offer the advantage of concise descriptions, with practical experimental details. These include techniques for the characterization of histocompatibility antigens and studies of noncovalent interactions in the gas phase as a mimic of solution-phase properties.

The literature covered appears to extend into early 1997. The provision of a subindex at the start of each chapter is particularly helpful, as is the inclusion of article titles in each set of references. The book is well-suited for those wishing to gain an introductory through intermediate understanding of selected topics in the applications of mass spectrometry. It would be particularly recommended to graduate or postdoctoral students, but consideration must be given to the high price of the volume.

James A. McCloskey
Department of Medicinal Chemistry
University of Utah
Salt Lake City, Utah 84112-5820

JM9805844

10.1021/jm9805844

The Antidepressant Era. By David Healy. Harvard University Press, Cambridge, MA. 1998. x + 317 pp. 16 x 24.5 cm. ISBN 0674039572. $39.95.

Who discovered chlorpromazine? Charpentier, who synthesized it in 1950? Courvoisier, who reported distinctive effects on animal behavior and neurophysiology? Laborit, who first noticed distinctive psychotropic effects in man? Or Delay and Denicker, who clearly outlined what has now become its accepted use in psychiatry and without whose endorsement and prestige Rhône-Poulene might never have developed it further as an antipsychotic? There have been bitter disputes over this issue, as a result of which no Nobel Prize was ever awarded for what has been the single most important breakthrough in psychiatric treatment.

Similarly, the question of who discovered imipramine can be asked. Many suggest that it was a collaborative effort. In 1954, a series of 42 tricyclic compounds (iminodibenzyl analogues) were synthesized and reported by Schindler and Haefliger (*Helv. Chim. Acta* **1954**, *37*, 4) working at Geigy Pharmaceuticals in Basel, Switzerland. One of these compounds, G-22355 (which was the iminodibenzyl closest in structure to chlorpromazine), was selected for clinical trial and distributed to a wide range of clinicians for evaluation. This group included some psychiatrists, among whom was Ronald Kuhn at the Münsterlingen Hospital in Switzerland on Lake Konstanz. Kuhn, who is now credited by many as the "discoverer" of the antidepressant effects of imipramine (G-22355), made his discovery as a result of careful observations on depressed patients from 1955 to 1956. In February 1957, Kuhn sent a report to Geigy endorsing the drug as a potential antidepressant, and in August of that year, he published his findings in a Swiss medical journal and presented his research at the World Conference of Psychiatry, which was held in Zurich in September. Interestingly however, Kuhn was not invited to participate at the First International Congress of Neuropsychopharmacology (CINP) held in Rome in 1958, even though there were presentations on imipramine. He was also not invited to the second and third CINP meetings.

Multiple independent discovery happens often enough in science, and the discovery of the antidepressants is no exception. Nathan Kline is generally credited with the discovery of the antidepressant effect of iproniazid. Kline, in contrast to Kuhn, was flamboyant and cosmopolitan, ready to adopt new ideas, and had considerable political savvy. Kline, at the time of his involvement with iproniazid in 1954, was an Assistant Clinical Professor of Psychiatry at Columbia University and director of the research facility at Rockland State Hospital in New York. He published the initial account of the clinical effects of iproniazid in the *Congressional Record* of 1956. However, where no one was honored for the discovery of chlorpromazine or imipramine, Kline was awarded the Lasker Prize in 1957 for his role in demonstrating the antidepressant effects of reserpine. Subsequently, Kline was awarded a second Lasker Prize in 1964 for his contributions to psychiatry.

In this book, Healy, himself a psychiatrist, having previously published two volumes of interviews with leading psychopharmacologists, presents a fascinating story of considerable historical scholarship and amusing and interesting anecdotes. I rarely bring "technical books" with me on my vacation, but having started to read *The Antidepressant Era* before leaving, I was compelled to finish reading this story of the discovery of the antidepressants during my vacation. The complex story that Healy tells in this book not only details the discovery of the antidepressants, the emergence of the idea of depressive disease, and the evolvement of psychopharmacology but also details the origins of the pharmaceutical industry and the pressures for the regulation of drug companies. Of particular interest are Healy's observations into the current efforts expended in the marketing of antidepressants. He emphasizes that pharmaceutical companies are as much in the business of selling psychotropic diagnoses as of selling psychotropic drugs.

There are two minor aspects of this book which I feel compelled to point out. A section at the end of the book lists a series of notes and references cited in the text. Many of these references are incomplete and difficult to locate. The second minor annoyance is that the structures shown for the antidepressants on pages 50, 51, 75, and 200 were carelessly drawn and in most cases are incorrect.

This book will be of interest not only to chemists, pharmacologists, and clinicians in the pharmaceutical industry and in academia but to all those interested in the history of science and the politics of scientific discovery. The book makes fascinating reading and is highly recommended.

John L. Neumeyer
Alcohol and Drug Abuse Research Center
McLean Hospital
Harvard Medical School
115 Mill Street
Belmont, Massachusetts 02178

JM980585W

10.1021/jm980585w