



Creative Approaches in the Current Funding Environment

Funding for research is not available for all the good science being proposed to federal and private agencies. Most new and renewal applications are not funded the first time around, and resubmissions have become the norm (see “Revising your NIH grant application,” *ASCB Newsletter*, January 2007). Hence anxiety is high about how to continue to maintain the momentum of a research group and provide salaries for research personnel.

There is much debate about the causes for this funding situation, for this funding crisis, actually. This article will focus on what to do in the face of this reality. What are some alternative approaches to funding in the short- and long-term? The suggestions offered have been gleaned from senior scientists as well as from short articles published in a variety of media.

If you are not awarded an anticipated grant, persistence in re-applying, and in applying to multiple sources, is essential. Since persistence is a characteristic of those doing research, this practice will presumably come naturally even in the face of discouraging reviews. Unfortunately, persistence alone will not pay the bills. Websites are available that list grant opportunities, such as the AAAS Grantsnet (<http://sciencecareers.sciencemag.org/funding?CFID=422590&CFTOKEN=50081533>) and a Stanford University site (<http://med.stanford.edu/rmg/funding/>). There are also sites by subscription (e.g., <http://gtonline.fdncenter.org/>). Readers are encouraged to send ASCB information on sites they have found useful in the search for funds; these will be posted on the WICB page of the ASCB website at www.ascb.org.

Preparing for Funding Gaps

Planning ahead is, of course, critical. No longer can previously funded researchers reasonably assume that the next grant application will be

funded immediately to provide continuous salary coverage. Indeed, frugality in research spending should start immediately upon receiving a grant award; in this funding climate, it is useful to have monies remaining at the end of the grant period since a no-cost extension request to the funding agency allows use of these unexpended funds across the next few months. Such a request must be made prior to the end of a given funding period.

To bridge a shortfall while applying for funds, start by talking with your grant administrator(s). Occasionally federal agencies can provide such bridging funds, but they must be requested. Some campus departments may be able to support research on a small scale for a short period of time, and a few institutions (usually those with substantial endowments) may have funds earmarked specifically to maintain research groups over a short period. None of these funds are volunteered; a strongly justified request must be made.

Salaries for graduate students and postdoctoral fellows might be covered by fellowship applications to a variety of professional societies and philanthropic organizations (e.g., American Society for Microbiology, American Heart Association, American Cancer Society, etc.). Some of these societies and organizations are listed on the

above-cited websites. You should also ask your own professional societies about such funding opportunities. Many of these will be short-term (e.g., 12 months); some will be shorter, covering a summer or travel to a meeting or course. Each request takes time to write, but success may allow continuity for the research group and/or support for a given young professional.

Some institutions require scientists or faculty to obtain a large proportion or all of their salaries from grant funding. Most institutions also allow their personnel to use personal time

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for consulting, a potential salary supplement in a funding shortfall. Investigators who assume institutional administrative positions have their salaries paid from institutional rather than research funding, and research supervision can continue while in such a position. This is not an advertisement to seek an administrative post, albeit institutional leadership can be a positive experience, but rather a possibility to consider. Of course, if the PI has personal resources, these can be brought to bear in the short- or long-term. In earlier centuries, research was supported by the wealthy (e.g., Charles Darwin's father subsidized his research career at the start), or research was done inexpensively (e.g., Gregor Mendel's garden). Unfortunately, most cell biology research entails more than growing and counting peas.

Collaboration is also a good strategy. Supply funds can come from collaborations with other research groups, on- or off-campus, whose work is closely related. Sharing equipment and service contracts on equipment with other department members can also free up money for supplies.

Recruiting Undergraduates, Economizing on Supplies

If at an academic institution, another way to keep one's research on the move during a personnel salary shortfall is to recruit talented undergraduates into your lab. These students are enthusiastic, intelligent, and interested in research experience. They are fun to train, and they often can receive course credit in addition to volunteering in the research effort. The experience, when productive for the undergraduate volunteer as well as for the research group, is a win-win situation that can keep the science progressing.

Frugality was noted earlier as a way to provide carryover funds in a no-cost extension during the grant re-application process. Economizing strategies are very group-dependent, but could be as modest as limiting the number of "kits" purchased or bundling orders with other research groups to enable discounted pricing on such kits. Surprisingly, small but essential laboratory supplies such as gloves, aluminum foil, paper towels, plastic wrap, etc., can often be obtained more cheaply at large outlet stores than at one's institutional warehouse. Even these "small-fry" economies can add up, and they may become essential if a funding hiatus extends longer than anticipated.

Encouraging Advocacy

Funding for research exploded in the early 1960s with the awareness that American sci-

ence and technology needed a shot in the arm. Since then, there have been peaks and valleys in the funding graphics. The current situation, with sometimes a 5–10% payline, is discouraging, frightening, and stressful. Taking an active role in turning this around, e.g., via the Congressional Liaison Committee (www.jscpp.org/clc.cfm) or Project 50, is strongly encouraged. In the meantime, being creative and bold about taking strategies to keep the research going might include some of the suggestions here, unorthodox as some of them may seem. ■

—*Caroline Kane for the Women in Cell Biology Committee*

Celebrating the Family of Science

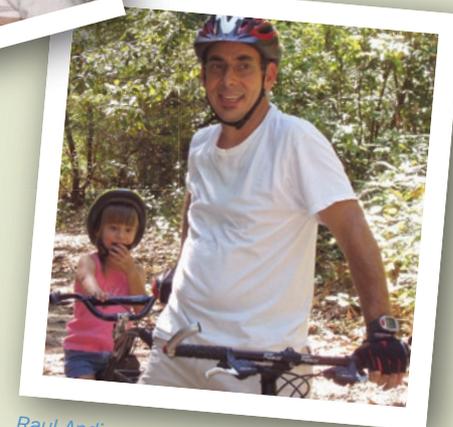
One of the best parts about being a cell biologist is the opportunity to visit universities across the country and talk with graduate students and postdoctoral fellows about their experiences. During such visits, members of the Women in Cell Biology (WICB) Committee



Sandy Schmid and family



Esther Verheyen and family



Raul Andino and family

learned that a large number of younger scientists are feeling a desperate need to see real-life examples of cell biologists who have children and still do great science.

With this goal in mind, we've created a photo gallery to celebrate the families of cell biologists and their children (www.ascb.org/wicb/index.html). The WICB-sponsored careers lunch at the ASCB Annual Meeting provides an opportunity, for those interested, to discuss issues of life balance and career choices. The WICB Committee is working hard to try to make it easier for members with children to participate fully in ASCB activities. If you have suggestions, please let us know. Contact Cheryl Lehr at clehr@ascb.org. ■