

Introduction

Who is this book for?

Are you a research bioscientist looking for help with your career? Do you want to know where to find out about jobs? How to write an effective CV? Improve your interview technique? Or learn more about how to take control of your career? If so, this book should help you. It contains advice and information specifically tailored to the needs of research bioscientists. It offers you strategies to enhance your chances of success, following a recognised theoretical model for effective career planning. It contains information about research and non-research jobs, funding and courses, how to present yourself in a CV, enhance your employability and be successful at interview. Also included are less tangible, but highly important, aspects of the career planning process such as self-analysis, decision making and action planning.

The world of work has changed and will alter even more rapidly in the future. The concept of a 'job for life' has long gone in many professions in most countries, replaced by a relatively insecure employment culture. However, as highly qualified and skilled researchers, you have the opportunity to forge a successful career in many occupational fields. Whatever 'successful career' means to you, it will be your actions and your purposefulness which get you there. Don't rely on your supervisor or manager to organise things for you; you need to be proactive and plan your career strategy. This book aims to help you to succeed by providing you with the information, tools and resources which will assist you with your career planning.

Planning your career can be challenging as not all career choices are within your grasp. You may not know in which direction you want to take your career or how to do it. Career plans and career direction vary from one person to another. If you are considering an academic career path, it may not turn out to be possible. Competition for permanent academic research positions is notoriously harsh in many countries. Statistics show that only between 7% and 14% of postdoctoral researchers will achieve a full academic career and secure a tenured position (Bradley 2009; Kirshenbaum 2008; Newman 2007). The situation is worse for women (see Chapter 5, Box 5.5). Therefore, it is advisable to keep your options open and have more than one career plan. Maybe you are considering other career options, such as a job in industry, science administration, policy or communications work. Some of you may be unsure about what you want to do. Personal circumstances change throughout the course of your life; sometimes you will be

Box 1.1 Definition of terms used in this book**Research bioscientist**

This term refers to researchers working across all subject disciplines within the field of the (primarily lab-based) biosciences and includes physiologists, microbiologists, molecular biologists, animal and plant scientists, biochemists, biomedical scientists, geneticists, ecologists and pharmacologists. It excludes vocational bioscience-related disciplines such as medicine and associated fields such as physiotherapy, pharmacy, veterinary science, dentistry and clinical careers as these can have significantly different career structures.

Doctoral student

For the majority of this book, I use 'doctoral student' to refer to those who are studying for a PhD (or D.Phil) by research. Equivalent terms more recognisable to some are postgraduate student, postgraduate researcher, doctoral candidate/scholar and PhD student. The programme of study is normally 3–6 years in length (but can be up to 8 years in some countries). PhDs are accredited by universities and are carried out there, in research institutes, industry, hospitals and government agencies.

Postdoctoral researcher

The term 'postdoctoral researcher' refers to a PhD-qualified researcher who is employed to conduct academic research. Equivalent terms more recognisable to some are early-career researcher, postdoctoral associate, postdoc, postdoctoral, research associate, postdoctoral scholar and contract research staff.

Career planning

Career planning is a life-long learning process which involves personal development, the ability to make informed career decisions, self-manage and ultimately ensure your employability. Career planning and associated terms, such as career management and career development, are used interchangeably in this book.

Employability

Employability does not mean 'employment'. There is no single definition but here it is defined as a set of personal aptitudes, skills and abilities which will enhance your chances of securing and maintaining employment.

fully flexible and able to relocate, while at other times personal considerations may compromise your career decisions.

As research bioscientists you have things in common which make this book relevant to you (see Box 1.1 for a definition of terms).

- Research bioscientists wishing to pursue an academic career are exposed to a highly competitive market. This book suggests ways in which to maximise your chances of success.
- Leaving academic research, although a common activity amongst research bioscientists, can be a tough decision to make. This book showcases a range of career options for you to consider as well as providing further resources to investigate.
- Many researchers define themselves by their subject discipline or research project. But who are 'you'? Self-knowledge is integral to finding a career which suits you and this book will help you to recognise your strengths and areas you need to develop.

- Once you are more informed about the job market and your skills and abilities, strategies are put forward to enable you to harness new opportunities.

It would be an impossible task to write a careers book with advice and information tailored specifically to every person's situation (that is the preserve of the individual careers interview). Equally, the entry requirements for different professions can vary at the international level, so what is true in one country does not necessarily hold for another. Research is an international endeavour with researchers working in multinational groups all over the world. My own careers work has been centred primarily in western Europe, and the UK in particular. However, work cultures in the majority of countries in the developed world are sufficiently similar nowadays that the content of this book will be relevant to all research bioscientists seeking advice with their career planning.

The process of career planning

There is more to career planning (see Box 1.1 for a definition of terms) than looking for jobs and making applications. Many people are not clear about what they want to do next. Those who have a specific career goal in mind need to think carefully about how to achieve their aim. Even when you know what you want to do, circumstances can intervene to change your career direction. The process of career planning involves taking control and managing your career so that you are making the most of your current post in preparation for your next career move or 'transition'. This means knowing when to take advantage of opportunities, being strategic and proactive, making informed decisions and being aware of your own particular strengths and weaknesses. Consider some of the following questions.

