BUILDING A PROFESSIONAL CAREER

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The mechanics of getting tenure

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Key strategies for success in an academic career were superbly covered in the previous column, by Professor Pamela Mabrouk of Northeastern University (Analytical and Bioanalytical Chemistry 384/5). In most cases, there is high correlation between the excellent advice provided by Professor Mabrouk and the activities needing documentation for the tenure application. This column will focus on the mechanics of the tenure application at a researchintensive, postgraduate degree awarding department in the USA because that is what I am most familiar with. In the article, overall guidance for what should be included in a tenure application as well as potential pitfalls and examples of possible remedies for specific issues will be presented. However, it is critically important that in preparing your tenure application, you get feedback from senior people in your department who would be most familiar with the idiosyncrasies of the process at your institution.

Before getting into the mechanics of becoming tenured, it is useful to consider exactly what the purpose of tenure is. Tenure was originally developed to provide autonomy for creative scholarly pursuits and represents a solemn contract between the institution and the academic. Thus, it confers a level of job security and self-autonomy that most people cannot even dream of. While there are a variety of paths that faculty members can take to a tenured position, the most common path is to begin as an assistant professor and apply for tenure at the beginning of the sixth year of appointment. However, individual circumstances (e.g., type of institution, prior academic or industrial experience, exceptional success or family leave) can accelerate or delay the tenure application/decision. Tenure is usually coupled with promotion (e.g., assistant professor to associate professor) but in some circumstances, promotion and tenure can be decoupled. An adverse tenure decision is usually accompanied by a 1-year terminal contract.

Your institution has typically developed some criteria for awarding tenure which should be available in some departmental documentation such as a faculty handbook. In your tenure application, you are asked to document your accomplishments in fulfillment of these criteria as well as to demonstrate your probable future value to the mission of the institution.

A significant part of the tenure application process involves documenting your accomplishments in the various faculty functions considered important to the institution. It is important to note that specific documentation and criteria may differ from institution to institution. Some institutions require applicants to use a specific template which may be obtained either from the department head, the tenure committee, the Dean's office or the Provost's office. Thus, one of the first things to do before preparing your tenure packet is to obtain a copy of a recent successful tenure application packet from your department to serve as a model. This should be done as early as when you are first appointed and you should continue to examine new applications, as they become available in your department.

The tenure documentation usually includes some type of summary statement which highlights your scholarly accomplishments and items in your supporting documentation. It is important to keep in mind that your tenure application or selected items from it will be viewed by a diverse audience (e.g., departmental colleagues, administrators, external reviewers). For instance, while the recommendation of the department is often accepted, pro forma, in many/some cases, the unit one or more levels above the department (e.g., Dean or Provost's office) also performs an additional tenure application review; each of these units has the authority to overturn a tenure decision at the departmental level. Hence, your summary statement or personal evaluation should be written for an educated person but someone who is not necessarily in chemistry. Further, the summary statement and overall tenure file should be set up in a way which facilitates extraction of pro-tenure arguments by whoever is reviewing your file or dossier. Your colleagues are busy and they do not usually

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know your accomplishments or field as well as you do. Basically, you need to give your tenure reviewers the ammunition that they need to be your advocate, with a minimal amount of effort.

Most academic institutions classify the various functions of faculty members into service, teaching and research components. Faculty members are expected to contribute in all three areas but the amount of effort/accomplishments required in each area is highly dependent upon the institutional culture. For instance, at a 2-year community college or some 4-year baccalaureate institutions, emphasis is placed on the teaching and service components while at research institutions, research accomplishments are emphasized.

Service

Service is often the least valued component of faculty activities at research-oriented institutions and vet it can represent a significant amount of effort. As Professor Mabrouk mentioned in the previous article, invitations to serve on departmental committees should be accepted selectively. It should also be noted that the service component of the tenure application not only includes service on departmental or institutional committees but also any effort expended in the service of the larger community. For instance, participation in community outreach (e.g., visiting elementary schools or participation in ACS Chemistry Week activities) should be included as a service activity. While proposal or manuscript reviews should be included as service to the larger scientific community, being asked to perform these reviews also establishes your competence in the field. You should provide a list of the agencies or journals you have reviewed for as well, perhaps, as an approximate number of articles you have reviewed. You should not provide names of authors or titles because that would breach reviewer confidentiality.

Documentation of the service component of the tenure application is usually satisfied with a few short paragraphs in the summary statement or a special section of the dossier. Any letters of appreciation (e.g., in recognition of community outreach or university service) could also be included as part of the documentation. In the case of departmental committees, you may also want to mention any suggestions that you made that were adopted by the department, thereby demonstrating leadership potential.

Teaching

Given that part of the tenure application process is establishing your value to the institution, it is important to document not only "good" teaching but it may also be important to demonstrate competence at all the levels taught in the institution. For instance, at a research-intensive institution, this may require documenting successful teaching of large undergraduate service classes as well as smaller upper-division or graduate courses.

Mentoring a graduate student to completion or nearcompletion of a postbaccalaureate degree is considered such an important milestone that failure to do so may need to be addressed in the summary statement.

