



Online Ethics Center
FOR ENGINEERING AND SCIENCE

Credit and Collaboration in a Molecular Biology Lab

Author(s)

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Description

A scenario that covers ethical issues that arise when people collaborate on research ideas.

Body

Metastasis is a major focus in the Smith lab. Chris, a third-year graduate student, is using a pharmacological approach to characterize how tumor cells change their cell surface properties. Although the Smith lab has published descriptive papers in this area, Chris is struggling, and there has been no breakthrough.

Lee is a senior postdoc in the lab who has been looking for a faculty position, and he plans to suggest a new approach that will build on the Smith lab's metastasis system during his interview. Lee reasons that to fully exploit the Smith lab metastasis system, a change in approach is needed. Lee plans to propose during faculty interviews that the application of sophisticated molecular biological techniques might yield key molecules that, in turn, could be used as entry points for studying the problem. Lee has no experimental experience in molecular cloning, but he convinces Chris that cloning is what the project needs.

Alex, a new postdoc in the Smith lab, recently completed a Ph.D. involving sophisticated cDNA cloning. Chris solicits Alex's technical help and receives extensive advice and assistance in designing experiments. After a few months, Chris succeeds in identifying a cDNA encoding cell surface protein whose expression is restricted to metastatic cells. Professor Smith decides to submit a manuscript on this topic with Chris as the sole coauthor.

- What should Lee and Alex do, and how should each go about it?
- To what extent do you have an obligation to help other members of your lab group on their projects? At what point do such contributions merit coauthorship? How does one identify the transition point? Is this point different for graduate students and for postdocs?
- What are Professor Smith's responsibilities to Lee, who plans to enter the job market predicated on using molecular approaches to metastasis? Is coauthorship necessary for Lee's staking out a claim to this approach for job hunting and grant writing?
- Alex's technical experience positions him to make rapid progress on this project, but Chris may feel uncomfortable having additional lab members work on the project. What are useful guidelines for determining who does what?

Notes

Caroline Whitbeck introduced methods and modules for discussing numerous issues in responsible conduct of research at a Sigma Xi Forum in 2000. Partial funding for the development of this material came from an NIH grant.

You can find the entire sequence on the OEC at [Scenarios for Ethics Modules in the Responsible Conduct of Research](#). Some information in these historical modules

may be out-of-date; for instance, there may be a new edition of the professional society's code that is referred to in an item. If you have suggestions for updates, please contact the OEC.

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Scenarios for Ethics Modules in the Responsible Conduct of Research

Topics

Authorship

Collaboration

Publication Ethics

Discipline(s)

Life and Environmental Sciences

Pharmacology

Research Ethics

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