an opinion)

The investigation committee should provide the subject of the investigation with an opportunity to submit his or her opinions or explanations in response to the corresponding suspicion.

Article 12 (Penalties)

- 12.1. The committee shall make a decision confirming that the acts of the person(s) under investigation in connection to the investigated matters is a research misconduct case by concurrence of more than 2/3 of the members present as a quorum is present at the meeting.
- 12.2. When a decision is made confirming the case of research misconduct, the

committee can sanction the author with applicable punishment. This can include one of the following:

- 1) Retraction or deletion of the research paper where research misconduct has been identified;
- 2) Suspension of membership owned by the relevant individual;
- 3) Notification of relevant organizations or institutions about the incident.

12.3. The committee can also disqualify or suspend anyone who intentionally or mistakenly makes a report that proves different from the established truth, or who distributes false information.

Article 13 (Notification of results)

The committee chairman shall immediately submit a written notification of the investigation results to the concerned persons, including the informant(s) of irregularities and paper contributor.

Article 14 (Administrative protest)

Within 20 days from the result notification, the informant of irregularities and/or paper contributor may file in a written disclaimer against the decision of the committee.

Article 15 (Confidentiality)

15.1. The committee shall be careful not to infringe on honor and rights of the claimed author until the inspection and verification of irregularities is finalized.

15.2. Investigation details shall be kept strictly confidential, and the committee may only disclose relevant information in accordance with the resolution of the investigation committee.

15.3. All investigators shall not disclose any confidential information obtained directly or indirectly while engaging in investigatory work, even after the termination of his or her office term.

Article 16 (Cost)

The costs required for the committee operation will be provided within the budget scope.

Article 17 (Guideline for the operation)

Other detailed provisions or guidelines required for the committee operation can be determined by the chairman through the deliberation of the committee.

These regulations shall be effective as of May 16, 2008.

Responsible research publication: international standards for authors

- **Summary**
- The research being reported should have been conducted in an ethical and responsible manner and should comply with all relevant legislation.
- Researchers should present their results clearly, honestly, and without fabrication, falsification or inappropriate data manipulation.
- Researchers should strive to describe their methods clearly and unambiguously so that their findings can be confirmed by others.
- Researchers should adhere to publication requirements that submitted work is original, is not plagiarised, and has not been published elsewhere.
- Authors should take collective responsibility for submitted and published work.
- The authorship of research publications should accurately reflect individuals' contributions to the work and its reporting.
- Funding sources and relevant conflicts of interest should be disclosed.

1 Definition of terms

Research frauds refer to forgeries, falsifications, plagiarisms, dual publications, improper inclusion or exclusion of authors, etc, as seen in the proposals, performances, result reports, presentations, etc. of the research. Their details are as follows:

- 1.1. Forgery: Refers to the act of forging non-existent data or findings.
- 1.2. Falsification: Refers to the act of distorting research contents or results by fabricating, transforming, deleting or adding the data willfully.
- 1.3. Plagiarism: Refers to the act of representing others' work as one's own. Included is the case of self-plagiarism of using identical ideas or data in subsequent publications.
- 1.4. Dual publications: Refers to publishing identical research contents in different academic journals twice or more.
- 1.5. Improper inclusion or exclusion of authors: Refers to not qualifying, without reasonable reason, a person who has contributed to research contents or results in scientific or technical terms for authorship, or to qualifying a person who has not contributed to them in scientific or technical terms for authorship.
- 1.6. Act of proposing, forcing or threatening another person to commit fraudulent acts.
- 1.7. Other acts that seriously out of line with the scope normally acceptable in academic

research.

2 Soundness and reliability

- 2.1 The research being reported should have been conducted in an ethical and responsible manner and follow all relevant legislation.
- 2.2 The research being reported should be sound and carefully executed.
- 2.3 Researchers should use appropriate methods of data analysis and display (and, if needed, seek and follow specialist advice on this).
- 2.4 Authors should take collective responsibility for their work and for the content of their publications. Researchers should check their publications carefully at all stages to ensure methods and findings are reported accurately. Authors should carefully check calculations, data presentations, typescripts/submissions and proofs.

