

Multi-author Review

From peptidoglycan biosynthesis to antibiotic resistance

Foreword

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In August 1997 a symposium entitled 'From Peptidoglycan Biosynthesis to Antibiotic Resistance: Present and Future' was organized in Liège and dedicated to Professor Jean-Marie Ghuysen, who was director of the Centre for Protein Engineering until 1995. Liège had always been the 'port d'attache' of Jean-Marie between his numerous working trips abroad, and it is the place where the centre grew, over a period of 25 years, from a small group of microbiologists and biochemists to a vast multidisciplinary organization. Liège thus appeared as the best place to gather Jean-Marie's numerous friends and admirers. His research career has spanned 5 decades. Begun with the isolation of RNA during work towards his PhD thesis in the laboratory of Victor Desreux, it continues today with a special emphasis on cell division, molecular recognition and reactivity approached via quantum chemical methods. He first achieved international recognition for his elegant studies

of the chemical structure of the bacterial cell wall peptidoglycan. This led naturally to development of an approach to the mode of action of penicillin, and later to the phenomenon of bacterial resistance to β -lactams. The Liège group was built around these problems, which unsurprisingly form the core of this special tribute.

In preparing the programme, however, the scientific committee decided to invite highly regarded scientists involved not only in the study of cell wall structure, genetics and metabolism but also in other areas, such as the folding of proteins, in which Jean-Marie showed a keen interest. A subgroup of the participants agreed to cooperate in assembling and having refereed by their peers the collection of articles that constitutes this multi-author review. Our aim in so doing is to provide the reader with a comprehensive look at current developments in this very diverse and growing field.