Of course national languages will retain their significance, and it is important and sensible to develop and foster them (such as the German and English editions of *Angewandte Chemie*), as otherwise words could literally fail us. But the future will be at least bilingual, and one of these languages will be English.

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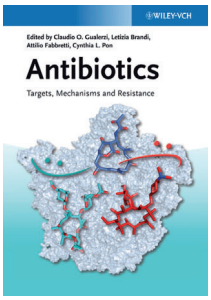

Antibiotics
Targets, Mechanisms and Resistance. Edited by Claudio O. Gualerzi, Letizia Brandi, Attilio Fabbretti, and Cynthia L. Pon. Wiley-VCH, Weinheim, 2013. 576 pp., hardcover, € 149.00.—ISBN 978-527333059

Antibiotics

This is a truely modern textbook on antibiotics giving a thorough overview of the structures, function, and resistance mechanisms for all of the common classes of antibiotics. Some might say this is an "old hat", as not much has happened over the last 20 years apart from endless discussions and critiques about the development of resistance by pathogenic bacteria, their perilous spreading, and the resulting therapeutic failure often with fatal consequences. However, there is a plethora of antibiotic substances, but hardly any therapies that involve combination drugs such as is now standard in oncology. Of the 20 classes of antibiotics, only four have made it onto the market. Perhaps this is a reason to think again. For just this reason, this book is important and it comes at the right time.

The editors are a group of four experts from Camerino, Italy, and they together with more than 20 international specialists have produced a compendium on antibiotics from the chemists' point of view. It is equally aimed at teachers, chemists, biologists, and pharmacologists as the target audience, but it is also aimed at students. It represents the current state of knowledge, however, it is not a book that can be consulted when recommendations are required on how to treat an infection.

The book is introduced by a very enlightening chapter on the problems that arise and the options that are available with the screening methods and the clinical development of new antibiotics. One chapter considers the significance of natural product research in the identification of new drugs and another is on resistance mechanisms. The bulk consists of 18 chapters that are oriented along the known and newly discovered biological targets and describe almost all known antibiotic substances that attack them. A chapter on transport and efflux mechanisms is also included.

Each of the carefully researched chapters has an introduction on the mechanism of action of the substances at the target. 3D pictures showing the bonding situation of the postulated mechanisms are provided as examples. Each chapter is very well structured and is in each case completed by an outlook. The scope of the reference section at the end of each chapter is also remarkable. It includes publications until 2012 and is thus eminently suitable for deeper study. A number of structural formulas have however been printed very small, especially in the summarizing tables.

Non-classical targets are also dealt with thematically, which like chaperones or signal transduction present novel points of antibacterial attack weakening bacterial fitness. After identification of target structures and effective inhibitors, this research area is becoming more important, because possible development of resistance is decreased due to lower selective pressure. In return, the immune system can be more effective in defending bacterial infections.

In summary, a highly informative and readable and very recommendable 500 page book has been produced. For completion, I would however welcome a short chapter on the therapeutic use of antibiotics in the clinical setting and ambulant care. This may be a task for the next edition.

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