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The Emergence of the Research-Development Professional

By Jacob Levin

There is a crisis in academe, and it extends beyond, and predates, our current financial woes. Limited budgets, skyrocketing costs and complexity, and growing competition, both domestically and abroad, have driven even those in the upper echelons of academe to devote ever-increasing portions of their time and energy to the money and management of research, rather than to the research and teaching itself.

From that crisis, a new career path is rapidly developing, and it is already having an impact. Research-development professionals—academic administrators who help faculty members plan and attract grants for their research—are being employed by a growing number of universities and institutes. In 2010 the National Organization of Research Development Professionals was established as part of a grass-roots movement to build a peer community. In June, I will become its second president.

Research in all fields is becoming more interdisciplinary and collaborative, with grants and contracts increasingly focused on team efforts. The pursuit of such large and complex projects, however, requires money and commitment beyond what many individual researchers are able to galvanize. Research-development professionals serve a critical role in guiding those efforts, and helping to forge teams that span disciplinary bounds and institutions.

The research environment has evolved enormously over the past 40 years, and many aspects of its operation barely resemble what they were in the post-Sputnik 60s, when so many of today's leading university-research programs began to flourish.

Several key trends have emerged over the years, such as the advent of, and eventual dependence upon, computers and the Internet. But the precipitous drop in grant-getting rates may have the greatest impact on the day-to-day activities, and level of stress and comfort, of modern academics.

In the early to mid-1960s, the National Institutes of Health funded more than 50 percent of the proposals it received. Throughout the 70s and 80s, grant-success rates remained healthy and reliable at 30 to 40 percent. Now they have dropped to around 15 percent (lower for some institutes), and the average age of independent investigators when they receive their first grant is creeping into the mid-40s.

Significantly, funding-success rates for certain subpopulations, like midcareer scientists, have sunk even lower. The time it takes to review grants has increased, and more and more resources are being poured into larger collaborative efforts (such as the \$2-billon Clinical and Translational Science Awards), leaving many investigators out in the cold, without sufficient support to continue their work for extended periods of time.

Research development, in one form or another, has existed in academe for decades. Early pioneers, such as Jacqueline Resnick, at the University of North Carolina at Chapel Hill, and Carla Whitacre, at the University of California at Santa Barbara, began providing grant-writing strategy and support in the 1970s.

However, full-service offices of research development, especially those employing Ph.D.-level staff members with grant-writing experience, were rare in academe until the past decade. The remarkable growth in the number of those offices has been driven by stiff grant competition and high research costs, and by the academic fixation on rankings and quantitative financial metrics (like the level of external grant dollars).

Our fledgling professional organization has been accepting paid memberships for only a few months and already has more than 200. Research development as a profession offers a career path for those with a passion for research and its performance, and will be an integral part of the academic enterprise in the future.

My pathway to the field was by no means prescribed but, considered retrospectively, seems almost obvious. My connection to academe has always been deeply personal. My father, an internationally known, award-winning member of the National Academy of Sciences, was an assistant professor at Cornell University by the time he was 24. My mother, a teacher, has for decades served as den mother and support system to countless graduate students, postdocs, and visiting scientists.

My own career began auspiciously. A National Merit scholar at 15 and double major in mathematics and physics at Cornell University at 20, I worked at a national laboratory, a corporate R&D headquarters, and in the labs of three Nobel laureates. My Ph.D.

resulted in a first-authored paper in *Nature* that has hundreds of citations. It seemed that I had been groomed since birth to do science. But through it all, something didn't quite mesh.

I was a postdoc at the Massachusetts Institute of Technology—one of the most exciting places to do research, filled with brilliant people and virtually any resource or capability one might need. (By the '90s, even the soda machines in the basement were Web-enabled, so you didn't have to get up to check if there was root beer.) But it can be difficult to stand out in such an environment. I always had the distinct feeling that if I stood up from my desk and went to the bathroom, by the time I got back, two younger, more diligent international visitors would be there, side by side, doing my job.

But I did have skills that differentiated me in some regards from my colleagues. I discovered that I enjoyed the discussion and communication of science perhaps even more than the practice of bench science itself, and in many ways I was better suited for and more adept at it.