3 Honesty

- 3.1 Researchers should present their results honestly and without fabrication, falsification or inappropriate data manipulation. Research images (e.g. micrographs, X-rays, pictures of electrophoresis gels) should not be modified in a misleading way.
- 3.2 Researchers should strive to describe their methods and to present their findings clearly and unambiguously. Researchers should follow applicable reporting guidelines. Publications should provide sufficient detail to permit experiments to be repeated by other researchers.
- 3.3 Reports of research should be complete. They should not omit inconvenient, inconsistent or inexplicable findings or results that do not support the authors' or sponsors' hypothesis or interpretation.
- 3.4 Research funders and sponsors should not be able to veto publication of findings that do not favor their product or position. Researchers should not enter agreements that permit the research sponsor to veto or control the publication of the findings (unless there are exceptional circumstances, such as research classified by governments because of security implications).
- 3.5 Authors should alert the editor promptly if they discover an error in any submitted, accepted or published work. Authors should cooperate with editors in issuing corrections or retractions when required.
- 3.6 Authors should represent the work of others accurately in citations and quotations.
- 3.7 Authors should not copy references from other publications if they have not read

the cited work.

4 Balance

4.1 New findings should be presented in the context of previous research. The work of others should be fairly represented. Scholarly reviews and syntheses of existing research should be complete, balanced, and should include findings regardless of whether they support the hypothesis or interpretation being proposed. Editorials or opinion pieces presenting a single viewpoint or argument should be clearly distinguished from scholarly reviews.

4.2 Study limitations should be addressed in publications.

5 Originality

5.1 Authors should adhere to publication requirements that submitted work is original and has not been published elsewhere in any language. Work should not be submitted concurrently to more than one publication unless the editors have agreed to co-publication. If articles are co-published this fact should be made clear to readers.

5.2 Applicable copyright laws and conventions should be followed. Copyright material (e.g. tables, figures or extensive quotations) should be reproduced only with appropriate permission and acknowledgement.

5.3 Relevant previous work and publications, both by other researchers and the authors' own, should be properly acknowledged and referenced. The primary literature should be cited where possible.

5.4 Data, text, figures or ideas originated by other researchers should be properly acknowledged and should not be presented as if they were the authors' own. Original wording taken directly from publications by other researchers should appear in quotation marks with the appropriate citations.

5.5 Authors should inform editors if findings have been published previously or if multiple reports or multiple analyses of a single data set are under consideration for publication elsewhere. Authors should provide copies of related publications or work submitted to other journals.

5.6 Multiple publications arising from a single research project should be clearly identified as such and the primary publication should be referenced. Translations and adaptations for different audiences should be clearly identified as such, should acknowledge the original source, and should respect relevant copyright conventions and permission requirements. If in doubt, authors should seek permission from the original publisher before republishing any work.

5.7 The priority of the primary publication is respected by a publication interval of at

least 1 week (unless specifically negotiated otherwise by both editors).

- 5.8 The paper for secondary publication is intended for a different group of readers; an abbreviated version could be sufficient.
- 5.9 The secondary version faithfully reflects the data and interpretations of the primary version.
- 5.10 The footnote on the title page of the secondary version informs readers, peers, and documenting agencies that the paper has been published in whole or in part and states the primary reference. A suitable footnote might read: "This article is based on a study first reported in the [title of journal, with full reference]." Permission for such secondary publication should be free of charge.
- 5.11 The title of the secondary publication should indicate that it is a secondary publication (complete republication, abridged republication, complete translation, or abridged translation) of a primary publication.

6 Transparency

- 6.1 All sources of research funding, including direct and indirect financial support, supply of equipment or materials, and other support (such as specialist statistical or writing assistance) should be disclosed.
- 6.2 Authors should disclose the role of the research funder(s) or sponsor (if any) in the research design, execution, analysis, interpretation and reporting.
- 6.3 Authors should disclose relevant financial and non-financial interests and relationships that might be considered likely to affect the interpretation of their findings or which editors, reviewers or readers might reasonably wish to know. This includes any relationship to the journal, for example if editors publish their own research in their own journal. In addition, authors should follow journal and institutional requirements for disclosing competing interests.

