Questions and proposed answers regarding authorship

The questions listed below come from various sources, including staff and students at the Institute of Tropical Medicine of Antwerp, and colleagues from other institutes. The answers have been proposed by the ITM-CRI working group.

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A. Responsibility and accountability

1) Who has the final responsibility for a publication: the first or the senior author?

   - Both the first and the last author have certain responsibilities. Accountability is one of the four International Committee of Medical Journal Editors (ICMJE) criteria for authorship.
   - The first author has important responsibility for the veracity and analysis of the data, but the senior author takes overall responsibility.
   - The first and especially the senior author should be capable to determine who is responsible for each part of the work.
   - Some journals request that all authors take responsibility for the entire article.
     [see the related paragraphs in the ITM-CRI authorship guidelines]

2) Can a co-author who is not first or senior author be held responsible?

   - Yes, each co-author has certain responsibilities. Accountability is one of the four ICMJE criteria for authorship.
   - Each author should take responsibility for at least one part of the work (their contribution).
   - Moreover, all authors should
     - insist to include as authors all persons who qualify as such and to exclude from authorship those who do not provide the required significant contributions described above;
     - mention potential conflicts of interest;
     - mention the agency/ies providing funding;
     - mention also the sponsor (legal responsible) of a clinical trial.
   - The senior author has a particular responsibility, but all others should guard this process.
   - Some journals request that all authors take responsibility for the entire article.
   - A hierarchical head may have legal responsibilities in addition to his/her responsibilities as a co-author.
     [see the related paragraphs in the ITM-CRI authorship guidelines]

3) Can someone who is not a co-author be held responsible?

- Yes, a hierarchical head who has no scientific contribution, should not be a co-author but may have legal responsibilities.

4) I am involved in a study for which the data are collected elsewhere. I do not have access to all pieces of information. How can I be accountable for this research?

- Co-authorship implies a relation of trust in the capacities and integrity of the other authors, that should be based on the implementation of verifiable quality assurance mechanisms, including but not limited to Good Research, Laboratory and Clinical Practices, such as traceability of primary results, transparent data management etc.
- Some journals request that all authors take responsibility for the entire article.
- One of the ICMJE criteria for authorship is the approval of the version of the manuscript to be submitted and published. This is not only an administrative procedure: this is the last time each co-author can check if he or she agrees to be accountable for the work and for the way it is presented.

5) Is it acceptable to publish a paper about a situation in a certain country without including co-authors from that country?

- It is preferred and recommended that co-authors are included from the country where the study was done. However, these people should then live up to all four ICMJE criteria. The senior author(s) should do efforts to that effect. However, if after reasonable efforts nobody is eligible, the paper can be published without country-specific authors, especially if it is based on secondary data.

B. Who should be co-author?

6) Can people from the community become co-author? Can lab technicians become co-author?

- The ICMJE criteria for authorship mention several different types of contribution, i.e. the conception of (part of) the work and/or design of the study and/or execution of the study (including acquisition of data) and/or data analysis and/or data interpretation.
- Collaborators with essential technical, statistical or clinical contributions can be eligible as co-author. They can provide important **intellectual** contributions e.g. by critically reviewing patient data, by critically adapting techniques to maximally fit the study, by providing thorough statistical advice, which all may significantly improve the paper.
- Obviously, to become a co-author, these collaborators should meet the four criteria: they also have to contribute to manuscript writing, they have to approve the final version of the paper and they are accountable for their contribution (and according to some journals they are accountable for the entire manuscript).

7) What is meant by ‘conception of the work’?

- Conception refers to the basic ideas, hypotheses, research questions, original methods, structure of a viewpoint paper… that are all at the heart of the study. A helpful tool to

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define the different roles of co-authors is given in the table below. (Source: Allen L, Scott J, Brand A, Hlava M, Altman M. Publishing: Credit where credit is due. Nature 2014;508(7496):312-3.)

WHO DID WHAT?
Respondents were asked to select all roles that applied to each author, as described in the taxonomy below, and to state which of these roles were lead or supporting.

