

# Book Review

Nontraditional Careers for Chemists: New Formulas in Chemistry,

by Lisa M. Balbes (Oxford University Press, 2006, 320 pp., ISBN 0195183673; \$27.95 paperback)

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Chemists are passionate about research. Investigating the unknown, asking questions about chemical reactions and processes, designing and performing experiments to solve problems—these are the activities that get a chemist's creative juices flowing. But for some chemists, a moment arrives when they realize their passion for laboratory research is no longer there; at this point, the question inevitably arises, "What do I do with my chemistry degree now?" *The book Non-Traditional Careers for Chemists: New Formulas in Chemistry*, by Lisa M. Balbes, provides a comprehensive answer to this question.

The title of each chapter in the book begins with the words "Chemistry and ... ." A sampling of the subjects that replace the ellipsis shows the variety of fields that are described: communication, information science, sales and marketing, business development, regulatory affairs, public policy, computers, and education. The beginning of each chapter introduces the reader to the profession and lists the various positions that would be appropriate for someone in this field with a background in chemistry. For instance, the chapter entitled "Chemistry and Patents" describes the jobs of patent examiner, patent searcher, technical specialist and patent agent, in addition to patent attorney. Profiles of actual people who hold these positions follow the job descriptions. These profiles are the heart of the book and give the reader real insights into the professions that are discussed.

Each person who is profiled starts by describing the position that he or she currently holds, including details of daily tasks and an overview of all the responsibilities encompassed by the job. Some indication is usually given concerning the amount of travel required for the position, as well as the salary, which is simply compared to that of a chemist working at the bench in an industrial setting. In the lengthiest section of each profile, the individual explains how he or she arrived at the current position. These sections help the reader to see what factors prompt people to leave the laboratory setting,

what advanced degree options should be considered if one is going to enter the line of work described, and what personality traits are important for success in the field. Since many of the speakers have been employed in a variety of environments, the advantages and disadvantages of working in small versus large companies are discussed, as are the pros and cons of owning one's own business. In an "Advice" section, the speaker is asked to provide specific suggestions on how to enter and succeed in the profession. The profiles conclude with predictions about the future direction of the field, as well as a list of references where the reader can find more information.

There are a number of themes that recur throughout the book. Virtually everyone who is profiled indicates that, although they are no longer working in a laboratory, the experience they gained while studying chemistry prepared them well for their current career. The skills learned in lecture and lab courses that are repeatedly cited as being invaluable include the ability to break down complex issues into simpler parts in order to solve problems, as well as the ability to acquire data, analyze it and assess its accuracy. In addition, having a strong background in science facilitates communication with practicing scientists, which is a necessary part of all the professions covered. The excitement associated with talking to scientists who are working on cutting edge research was mentioned by many as being a highly rewarding aspect of their job. Some generalizations can also be drawn from the advice given by those profiled—an ability to adapt to new situations is essential; one must always be ready to take advantage of new opportunities; and networking at conferences and through professional societies is important for advancement.

While not explicitly stated, it appears that the book is intended for students at both the graduate and undergraduate levels. However, there are few profiles of people who are just embarking on their careers. Most have advanced degrees or have been in their fields a long time and risen to a high-level positions. While the absence of recent chemistry graduates might initially appear to be an oversight, it becomes clear that the experiences of these more seasoned individuals have given them big picture views of their respective fields, which allows them to speak about opportunities at every level, from entry to executive. Their knowledge of and enthusiasm for their fields is inspiring. In fact, the vast array of opportunities presented was so enticing that it made me want to go back and major in chemistry all over again.