7 Appropriate authorship and acknowledgement

- 7.1 Authorship credit should be based on 1) substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; 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. Authors should meet conditions 1, 2, 3, and 4.
- 7.2 When a large, multicenter group has conducted the work, the group should identify the individuals who accept direct responsibility for the manuscript. These individuals should fully meet the criteria for authorship/contributorship defined

above and editors will ask these individuals to complete journal-specific author and conflict-of-interest disclosure forms. When submitting a manuscript authored by a group, the corresponding author should clearly indicate the preferred citation and identify all individual authors as well as the group name. Journals generally list other members of the group in the Acknowledgments. The NLM indexes the group name and the names of individuals the group has identified as being directly responsible for the manuscript; it also lists the names of collaborators if they are listed in Acknowledgments.

- 7.3 Acquisition of funding, collection of data, or general supervision of the research group alone does not constitute authorship.
- 7.4 All persons designated as authors should qualify for authorship, and all those who qualify should be listed.
- 7.5 Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.
- 7.6 The research literature serves as a record not only of what has been discovered but also of who made the discovery. The authorship of research publications should therefore accurately reflect individuals' contributions to the work and its reporting.
- 7.7 In cases where major contributors are listed as authors while those who made less substantial, or purely technical, contributions to the research or to the publication are listed in an acknowledgement section, the criteria for authorship and acknowledgement should be agreed at the start of the project. Ideally, authorship criteria within a particular field should be agreed, published and consistently applied by research institutions, professional and academic societies, and funders. While journal editors should publish and promote accepted authorship criteria appropriate to their field, they cannot be expected to adjudicate in authorship disputes. Responsibility for the correct attribution of authorship lies with authors themselves working under the guidance of their institution. Research institutions should promote and uphold fair and accepted standards of authorship and acknowledgement. When required, institutions should adjudicate in authorship disputes and should ensure that due process is followed.
- 7.8 Researchers should ensure that only those individuals who meet authorship criteria (i.e. made a substantial contribution to the work) are rewarded with authorship and that deserving authors are not omitted. Institutions and journal editors should encourage practices that prevent guest, gift, and ghost authorship.

Note:

- guest authors are those who do not meet accepted authorship criteria but are listed because of their seniority, reputation or supposed influence
- gift authors are those who do not meet accepted authorship criteria but are listed as a personal favour or in return for payment
- ghost authors are those who meet authorship criteria but are not listed

7.9 All contributors who do not meet the criteria for authorship should be listed in an acknowledgments section.

7.10 All authors should agree to be listed and should approve the submitted and accepted versions of the publication. Any change to the author list should be approved by all authors including any who have been removed from the list. The corresponding author should act as a point of contact between the editor and the other authors and should keep co-authors informed and involve them in major decisions about the publication (e.g. responding to reviewers' comments).

7.11 The corresponding author shall represent all authors in answering for data accuracy, evaluating exact contribution of each author, certifying approval of all authors for the submitted draft and handling all correspondences and questions.

7.12 Authors should not use acknowledgements misleadingly to imply a contribution or endorsement by individuals who have not, in fact, been involved with the work or given an endorsement.

8 Accountability and responsibility

8.1 All authors should have read and be familiar with the reported work and should ensure that publications follow the principles set out in these guidelines. In most cases, authors will be expected to take joint responsibility for the integrity of the research and its reporting. However, if authors take responsibility only for certain aspects of the research and its reporting, this should be specified in the publication.

8.2 Authors should work with the editor or publisher to correct their work promptly if errors or omissions are discovered after publication.

8.3 Authors should abide by relevant conventions, requirements, and regulations to make materials, reagents, software or datasets available to other researchers who request them. Researchers, institutions, and funders should have clear policies for handling such requests. Authors must also follow relevant journal standards. While proper acknowledgement is expected, researchers should not demand authorship as a condition for sharing materials.

