Dear Labby,

I am entering my sixth year as a graduate student in a PhD program at a top medical school. I am ambitious and want a research career. My advisor allowed me complete freedom to develop interesting projects, but until recently all my projects fizzled. Six months ago, I set up an innovative screen to identify proteins that modulate the EGF receptor kinase. I have just identified a novel protein that inhibits the kinase activity. Eureka! My finding could have important medical implications in cancer treatment. I want to elucidate how this protein works, and engineer mice to study its role in a physiological setting and in cancer, but I realize this may take three years. My advisor says I should graduate by the end of my sixth year with a publication reporting my initial discovery. Labby, is my advisor being reasonable, or should he allow me more time to benefit from my exciting finding?

—On the Brink of a Breakthrough

Dear On the Brink of a Breakthrough,

Congratulations on your finding! Your story brings up a very important question about graduate education: How do you know when you are done? And to answer that question, of course, we need to consider the purpose of a PhD.

Graduate school provides instruction in the art of good science and its application. An appropriate time to graduate is when you have learned the tricks of the trade and have demonstrated your knowledge with solid, original research. Your advisor and committee have important roles to play in guiding you to that point. They should reassure you when appropriate, and gently encourage you to drop an unproductive line of investigation. Labby suspects that they gave you too little guidance for too long. Nevertheless, you should seriously consider the merits of your advisor’s suggestion.

Your question is a tricky one and has no straightforward answer. Labby understands your desire to remain in your present lab and see your discovery to fruition. In an ideal world, you should have the joy of taking your project further. But if you publish your current pioneering findings with clear data and graduate soon, you will have made an important contribution to which future researchers should always refer. It is most likely that you will be an author—even a co-first author—on future publications from your PI’s lab. This is worth discussing with your thesis advisor before you leave the lab.

You should also consider whether there any downsides to staying in graduate school for another three years. Would this advance your career more than moving directly to a postdoc? Probably not. It may take longer than you expect to wrap up your project, especially if you plan to publish in a vanity magazine where requested revisions can drag out the publication process. You may be in graduate school for more than eight years, and that will undoubtedly be noticed negatively by potential postdoc advisors, funding agencies, and faculty search committees. The sooner you achieve your goal and secure an independent position (and make a reasonable salary!) the better. In light of the disturbing recent increase in the age at which young investigators receive their first R01 grants, you don’t want to delay your career any more than you have to.

There is a third option: You could write up your work now and continue in the same lab as a postdoctoral fellow to follow up on your discovery. Indeed, some scientists have launched their careers in this way. But that option also has downsides when viewed from outside your lab—and would be a topic for another column.

What would Labby do? She would talk to faculty members with whom she has a good relationship and ask them which path would best advance her career. Most likely she would write up her work, immediately seek out a top postdoctoral position, and enjoy embarking on the exciting research career ahead of her!

Whichever path you choose, good luck!

—Labby

Got Questions?

Labby has answers. ASCB’s popular columnist will select career-related questions for publication and thoughtful response in the ASCB Newsletter. Confidentiality guaranteed if requested. Write us at labby@ascb.org.

Note

The “new” Labby is honored to have been asked to succeed the “old” Labby, Thoru Pederson, as author of this column. For his many contributions to the ASCB, including 10 years as Labby, Thoru was presented with the ASCB Distinguished Service Award at the 2015 Annual Meeting.