- How well are you managing your career?
- What are your career plans for the near and more distant future?
- Looking back over the past 3 years, what experiences, skills or knowledge have you acquired that has contributed to your personal growth?
- How happy are you with the progress you have made over these years? Could you have done more?
- Are there gaps in your experience which could hinder your career progression?

Helping you with your career planning

In my role as a careers adviser working on behalf of a bioscience learned society, I have developed a repertoire of career development workshops aimed at bioscience doctoral students and postdoctoral researchers, which I deliver in universities, independently and during scientific conferences. Similarly, other organisations, policy and funding bodies do the same, and many universities and research institutes employ staff and offer career programmes designed for their research staff and students. The existence and visibility of these development programmes vary across university departments, institutions, countries and continents. In Europe, the European Charter for Researchers (2005) and The Concordat (2006) provide guidance on good practice for higher education institutions, research

institutes and other organisations employing postdoctoral researchers. In the US, the Carnegie Initiative on the Doctorate (CID) worked with doctoral training departments to restructure their programmes to better prepare doctoral candidates after the National Academy of Sciences, National Academy of Engineering and Institute of Medicine concluded that more funding should be made available to support the career development of postdoctoral researchers (Golde & Walker 2006; Walker et al. 2008). Furthermore, bodies such as the European Universities Association Council for Doctoral Education (EUA-CDE 2012) advise on the continuing improvement and development of doctoral education and research training programmes.

The aim of this book is to transmit the information, guidance and advice from these career development programmes in order to provide a useful and convenient compendium to refer to. This book discusses the many complex factors which exist within the career planning process, enabling you to find effective strategies and make considered decisions for a successful career.

Content of the book

Chapter 1: Introduction

This chapter establishes the aims and objectives for the book and its content. The importance of paying attention to your career is discussed in the context of initiatives already in place to assist doctoral students and postdoctoral researchers to capitalise on their personal and professional assets.

Chapter 2: Planning your career

Theories of career development and planning underpin the information and guidance in this book. This chapter focuses on two key career planning models and establishes a structure for the book.

Chapter 3: Self-awareness

How well do you know yourself beyond your research interests and technical skills? How will you decide which careers are suited to you? This chapter contains exercises to help you examine self-awareness dimensions, such as your skills, personality and values, so you can make informed decisions about your career and write effective job applications.

Chapter 4: The job market

Where are the jobs and how do you engage effectively with the job market? With so much competition, how do you stay positive in your job search? Which careers should you consider? This chapter analyses a range of jobs and looks at how you can discover the 'hidden' job market through networking.

Chapter 5: Enhancing your employability

In Chapter 5, suggestions for personal and professional development to enhance your employability are put forward, including ways to extend your experiences beyond your core research work.

Chapter 6: Making applications

There are a number of ways in which to apply for a job. The most commonly used are the application form, curriculum vitae (CV) and resumé. Usually sent via email or an electronic submission system, it is vital that the documents adhere to guidelines and present your information convincingly. This chapter gives advice about how to make effective applications and is supplemented with example CVs.

Chapter 7: Successful interview technique

This chapter provides advice on techniques and strategies you can use before, during and after your interview to achieve a successful outcome. Sample questions give you the opportunity to consider how you would answer them effectively.

Chapter 8: Decision making and action planning

Based on a recognised coaching model, this chapter brings together the information gathered from previous chapters (especially Chapters 3 and 4) to enable you to make informed decisions about your career.

Appendix 1: Career narratives

Appendix 1 comprises 20 career narratives from research bioscientists working in a range of professions. Each case study describes the person's job, how they successfully moved into this profession and includes a commentary on their career strategies.

Appendix 2: Social media

Chapters 4 and 5 are supplemented by Appendix 2, which describes how researchers can make use of social media to enhance their employment prospects and access the 'hidden' job market through networking.

Appendix 3: Example CVs

Appendix 3 supplements Chapter 6 and provides six example CVs, demonstrating how they have been adjusted to six different job advertisements and their corresponding specifications.

Appendix 4: Support and resources

Appendix 4 consists of a comprehensive list of support groups, web resources and a bibliography for further information.

How to use this book

Much of the information in this book is generic and is a useful reference for anyone looking for an effective career planning strategy. For example, changing patterns of work as a result of a global economy, models of career planning and the capacity

for self-reliance apply to everyone. However, as research bioscientists, you possess a particular set of skills and experiences which have been used in the book to illustrate how you can capitalise on them. Example CVs and career profiles are based on research bioscientists working in a range of professions. Job vacancies, sources of support and further information are primarily bioscience related.

The way you use this book is up to you. You can read it from cover to cover for a full overview of how to plan and manage your career. You may prefer to dip into particular chapters, or perhaps you are searching for specific information such as how to write an effective CV or improve your interview technique. However you make use of it, this book aims to provide you with concepts and information, practicalities and tools to assist you in performing one of the most important experiments of your life – your career.

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