Taxonomy category	Description of role
Study conception	Ideas; formulation of research question; statement of hypothesis.
Methodology	Development or design of methodology; creation of models.
Computation	Programming, software development; designing computer programs; implementation of the computer code and supporting algorithms.
Formal analysis	Application of statistical, mathematical or other formal techniques to analyse study data.
Investigation: performed the experiments	Conducting the research and investigation process, specifically performing the experiments.
Investigation: data/evidence collection	Conducting the research and investigation process, specifically data/evidence collection.
Resources	Provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation or other analysis tools.
Data curation	Management activities to annotate (produce metadata) and maintain research data for initial use and later re-use.
Writing/manuscript preparation: writing the initial draft	Preparation, creation and/or presentation of the published work, specifically writing the initial draft.
Writing/manuscript preparation: critical review, commentary or revision	Preparation, creation and/or presentation of the published work, specifically critical review, commentary or revision.
Writing/manuscript preparation: visualization/data presentation	Preparation, creation and/or presentation of the published work, specifically visualization/data presentation.
Supervision	Responsibility for supervising research; project orchestration; principal investigator or other lead stakeholder.
Project administration	Coordination or management of research activities leading to this publication.
Funding acquisition	Acquisition of the financial support for the project leading to this publication.

8) Should those who provide essential material become co-author? Can reagents or rebates be exchanged for co-authorship? What about colleagues who provide basic reagents, not specially designed for the study?

- It really depends on the nature of the contribution. Just providing a cell line or a number of strains, with no other contribution, cannot be considered as sufficient for authorship. Clearly, if there is no other (intellectual) contribution, this should only be mentioned in the acknowledgments.
- A rebate cannot be a substitute for an intellectual contribution.
- Providing biological samples (e.g. from patients) with background clinical and epidemiological information or providing other important quantitative or qualitative data can be a significant contribution. To become a co-author, these contributors should also be involved in the writing and final approval of the paper and they are accountable for the quality of their material and data.

9) What about providing samples in exchange for co-authorship?

- The way this question is formulated suggests that co-authorship is considered as a currency. That is clearly unacceptable.
- The context needs to be considered: if it is routine samples (e.g. from blood banks), with little additional information, the provider should be mentioned in the acknowledgments.
- If the samples are well documented and provide an essential contribution, co-authorship can be considered, but always on condition that the contribution includes participating in writing/reviewing the manuscript, final approval and accountability.

10) Can persons who do not know English be co-authors on an paper in English?

- Yes. If they are not used to read scientific English, the first and/or senior authors should assist in reading the manuscript, discuss the content thoroughly with them and take their remarks into account. Obviously, they should also approve the final manuscript and they are responsible for their contribution.

11) Who qualifies for authorship if the number of individuals critically contributing to the study exceeds the target journal's maximum author number?
Example: A joint clinical & laboratory study testing a new diagnostic test and therapy for a viral haemorrhagic fever involved 10 doctors assessing/recruiting/treating the patients and 10 scientists/epidemiologists.

- This question illustrates the utility of establishing the author list at study inception. If all 20 individuals were on the initial or amended study author list then all should be included as authors. (Study participation by researchers is often different to that originally planned and this could be reflected by amending the original author list during the study).
- A critical point is that if all 20 individuals were significantly involved in the study according to ICMJE author criteria then all should be included as authors. Finding an alternative journal that allows 20 authors would in this instance be an optimal solution.
- The flip side of this is that all persons on the author list should agree up front to the responsibilities that authorship entails. If the individuals are not prepared to comply with these responsibilities, they should not be considered as authors. Persons who do not sufficiently contribute to the study should not be considered as candidate authors in the first place.

12) In some research teams it is the 'habit' to include all unit members in the authors list. Is this okay?

- If it is a habit with the objective to increase the number of publications by the team and its members, this is unacceptable. Only if all unit members have significantly contributed to a particular manuscript and fulfil all four criteria, it is acceptable to include all names.

C. Roles and positions

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13) Can there be multiple "first" and "last" authors?

- This is becoming common practice, but should carefully be limited to those instances where researchers really made equal contributions.

14) Can a PhD student be corresponding author? Can there be two corresponding authors at the same time?

- For practical reasons and to avoid confusion, it is convenient to have only one corresponding author who is expected to remain at the institute for a long time .
- On the other hand, a PhD student can also be corresponding author. This can be considered as part of the PhD learning process.
- A possible scenario to is to have the first author (PhD student) as corresponding author during the submission, for correspondence with editor and reviewers. Then the corresponding authorship can be changed to a co-author with long-lasting affiliation with the institute, who will reply to questions from readers.