The teaching component of effort can be documented by listing and/or describing courses taught, student enrollments, teaching evaluations (e.g., numerical scores and transcribed comments) and copies of syllabi or other course material. In some institutions, peer evaluations could also be included. In the summary of courses taught, you might include the description and particular challenges of each course, the types of students enrolled and your goals for the course. New courses developed or technology introduced into the curriculum should also be featured in the summary statement and how these changes enrich the educational experience for the students.

Student teaching evaluations are a common metric for teaching effectiveness but there is a significant amount of scholarship that suggests that they can be somewhat problematic in that students' anticipated grades may be correlated with course/teacher evaluation [1]. Teaching evaluations by lower-division students also tend to more negative than those by advanced students [2]. This may be attributable to the large class sizes and inadequate calibration for post-high-school academic expectations. Negative evaluations early in an academic career can be partially offset by more positive evaluations obtained when the same course is taught again.

Research

In institutions where postbaccalaureate degrees are awarded and research is emphasized, documentation of research accomplishment is probably the least ambiguous of any of the areas of faculty activity. Success metrics include presentations of research talks or posters at professional meetings, publication of peer-reviewed manuscripts (preferably in high-quality journals) and extramural grant awards. Documentation of research accomplishments usually includes a copy of your updated curriculum vitae, a summary statement, copies of publications, manuscripts that are in press or submitted, proposals, reviews and external letters. With the exception of the external letters, the tenure applicant selects the documentation to include. Each of these topics will be discussed, in more detail, in the following.

A good strategy in the development of your research summary statement is to first describe, in terms an educated general audience can understand, the general areas you are working in, why they are important areas and then organize your research accomplishments around specific themes that have emerged from your scholarship.

There are several critical points to make in this research summary statement. Foremost is that you need to establish that you have developed a vibrant, independent research program that has moved beyond the scope of your research as a graduate student or postdoctoral fellow. Thus, continued collaboration with former mentors is viewed somewhat negatively. If your research has a significant collaborative component, it will be necessary to clarify your contributions to the overall work. In some cases, it may be appropriate to solicit letters from collaborators in which your contribution on joint projects is clearly delineated. You need to demonstrate that you have selected important problems to work on and that your approach is yielding successful results. Thus, you will want to clearly indicate which publications or presentations emanated from work original to your current position. You will want to include successful proposal submissions in this section and may want to include direct positive quotations from proposal reviews. In this summary statement, you will also want to mention any student milestones (e.g., student publications or presentations, thesis completion). Student or postdoctoral fellows may be identified in citations by using different typographical symbols (e.g., asterisks for undergraduate coauthors; number signs for postdoctoral fellows).

In discussing your presentations or publications, you should mention any special circumstances (e.g., if invited and by whom; more about this later) or the standing of the meeting or journal in your field. Each field tends to have specialized meetings or journals with a range of importance. Thus, you will likely need to inform the members of your departmental tenure committee on the importance of the journals in which you are publishing or the meetings in which you are participating. For instance, in some fields, the most prestigious meetings are the National American Chemical Society meetings, whereas the Pittsburgh Conference tends to be an important meeting for analytical chemists. Similarly, in some fields, the "gold standard" for publications might be a Journal of the American Chemical Society article, while analytical chemists tend to publish more in journals such as this one and Analytical Chemistry. Journal quality can be quantified through the impact factor. Important yardsticks for the impact of a specific paper can be gleaned from the Science Citation Index. The Science Citation Index provides the complete citation for any articles which have cited a specific publication. This information can be used in two ways: the absolute number of citations or where and by whom your work is being cited.

If the funding or publication record is a little weak, manuscript or proposal reviews may also be included as documentation, even for proposals that were declined. For instance, if reviewers were very enthusiastic about the scientific merit or innovation of a proposed project, these reviews could enhance your scientific credibility. A note of caution, however, in listing or including reviews of all declined proposals because you do not want to send the message that your chosen research field may not be fundable.

Research accomplishment is also typically assessed through letters from external experts in your field, solicited by your tenure review committee or the head of the department. The outside letters are probably the most critical component of the tenure application. Typically, the candidate is asked to prepare a list of potential outside reviewers and a file documenting research productivity

which is sent to the outside reviewer. In most departments, outside letters are solicited from some of the reviewers proposed by the candidate as well as others that may be known to the tenure committee as experts in the field. In some institutions, the candidate is shown the proposed list of external reviewers and given the opportunity to oppose any of them. However, in many cases, neither the names of the outside reviewers nor their letters are made available to the candidate unless unfavorable letters are obtained. In these unfortunate situations, the candidate is usually offered the opportunity to provide a rebuttal but there is no guarantee for this.

Some additional comments on the selection of the outside reviewers are warranted, considering the critical importance of these letters to the tenure decision. Of course, letters from senior faculty members (e.g., full professors) with some stature (e.g., with named chairs) in your field carry more weight than letters from faculty members who have only recently been awarded tenure themselves. Naturally, external reviewers are most familiar with the challenges and requirements for success at the institutions with which they have been affiliated. It should be noted that the resources, teaching/service load, number, preparedness and quality of students available to faculty members can vary considerably from department to department; thus, it may be advantageous if the outside reviewers are or have been affiliated with peer institutions of your institution. It may be tempting to suggest as outside reviewers former mentors, postdoctoral fellows or former graduate students associated with your former mentors during your residence with them. In some institutions, this can weaken your tenure application because it sends the message that your research not only has a very narrow scope but that you have not developed professionally. In other institutions, failure to include a former mentor could raise a red flag so you will need to be aware of your departmental or institutional culture regarding this issue.