I started writing grants at MIT as a way to cover my children's health-insurance expenses (your grants had to bring indirect costs to the institution in order to get health coverage). After a few misfires, I won a \$1-million grant from the Defense Advanced Research Projects Agency for my postdoc project. So began the process—at first exhilarating and then, within a few months, burdensome—of spending \$1,000 a day (on average) for three years. Soon I was hiring undergraduates, supporting graduate students, purchasing all manner of equipment, writing status reports and presentations, and repeatedly presenting my (admittedly overambitious) project to a variety of audiences.

With all of that grant-management activity, I hardly had the time to do my science. And the more I wrote, presented, and managed the administrative aspects of my project, the more others took notice and asked if I could assist similarly with their activities. Soon enough I was: helping to write grant renewals, giving tours to donors, sitting on building committees, and designing Web pages. I felt that I was contributing something valuable, and my inclination became to devote my energies to this new effort, and in that way, have a larger and broader impact than my science ever would.

At the end of 2004, I came to the University of California at Irvine, where two deans and I created a position where I could do such work full time. In the past six years, my office has grown from one full-time employee to its current staff of seven, five of whom hold

Ph.D.'s. We have submitted more than 175 multi-investigator grant proposals, with a success rate of above 45 percent.

But our success is by no means unique. Most research-development offices show grant-success rates well above the national average. More than anything, I believe that has to do with the extra attention that our offices bring to bear on each project. (A parable my father once told me is relevant here: Two hunters hear a bear outside their tent. One starts to lace up his tennis shoes. The second responds "Are you crazy? You can't outrun a bear!" Replies the first, "I don't need to outrun the bear. I just need to outrun you.")

Our association arose organically, in response to an enormous need for a community of people serving similar roles across academe, primarily in isolation from one another.

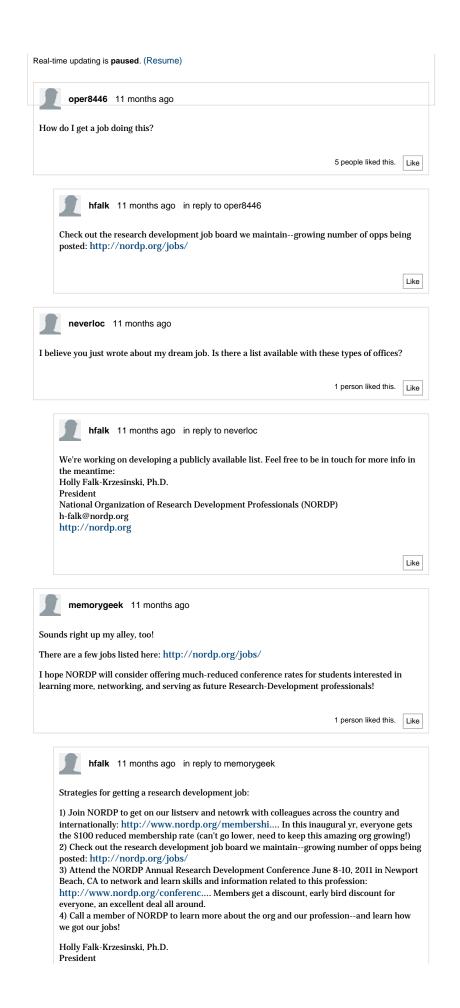
Its formation, however, came largely through the efforts of one woman: Holly Falk-Krzesinski, a research professor at Northwestern University and founding director of its research-development office. She began calling other research-development offices to evaluate interest in establishing a network that could share experiences and ideas. The response was positive. She kept calling. The National Organization of Research Development Professionals was incorporated in 2009, with a 12-member governing board representing a broad range of disciplines and institutions. In June we will hold our third annual conference.

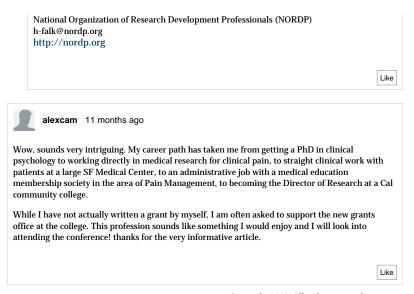
Research-development professionals occupy a unique and valuable role in the academic enterprise. We journey through the campus, traversing it daily in small exploratory ventures or large expeditions, helping people formulate and finance their research and doing what we can to make things a success. It's a good feeling.

Academe needs strategic guidance and managed involvement in order to revitalize our research programs. Our offices are a voice for scientists. By effecting change in our own lives and career paths, we can change the way research is done.

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