

## Book Reviews

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J. K. ARONSON, *An account of the foxglove and its medical uses 1785–1985*, Oxford University Press, 1985, 8vo, pp. x, 399, £25.00.

The bicentenary of the publication of William Withering's *Foxglove* has been well and largely perceptively celebrated the world over, but the most permanent tribute comes in the form of this book by J. K. Aronson. Aronson is very well qualified for the job he has set himself. He is an eminent authority on the pharmacology and clinical practice involved, and he now shows himself to be a fine and meticulous historian.

The first half of the book is a facsimile of the original *Account of the foxglove and some of its medical uses*. This has been annotated in the margins with helpful notes on people, diseases, practices, and drugs. Here Aronson reveals an encyclopaedic grasp of his material. The second half of the book consists of mostly historical chapters putting Withering and the *Foxglove* in perspective. The account is vastly more balanced than that of Peck and Williamson (1950, *William Withering of Birmingham*) and forms a valuable addition to the insight already given by Schofield (1967, *The Lunar Society of Birmingham*).

I noticed very few possible slips or omissions. The only one of any importance relates to George Eliot's reference in *Silas Marner* to the use of the foxglove for the "terrible symptoms of heart-disease and dropsy". Aronson says the source of the information is unknown to him. I think we can be almost certain that it came from George Henry Lewes, who, amongst his other accomplishments, was a physiologist with a formidable range of knowledge. It is inconceivable that he did not know of Withering's work. He and George Eliot frequently talked about his physiological work (some of her correspondence refers explicitly to this), and the medical parts of her novels are probably the main evidence of Lewes's influence on her.

A novel feature of Aronson's book is the analysis of Withering's own results using statistical methods. In this way, Aronson fairly convincingly shows that Withering's success owed as much to his previous experience as to his switch of method of preparation. I also find Aronson's analysis of the contrasting characters of Withering and Erasmus Darwin rings true. Withering was "the sort of man most likely to annoy Darwin". My own reading of this famous quarrel was that it cannot have been true that Withering was completely innocent, though he was clearly right.

The book finishes with a brief and helpful review of work on digitalis during the twentieth century.

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ROBERT AUSTRIAN, *Life with the pneumococcus. Notes from the bedside, laboratory, and library*, Philadelphia, University of Pennsylvania Press, 1985, 8vo, pp. xi, 168, £25.00.

As these lines are being written, the University of Pennsylvania is preparing to unveil a portrait of Robert Austrian and to announce the creation of a Fellowship in Infectious Diseases bearing his name. These are the customary methods by which universities honour distinguished members and are the methods by which names and faces are encased in a certain amount of tradition, although succeeding generations are unlikely to be able to identify the names or the faces, let alone the accomplishments that led to the honours.

Son of one of Baltimore's distinguished clinicians, Robert Austrian trained at Johns Hopkins in the Medical School and in the Hospital. His loyalty to these institutions and to his native city has never been doubted by those of us who have known him. Academic opportunities carried him to the Downstate Medical Center and the King's County Hospital in Brooklyn, New York, and then to his present position as the John Herr Musser Professor of Research Medicine at the University of Pennsylvania School of Medicine.

Early in his career, he encountered the inevitable pneumococcus and had the good fortune also to come into close contact with several major figures in the study of this organism, most notably Colin MacLeod and W. Barry Wood, Jr. Austrian's interest in the pneumococcus has

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never flagged and this brief book, comprising thirteen lectures that he gave during his career, indicates the depth and commitment with which he continued to study this ubiquitous and extraordinary micro-organism, adding to the gift of medical knowledge that has come from detailed study of this pathogen. Yet, we must conclude with the paradox that despite the intensity and depth of our knowledge concerning the pneumococcus, we still do not know how it produces illness and death.

The thirteen essays were written at different times, during the period 1959–84, and they indicate how Austrian came to the realization that despite specific antimicrobial therapy, and despite the sensitivity of the micro-organism to these drugs, pneumococcal pneumonia remained an important cause of morbidity and mortality, particularly at the two extremes of the span of life. Necessarily, there is a certain amount of redundancy. Austrian's careful scholarship recalls to the reader the notable early contributions that led to the identification of the pneumococcus, its separation from other microbes of the respiratory tract, and the painstaking process by which the large number of serotypes of the pneumococcus became identified to become the basis for the vaccine that Austrian developed and that is now commercially available.

The story that unfolds can be interpreted in many ways. Lewis Thomas in his foreword interprets these papers as a lesson in how the study of biological mechanisms at a fundamental level leads to discoveries that can be applied to human disease. This is a theme that has dominated much of Thomas's writing over the past several decades. Alternatively, it could be argued, and Austrian makes the point effectively, that a clinical investigator who becomes intrigued with an important medical problem, and who decides to explore that problem wherever it may go, must ultimately become adept at sorting out epidemiological and biostatistical information, may need to learn about the chemical structure of bacteria, and of the immunological response to these structures, and should grasp completely the various clinical manifestations of infection due to an organism with extraordinary capacity to invade and to do so in different ways in different hosts. It matters little which interpretation one chooses to adopt as an article of faith, and perhaps matters little if there is an article of faith underlying these observations. What does come through is that the depth of the chase has uncovered knowledge and has saved lives. Whether as many lives have been saved as was originally projected, and whether the inevitable controversies over exactly how effective the vaccine is will be stilled by any body of accumulating knowledge, is irrelevant to the fundamental message.

Equally important is the precise and measured prose with which the complex thoughts and experiments are made lucid and proceed to the discoveries that will follow. Those of us who have attempted to edit Austrian's writings know only too well the precision with which his thoughts are presented, the meticulousness with which he will argue about the placement of a semicolon or a comma, and know equally well that this fluid and seemingly effortless prose comes only from those who have taken great pains to fashion it. All who are engaged in writing scientific articles will gain from a careful study of these essays, quite apart from their scientific content.

This is a book to be read in many brief excursions, rather than read through at one time. In this way, the development over almost thirty years of research can be fully appreciated and the purposeful repetitions disregarded. The book will be rewarding for its content, presentation, and for its most important message, which is one of optimism, and the sheer pleasure and satisfaction that comes from looking back at a life of discovery and achievement.

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GLADYS L. HOBBY, *Penicillin: meeting the challenge*, New Haven, Conn., and London, Yale University Press, 1985, 8vo, pp. xxii, 319, illus., £30.00.

Dr Hobby has written an excellent, broad-ranging book which contributes new information as well as providing a fresh insight into the penicillin story, from the discovery by Fleming through to its large-scale production. The part played by the American pharmaceutical industry in the development of penicillin is covered in detail. There are also chapters on the development