We would be naïve if we did not acknowledge that bias sometimes plays a role within the scientific community. For instance, in the USA there are many prominent chemistry departments in fine institutions that do not recognize analytical chemistry as a legitimate chemical discipline. Thus, it is important for you to have attended professional meetings and gotten to know the experts in your field. Absolutely, do not contact potential reviewers about tenure-related issues while your case is under review. This is considered a serious ethics violation. However, I do recommend approaching people you are considering putting on your list, or that your department is likely to contact, at meetings a year or more before you go up for tenure and ask if they would mind being included on your list of potential reviewers. In just answering the question, a potential reviewer may reveal an unexpected bias. For instance, I know of one case in which a young assistant professor approached a prominent scientist in her field who revealed a theretofore unsuspected bias against women in academia in his response to her. In this case, the department had a policy that not only allowed the tenure candidate to submit a list of suggested outside reviewers but also an exclusionary list of potential reviewers not to be contacted.

Most departments pick several outside reviewers from your list but they are also likely to contact additional reviewers who are not on your list. In preparing my own tenure application, I assumed most of my colleagues were very busy people, not very familiar with my field. So, I seeded my narrative with the names of scientists in my field who had invited me to participate in symposia or contribute to special journal issues, thereby conveniently providing names of potentially favorably inclined external reviewers that were not on my list. While the effectiveness of this strategy remains unproven, it did at least relieve some of my anxiety in this whole process.

At some institutions, the packet sent to the outside reviewer may focus entirely on your research activities and may not include all the material in the tenure application file. For instance, documentation of teaching or service activities may be absent. By definition, the outside reviewer is an expert in your field; thus, you may want to substitute a slightly modified research summary statement which reflects this expertise. At other institutions, the exact same file that is submitted to the institution must be sent to the external reviewers. Again, it is important that you obtain feedback from senior people in your department who would be most familiar with the idiosyncrasies of the process at your institution.

After the tenure application is submitted

At most institutions, a tenure decision by the academic unit (e.g., department) can only be passed along as a recommendation to higher levels (e.g., College of Arts and Sciences or School of Natural Sciences) housed within the institution, with final approval given by the institutional governing board (e.g., Board of Regents). After all your hard work, prepare yourself for months of not knowing the outcomes at each individual level until the final decision is awarded.

While nobody likes to think about negative outcomes, what are the options if your tenure decision is negative? This topic could definitely be the subject of another professional development column, so I will just offer a few comments here. Usually the candidate is notified when a negative outcome occurs at some stage of the tenure review process, for example, negative vote at the schoolwide Promotion and Tenure committee. According to Associate Prof. Julie Stenken, of Rensselaer Polytechnic Institute, "The most important point to remember is that academia, like all of life, is a game that is a combination of meritocracy and politics. Remember that a negative outcome is not about you as an individual person." Therefore, it is critically important to remain focused and maintain your composure while gathering information so as to develop the most appropriate response. The first thing to do is to consult the faculty handbook or your Department Chair to discuss options. If an appeal is possible, the next best thing to do is to arrange for a member of the

department (full professor or your chair) to be an advocate for your case. It is essential that this be done in a nonconfrontational manner, because reversing a negative decision is much easier if it can be ascribed to an administrative technicality in which no one loses status. You need to know the level at which you received a tenure declination. If you received a positive tenure decision out of your department but the decision was overturned at some higher level, it may well be that there was some miscommunication somewhere along the line. For instance, your department may not have been effective in advocating for you or educating the administration in their expectations of you. It then becomes the department's responsibility to clarify things for the administration with possible further input from you. This can be hard because each one of us wishes to fight our own battles, but in this case, it is often best to let the already-tenured faculty member fight the battle for you.

Even in the case of a positive tenure decision, it is common, to feel a "letdown", once the paperwork is submitted or during the months awaiting the decision. There is also a tendency for service expectations to increase dramatically once the tenure application has been submitted. In addition, the various types of support (e.g., extra teaching assistantships/research assistantships, lighter teaching load) offered to assistant professors are suddenly less available to newly tenured associate professors. The convergence of letdown, increased service demands and reduced support can lead to a posttenure slump in productivity. Knowing that this slump can happen may help you prepare for it.

Take a deep breath. This is a great opportunity for reflection as you begin to identify and prepare for your next major career/research goals. Many choose this time to reexamine their current position within their institution. Do you want to continue in a research-intensive environment or are you interested in adding more administrative functions? Were there some areas of research that you thought exciting but did not pursue because a looming tenure decision dictated following a less risky research path? Start looking at sabbatical options that would support this potential new line of research for you. Now may be the best time to reinvent yourself. Go for it!

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