

Case 3: Intellectual Property

The scientific method is a process that uses observation to learn about the world. To answer a question of interest, a scientist forms a hypothesis--an educated guess--and then conducts experiments to test the hypothesis. Based on the data gathered, the scientist draws conclusions that may or may not support the initial hypothesis.

There is fierce competition among scientists for research funding grants, publications in high-ranked journals, and invitations to speak at conferences and scientific meetings. Research projects with compelling questions and results receive great attention from the scientific community, and this attention advances researchers' careers.

Professors conduct their research within research groups. The head of the research group, the Principal Investigator (PI), hires undergraduates, graduate students, and postdoctoral fellows to work on projects relevant to the PI's field of expertise. During weekly meetings, group members share ideas, data, and information about the progress of their respective projects. Although the competitive nature of professional science often pits researchers against one another, members of research groups must collaborate, sharing their ideas and results with their colleagues. This contradiction may give rise to conflict.

In a large university, a research group in the Medical School meets once per week. Group members include Jay (the PI), Sarah (a fourth-year doctoral student), David (a first-year doctoral student), and Lisa (a postdoctoral fellow). Since Sarah joined the program four years ago, she has been working on the same project without much success. Her hypotheses have not been confirmed by the experiments she has conducted, and the lack of promising results and absence of fresh ideas have slowed her progress. David, the new student, joined the group at the beginning of the academic year with great enthusiasm and strong motivation. As the newest member in the group, he usually spends meetings listening to progress reports from other group members, sometimes asking questions. He does not have a project yet.

During this week's meeting, Sarah again shares her frustration with negative experimental results and says that she does not have an alternative hypothesis or experiment to develop. Jay, the PI, suggests they meet later to brainstorm other projects. However, after the group meeting, David thinks of a novel way to test Sarah's hypothesis. He stays late at the lab that night planning the experiment. Following several months of work, David is able to answer the question that Sarah has been

struggling to answer for four years. He meets with Jay and presents the results. Jay is excited, and the two men begin drafting a joint paper for publication.

Study questions:

1. Should Sarah be included in this project? Why or why not? If she should be included, in what capacity should she be included?
2. What counts as a person's intellectual property? If Jay and David publish the paper without including Sarah, have they violated Sarah's intellectual property rights? What further information might you need to answer this question?
3. David is a first-year graduate student, while Jay is a professor whose responsibilities include mentoring students. How do these different roles affect David's and Jay's various obligations, particularly their obligations toward Sarah?

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