8.4 Authors should respond appropriately to post-publication comments and published correspondence. They should attempt to answer correspondents' questions and supply clarification or additional details where needed.

9 Adherence to peer review and publication conventions

- 9.1 Authors should follow publishers' requirements that work is not submitted to more than one publication for consideration at the same time.
- 9.2 Authors should inform the editor if they withdraw their work from review, or choose not to respond to reviewer comments after receiving a conditional acceptance.
- 9.3 Authors should respond to reviewers' comments in a professional and timely manner.
- 9.4 Authors should respect publishers' requests for press embargos and should not generally allow their findings to be reported in the press if they have been accepted for publication (but not yet published) in a scholarly publication. Authors and their institutions should liaise and cooperate with publishers to coordinate media activity (e.g. press releases and press conferences) around publication. Press releases should accurately reflect the work and should not include statements that go further than the research findings.

10 Responsible reporting of research involving humans or animals

- 10.1 Appropriate approval, licensing or registration should be obtained before the research begins and details should be provided in the report (e.g. Institutional Review Board, Research Ethics Committee approval, national licensing authorities for the use of animals).
- 10.2 If requested by editors, authors should supply evidence that reported research received the appropriate approval and was carried out ethically (e.g. copies of approvals, licenses, participant consent forms).
- 10.3 Researchers should not generally publish or share identifiable individual data collected in the course of research without specific consent from the individual (or their representative). Researchers should remember that many scholarly journals are now freely available on the internet, and should therefore be mindful of the risk of causing danger or upset to unintended readers (e.g. research participants or their families who recognize themselves from case studies, descriptions, images or pedigrees).
- 10.4 The appropriate statistical analyses should be determined at the start of the study and a data analysis plan for the prespecified outcomes should be prepared and followed. Secondary or post hoc analyses should be distinguished from primary analyses and those set out in the data analysis plan.
- 10.5 Researchers should publish all meaningful research results that might contribute to understanding. In particular, there is an ethical responsibility to publish the findings of all clinical trials. The publication of unsuccessful studies or experiments that reject a hypothesis may help prevent others from wasting time

and resources on similar projects. If findings from small studies and those that fail to reach statistically significant results can be combined to produce more useful information (e.g. by meta-analysis) then such findings should be published.

- 10.6 Authors should supply research protocols to journal editors if requested (e.g. for clinical trials) so that reviewers and editors can compare the research report to the protocol to check that it was carried out as planned and that no relevant details have been omitted. Researchers should follow relevant requirements for clinical trial registration and should include the trial registration number in all publications arising from the trial.

11 References

- 11.1 Wager E & Kleinert S (2011) Responsible research publication: international standards for authors. A position statement developed at the 2nd World Conference on Research Integrity, Singapore, July 22-24, 2010. Chapter 50 in: Mayer T & Steneck N (eds) Promoting Research Integrity in a Global Environment. Imperial College Press / World Scientific Publishing, Singapore (pp 309-16). (ISBN 978-981-4340-97-7)
- 11.2 Elizabeth Wager & Sabine Kleinert (2010) A position statement developed at the 2nd World Conference on Research Integrity, Singapore, July 22-24, 2010.
- 11.3 International Committee of Medical Journal Editors “Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Writing and Editing for Biomedical Publication (Publication Ethics: Sponsorship, Authorship, and Accountability)”
- 11.4 The “Uniform Requirements for Manuscripts (URM)” of International Committee of Medical Journal Editors.
- 11.5 The International Committee of Medical Journal Editors (ICMJE)
- 11.6 The Korean Institute of Chemical, Ethical Guidelines to Publications of Korean Institute of Chemical Engineers(KICChE).
- 11.7 The Polymer Society of Korea, Ethical Guidelines to Publications of The Polymer(Korea).
- 11.8 Korean Society for Molecular and Cellular Biology, Ethical Guidelines to Publications of "Molecules and Cells", the official journal of the KSMC.
- 11.9 Journal of Soft Matter, Journal of, Publication Ethics.