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This book is a great resource for those of us communicating with funding agencies and preparing grant submissions to advance our work. Written by an insider, it is perfect for those new to the process as well as helpful to experienced applicants navigating rapidly changing rules and guidelines. I recommend it as a perfect addition for all scientists, regardless of area of research or funding source.

—**KARLENE BALL, PhD**, UNIVERSITY PROFESSOR AND ENDOWED
CHAIR, UNIVERSITY OF ALABAMA AT BIRMINGHAM; FELLOW,
AMERICAN PSYCHOLOGICAL ASSOCIATION

It isn't often one can find a book on grant funding that provides the broader context affecting the grant preparation process and the grant policy issues that may impact study design. Jeff Elias draws on his vast and diverse experience with research and grant funding to make the whole grants process more understandable and less daunting. As new grant opportunities continue to proliferate, this readable book will quickly become a go-to resource for novice and advanced researchers alike as well as members of the grant support workforce at universities. I highly recommend it.

—**GEORGE W. REBOK, PhD**, PROFESSOR EMERITUS, JOHNS HOPKINS UNIVERSITY,
BALTIMORE, MD; FELLOW, AMERICAN PSYCHOLOGICAL ASSOCIATION

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INTRODUCTION

Who Is This Book For, and What Is It About?

Science is not static; it continues to evolve. Consequently, regardless of the funding experience and previous success of investigators and research institutions, the nature of funding continues to change. There are always new challenges and challengers. This book provides tactics and strategies to systematically prepare for the competitive funding process, including self and team evaluation, designed to promote retrospection, introspection, and constructive future expectations. I will explain how to expertly identify and convey what makes your proposed research impactful, innovative, and achievable.

Good ideas drive science forward, but funding agencies do not award funding solely on the basis of how good an idea is. Grant writing is a communicative endeavor. There is a broader context that affects grant preparation processes. Understanding and communicating within that broader context can enable a more positive application review. I will explain how and when to interact with funding institutions and how to interpret and respond to peer review feedback.

The chapters in this book provide a broad basis for interacting with funding agencies, most of which follow standard guidelines for submission, review, feedback, and funding. Readers are encouraged to apply the principles of

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Get Funded: A Practical Guide to Understanding the Grant Application Process and Writing Winning Proposals in the Behavioral and Biomedical Fields, by J. W. Elias
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grant writing outlined in this book to the specific funding policies and deadlines that will characterize grant writing for any funding entity.

The suggestions in the text apply to the development of any funding opportunity, including opportunities in the basic sciences. The strategies and tactics I discuss are most frequently examined in the context of applying to the National Institutes of Health (NIH) and the National Science Foundation (NSF). The size and breadth of research funding by NIH and NSF provide the most usable examples of how to navigate granting agencies more broadly. All funding agencies are mission driven in some fashion, and applicants need to understand the greater mission of a funding source before applying. NIH and the NSF exemplify how the social needs of society interact with basic science to produce products that are designed to move both science and society forward.

Communication with funding agencies and their agents is a two-way process. A primary source of communication for funding agencies is their website. Much of grant writing is knowing where to find the latest information on funding sources and then navigating a website. This text will direct readers to URL-based sources of information, which is sometimes like opening a book at the beginning only to find yourself in the middle chapters and not knowing how you arrived there. These are the portals to most funding sources, although many funding agencies provide manuals to explain their processes; these manuals can be downloaded by locating and opening the appropriate URL. Once you have located important content on a website, copy it and make it active on your list of grant resources!

The content in this book will be helpful for those just becoming initiated into the world of grant funding as well as for those who are more advanced. New researchers need to know how to identify a promising research topic, assemble a strong research team, and complete an application. This book will also help more advanced researchers, who may have multiple roles to play in the grant funding process. Advanced researchers are frequently called on to mentor others while maintaining their own funding. They also frequently work in administrative roles in the institutions that support them. Such dual roles require multiple perspectives on funding, which this book covers.

Most research institutions have a large administrative support workforce whose sole purpose is to help faculty apply for grants to support their research. These staff also need a broad understanding of the grants process and the factors that influence whether an application is funded. Thus, an additional audience for this book includes members of the grant support workforce at universities.

ABOUT ME

You will see certain themes develop throughout the text that are the result of my experiences with research and career development, and they represent the experiences of others as well. My first experience with funding and how it supports research and education came when I was an undergraduate in a program that received a federally funded grant to support the development of space and administrative resources to train undergraduates to develop real research projects with real mentors. I was supported through graduate school on research grants to my advisors and mentors, including a Public Health Services Fellowship. Using data from my dissertation, I submitted an application for a postdoctoral fellowship. It was funded, but I withdrew from the fellowship prior to funding and accepted a full-time academic position at a university. I expanded the postdoctoral fellowship application to an R01 application that was funded by the National Institute on Aging (NIA), which gave me a good start to a career in academics. That R01 included premise-supporting data and a couple of years of preparation.

My career experience with research has been purposely diversified and always involved research funding. This includes my experiences as an undergraduate student, graduate student, faculty member, research director, administrator, author, journal reviewer, journal editor, ad hoc and permanent peer review panel member, NIH Center for Scientific Review Officer, National Institutes on Aging Program Officer, and Director/Manager of Grants Facilitation at a school of medicine.

What I have observed from all these perspectives on research and funding is that there is a winning combination that includes access to space, a supportive environment, willing mentors, colleagues, student colleagues, research projects, support for data collection and student development, opportunities to diversify research and career interests, and time and resources to regroup and try again when things do not go your way. The resources of time and the ability of the support environment to adapt to grant funding policy changes for human subjects, clinical trials, and data management are becoming bigger parts of the winning combination.

Moving from the position of reviewer and applicant to the position of grant administrator at NIH was like discovering a new floor in my house. Grant review is much more complex and fast moving than the well-defined and limited environment of a study section makes it seem. Program Officers have a role that is quite broad and involves not only managing the best science possible but also promoting the advancement of that science, and the investigators, to include new investigators. The training role of administrative positions never ends because science and policy continually evolve.

OVERVIEW OF THIS BOOK

Chapters 1 through 3 of this book provide foundational information on the contexts of grant writing, including navigating the funding announcement and understanding the influence of grant policy issues on study design. Chapters 4 through 6 provide guidance for writing the different sections of a grant proposal. Chapters 7 and 8 provide an inside look at how peer reviewers from the funding institution evaluate proposals and how applicants can interpret and respond to peer review feedback. Chapters 9 and 10 focus on non-traditional grants, including training grants and product commercialization grants. Chapters 11 and 12 discuss how to advance grant writing skills by using team and time management and then moving toward advanced grant literacy, which ultimately can be defined as “knowing what to do next.”

As grant writing and funding have progressed over the years, so too have the pomp and presentation of researchers and grant funding. This can be a bit daunting for those new to the competition, but, cheerleading aside, competition in grant writing requires a good game plan. For those newly initiated into the competition, I would say, “Why not you?”