

Learning to be a principal investigator

At the Helm: A Laboratory Navigator by Kathy Barker

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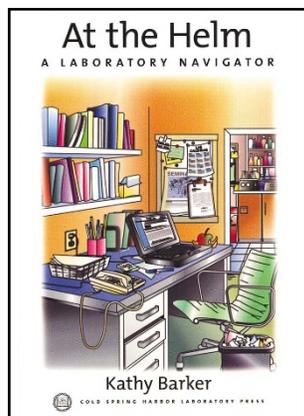
Reviewed by Cori Bargmann

University of California, San Francisco, California, USA

Starting a new lab is an exciting landmark for a scientist, but it comes with an avalanche of new responsibilities: finding, training and encouraging co-workers; writing grants; teaching courses; and managing an operation halfway between a small business and a playground. Kathy Barker's new book, *At the Helm*, is a lively introduction to lab management that is framed as advice for the new principal investigator. *At the Helm* is based on Barker's interviews with about 50 practicing scientists in academia and industry. Rather than describing specific interviews, Barker synthesizes a set of principles that consistently emerged from the conversations. The book describes these principles, drawing on other literature about academic science as well as literature from the world of management. To provide more personal perspectives, anonymous quotes from the scientists interviewed appear in boxes alongside the text.

The heart of *At the Helm* is the challenge of being responsible for a group of people, and most chapters center on personnel management. Leadership, choosing lab personnel, training and retaining new lab members, communicating, and group dynamics each receive a chapter; other chapters address long-term planning and lab organization issues. Barker's

style is that of an enthusiastic older friend giving advice to a slightly younger one, exhorting you not to make the mistakes that she made. The book feels like a brainstorming session. It's not rigidly organized and some topics come up several times, but the energy of the text makes it easy to keep reading.



Ideas and results are the real products of science—and this book acknowledges that while making a case for the right kind of lab and leader. A bad environment can undo the best people and ideas, and a good environment can help them thrive. Most of the major issues that can come up in a lab make an appearance, from authorship arguments to workplace violence. *At the Helm* strives to present practical advice that can actually be followed. Each section begins with an explanation of the issues, gives some general examples and suggestions, and ends with a set of bullet points. The book makes the optimistic assumption that any problem can be solved by a logical strategy, from recruiting a graduate student to fixing a poisonous lab morale. That may not always be true, but this approach has a much better chance of success than ignoring problems or evading them.

At the Helm should be an enjoyable read for any young investigator. Most sections begin with wonderful excerpts from

scientific memoirs or histories. These personal examples bring life to the more impersonal recommendations in the body of the text. In addition, the associations evoked by the familiar names serve as frequent reminders to the reader that scientific content is what really inspires every scientist. The variety of sources means that something unexpected and interesting appears every few pages. A nice early section on time management borrows from Covey's *The 7 Habits of Highly Effective People* to point out that immense energy is wasted on tasks that are urgent but not important. A sensitive and sensible chapter discusses different expectations of behavior in different cultures, and is accompanied by a magazine-style test on cultural awareness.

At the Helm takes a good look at starting a lab, but it is not the perfect guide to scientific life. It can be vague. For example, a brief primer on visas for foreign scholars failed to explain why some are vastly more desirable to a postdoc than others. Still, naïve laboratory heads will benefit just from reading that there are many visas with different properties that they need to learn about. Working with people is one of the challenges that comes with being an independent investigator, but other topics, such as classroom teaching, grant writing, university bureaucracies and the practical aspects of setting up a lab, receive little or no coverage in the book. For some of these issues, the extensive reference lists at the end of each chapter provide avenues for further exploration; others must wait for a later book.

At the Helm is welcome especially for bringing questions about lab dynamics and strategies up for discussion. There are many valuable ideas here, and even in cases where I didn't agree with the opinions presented, or thought they were weakly explained or too dogmatic, disagreeing with the conclusions helped me frame my own thinking. This is a refreshing book. □