15) More than one person can have the capacity to fulfil the role of first (or last) author and they may have already taken up this role. How do you decide who gets the first (or last) position?

- Discuss this issue amongst co-authors in an early stage. If no agreement can be reached, ask advice (e.g. with CRI).

16) Is 'strategic authorship' acceptable?
E.g. in case a postdoc and ZAP have contributed equally to qualify as last author but the postdoc needs last authorship positions for career perspectives, is it then allowed to put the postdoc in the last position?

- Only in case of equal contribution, this is allowed.

D. Affiliations

17) How many affiliations should a PhD student use? Home institute and/or ITM and/or PhD-granting university?

- The student should try to give the three affiliations, in that order, implying that the PhD granting university is deleted if only two affiliations are allowed.

18) Can a collaborator who moved from ITM to another institute add his/her new affiliation to the list of affiliations?

- The principle is that the author should provide the affiliation of the institution where the actual work was done.

E. Approval for submission

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19) My paper is finally ready for submission. In the cover letter, I have to write that all co-authors have read and approve the final version of the manuscript. I am afraid that if I send another email to all the co-authors, I may get into difficulties because they may want to make additional changes, or because they may not answer my email quickly. In addition, they will all notice that I am submitting the paper later than they had expected which is embarrassing. What should I do?

- It is better to have the formal written approval of all co-authors to avoid discussions and jeopardize future relationships. This approval can be given by e-mail. It may be useful to adhere to a reasonable deadline. Potential co-authors who have not delivered their due contribution can then be taken off the list.

20) The final approval of the version to be submitted: should it be in writing or can it be verbal?

- Writing is clearly preferred, because it can prevent discussions afterwards

F. Problems

21) I am involved in a research project in which authorship was discussed and defined in the beginning. But in the course of the project, it has become clear that some of the co-authors do not perform what they should have accomplished.

- It should be clear from the start that authorship depends on the ICMJE principles and on actual accomplishment of agreed tasks. If the latter does not materialize, co-authorship should be discussed again.
- Also when the direction of the study changes or when staff changes occur, co-authorship should be re-discussed.

22) I consider that someone has made a significant contribution to a publication but now that I see the draft paper, I notice that this person is not in the list of co-authors. What should I do?

- Discuss it with the senior author. If no agreement is reached, the CRI can be consulted.

23) My supervisor (or last author) tells me to include an additional co-author. The paper is nearly finished and that additional person has not contributed so far. What can I do?

- The question is whether this newly proposed co-author will contribute significantly, e.g. by performing a more thorough analysis and revising the text (+ approval and responsibility for the new analysis) or not. If so, (s)he can be rightfully included; if not you should refuse to include him/her, but first discuss the matter with your supervisor.

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24) I am worried about an issue related to authorship and I have tried to tell this to my boss (or supervisor or last author). After the conversation, I still disagree with my boss (supervisor or last author). What can I do?

- Propose your supervisor to have an independent advice (e.g. from CRI). If he or she still disagrees and if the issue cannot be resolved in a collegial spirit, you can submit a request to start a formal inquiry of undesirable practice to the Reporting Point of the CRI (researchintegrity@itg.be).

25) Can I consult the ITM Commission for Research Integrity to ask a neutral opinion, without filing an allegation? If I ask an opinion, do I have to mention the names of the people involved? Can this be done in a confidential way?

- Yes, you can ask the Commission for Research Integrity for a neutral opinion without filing an allegation. In that case, you do not have to mention the names of the people involved. The CRI will respect confidentiality.

G. Other

26) In the evaluation of a project submitted to the Research Foundation Flanders (FWO), the curriculum vitae of the applicant is as important as the quality of the project itself. In this context, a principle investigator should have as many first and last author positions as possible. This may prevent professors and postdocs from taking a senior authorship position and limit their chances to get grants. How to deal with this situation?

- This question cannot simply be resolved with Guidelines on Authorship. It is a matter that needs to be addressed in the fora, where the policy of FWO is being discussed.

27) The present criteria for authorship are mainly written for full research or review papers. Do we need other criteria for editorials or opinion papers?

- Not really needed, the same principles can be applied to all types of papers.

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Revision history	
Changes to the previous published version	Initial version