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Patent Authorship: Whose DNA Is It Anyway?

Year

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Description

This case highlights potential dilemmas encountered by postdoctoral fellows in a research setting. Who owns the patent when a project belongs to both a faculty member and a graduate student? It also looks at potential conflicts between students and faculty when research and manuscript ownership are not clearly specified.

Body

Part 1

Glen, a professor and principal investigator, performs a series of experiments to identify genes associated with heart disease. He clones several partial-length complementary DNAs (cDNAs) from a strain of mice and is immediately struck by the sequence similarity of one such cDNA with a class of known genes involved in cell proliferation. Glen asks Sarah, one of his graduate students, to perform additional experiments with this cDNA to fully characterize the importance of this

discovery. This work is not initially part of Sarah's doctoral thesis, but it becomes the project on which she spends the majority of her research efforts for three years. Sarah's efforts result in substantial progress in characterizing this gene, and she and Glen prepare a manuscript for submission to *Nature*.

Glen and Sarah discuss the potential commercial applications of this gene, and how he intends to patent the gene sequence through the university's technology transfer office. In discussions with Sarah, he often refers to the patent submission as "our patent." Although Sarah has reservations about the appropriateness of patenting genes, she never expresses these concerns to Glen, and she excitedly tells her colleagues about her impending first patent. As far as Sarah knows, Glen's laboratory has no oral or written guidelines concerning patent applications.

Discussion Questions

1. As her adviser, what obligations does Glen have to review with Sarah the laboratory's policy regarding patent and manuscript authorship?

2. If Glen does not inform Sarah about this policy, what obligations does Sarah have to raise this issue with Glen or others within the university in order to ensure that she has a clear understanding of Glen's expectations regarding the patent process and manuscript generation?

3. Should the university have an institutional policy regarding these issues? Whose responsibility is it to see that students are adequately informed?

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Part 2

When she generates additional data from the project, Glen instructs Sarah to provide this material to the university-designated law office drafting the patent submission. As a result, she obtains a copy of the patent application, and she is dismayed to find that she is not included as an author, although the application is essentially a retyping of her manuscript. She confronts Glen, who defends his decision to be sole inventor and accuses Sarah of trying to claim credit for something she didn't do. Glen tells Sarah that the manuscript is as much his as hers,

and that it was he who made the initial discovery of the partial cDNA. Glen states that Sarah will be allowed to put her results into her dissertation and that she will be first author on the publication describing this gene.

Without Glen's knowledge, Sarah performs additional experiments to identify the human form of the gene. She is successful, and she also identifies an additional, closely related gene. Sarah presents these data to Glen and subsequently to her thesis committee members. Glen instructs Sarah to include the new data in a revised patent application. He states that this additional work merits her inclusion as an inventor on the revised patent.

Discussion Questions

4. Was Glen entitled to use Sarah's manuscript as a basis for his patent application? As a larger issue, when a student writes and an adviser revises a paper, who is/are the author(s)?

5. Is patent and manuscript authorship a matter of convention relative to each lab? Or should some global policy apply to laboratories everywhere?

6. Did an oral contract exist between Glen and Sarah concerning the gene patenting?

7. If after Sarah's additional contributions, Glen still refuses to grant her co-inventor status, what are her options and her responsibilities to the project?

8. What should Sarah have done about her objections to patenting gene sequences? When should she have done it?

Notes

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