Career Opportunities in Physiology

Basic Science Department in a Private Medical School

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The major differences between a private and state medical school for a young physiologist are historically in the areas of internal funding for research, teaching loads, graduate training, and availability of major centralized support facilities such as machine or electronic shops. In this presentation, I would like to focus on the environment and responsibilities of a new faculty member at a private medical school. Although some of the distinctions between private and public institutions have been eroded by the recent financial problems at the federal and state levels, differences between the two types of schools will probably remain. As recently described (1), the responsibilities of a faculty member in a basic science department are research, teaching, and service. These responsibilities are common to both private and public schools. However, the emphasis placed upon each responsibility, especially for a new faculty member, may differ between the two types of schools. While teaching and service are important, research is probably the most important task for a new faculty member in a private school. A large amount of time and effort is required to establish an independent research program with continuous funding from outside the school. Both institutional and departmental funds for research and salary support are limited in a private school. Thus research funding must be obtained from competitive sources outside the institution. While salaries for an Assistant Professor of Physiology may be similar for the two types of institutions, in a private school, obtaining salary support from outside sources will help both the department and institution conserve the limited funds for other programs.

In developing a research program in a private medical school, one will be required to do "bench" research and obtain preliminary data for grant applications. Most, if not all, the research will be initially performed by yourself, since there are limited funds for technical support. Additional time is required for writing manuscripts and grant applications. Thus a large amount of time is required to start your research program, and your chairman can help in keeping your teaching and committee assignments small. This emphasis on research will change as your research program becomes more developed. An advantage to working in many private medical schools is the absence of a large number of allied health programs that require an extensive teaching load. The departmental teaching load is thus often smaller at a private school than a large public school, and the chairman can be more flexible with the teaching assignments. With a small teaching load, you will be better able to concentrate on developing your research program. However, you must also be prepared to assume teaching responsibilities outside your area of research interest. Often someone else already teaches in that area, and you will be needed to teach some other area of physiology.

As outlined in Table 1, there are a few important considerations in starting a research program at a private school. Since initial funds will be very limited, the project should be small and well defined. Most of the work will be done by yourself, so that a large project requiring additional technical support would not be appropriate at this point in your career. One of the primary goals during your first year as a faculty member at a private school is to use the small, initial funds provided by the institution to generate data for grant applications and your first publications as a principal investigator. In addition, the project should not require sophisticated and unusual pieces of equipment not already available in the department, since funds to purchase them will probably not be available and the facilities to design and construct them will be limited. As your research funding becomes greater and more stable, the project can become more complex and larger. This may mean that you will have to initially use major pieces of equipment, such as gamma counters, spectrophotometers, or balances, located in other laboratories. While this may be inconvenient at times, it will permit you to conserve the limited funds to purchase animals and supplies.

The third consideration is that there are other, more senior, members of the department interested in your research area and that they are willing to help you establish your program. Many times your ideas can become more focused and clear by presenting them to other people. In addition, the more senior investigators can help in the preparation of grants because they have had experience with the review process and know how to prepare a strong application. The ability to collaborate with more senior investigators should be an important consideration in choosing a position at a private school. There is less diversity of research interests in a small private school than in a large state school. Often there are a few concentrated areas of interest within the department. Thus it is important to make sure that there are other faculty members interested in your research area at the school and that they are willing to take the time to help you.

The fourth consideration in starting your own research program is that the initial project you select be directly related to your postdoctoral work. Your previous experience with the field will help give you the needed confidence in writing grant applications and manuscripts. Your familiarity with the literature will

Table 1
Considerations for Starting a Research Program at a Small Private Medical School

1. Project is small and well defined
2. Essential equipment for the project is already available for your use
3. Collaboration with other faculty interested in your research area is available
4. Project is an extension of your postdoctoral work