Author's Commentary on Project Selection and Authorship in Biomedical Engineering Research

Case A: Commentary

The authorship criteria for biomedical research are recommended by the international committee of the medical journal editors (ICMJE), which many academic groups practice. ICMJE suggests authorship based on a substantial contribution to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work. The ICMJE recommends individuals conducting the work determine the co-authors. In addition, ICMJE established that an author should be able to identify which co-authors are responsible for specific other parts of the work.

The project idea was conceived in a discussion during a regular lab meeting. According to Ahmad's statement, the work was conducted and delivered in collaboration with Steven. It can be inferred from Ahmad's perspective that Dr. Goldstein, Steven, Steven's advisor, and himself should be considered co-authors. According to the ICMJE's recommendations, Ahmad should be able to identify the co-authors and their responsibilities and contributions.

There are three possible scenarios:

1. Peter had intellectual contributions to the work outside of the interactions between Dr. Goldstein and Steven. This would raise the question of why Ahmad had not been involved in those interactions, which is particularly important since Ahmad was involved in the conception of the idea and was responsible for implementing the work. This raised the question of bias.
2. Dr. Goldstein's claim about Peter's contribution during their interaction at the conference seems to be orthogonal to Ahmad's claim about the start date of the work. It may have been a more trustworthy approach if Dr. Goldstein had a conversation with Ahmad earlier to identify all the possible co-authors of the work and address the questions that might have arisen.
3. Peter did not have substantial contributions to the work. This scenario will raise an ethical concern on whether Peter should be credited as a co-author while at least one author cannot identify his contribution.

ICMJE recommendations suggest delegation of judgment call on authorship to the institution where the research was conducted in the case when agreement cannot be reached. Although this option is open to Ahmad to reach out and seek external help, given the imbalance of power in advisor-advisee relationships in academia he hesitates, as this might negatively affect his relationship with Dr. Goldstein. Furthermore, this approach might play against Ahmad in his future as a research scientist.

Case B: Commentary

It appears that Dr. Goldstein was excited about Ahmad's proposed idea and wanted to pursue the idea himself. The most straightforward approach could have been to have Ahmad work on expanding and delivering the work. However, it can be inferred from Dr. Goldstein's response

that he had other trainees in mind to work on this idea. This raises the question of how Ahmad will be credited for his contribution to the idea's conception. In the academic setting, graduate students are expected to seek advice from their mentors on project selection, design, and implementation. Because of this, Ahmad probably won't have the authority to secure the proposed project for his dissertation after Dr. Goldstein requests the replacement. In addition, dismissing Ahmad's contribution to the idea's conception by Dr. Goldstein can suggest that Ahmad will not be credited for his contribution even if another trainee worked on the idea. Ahmad's potential options are:

1. Accept Dr. Goldstein's proposition and move on with his advisor's proposed plan. However, since Ahmad conceived the idea and generated initial results by optimizing the imaging parameters, ethical concerns might arise if he is not appropriately credited for his contribution.
2. Another option for Ahmad would be to have University authorities involved in investigating the matter to help him secure the project for his dissertation. But, one can predict from Dr. Goldstein's response that he might not appreciate this approach, which might negatively affect Ahmad's relationship with him.