Biochemistry of the Acute Allergic Reactions: Fourth International Symposium

Edited by E. L. Becker, A. S. Simon and K. F. Austen
Alan R. Liss; New York, 1981
xviii + 350 pages. £35.50

I can recommend this excellent book to those wanting an update on the best of contemporary laboratory research into inflammatory mediators. It contains 21 papers given in May 1980 at a most select conference in the Santa Ynez valley, California, together with a well-edited version of the extensive and informative post-paper discussions. It must have been an exciting meeting.

The 24 participants at the conference represent a fair helping of the crème de la crème of allergic mediator research, and its multidisciplinary nature is reflected in their affiliations: pharmacology, chemical and molecular immunology, medicine and pathology departments predominate, with chemistry and paediatrics thrown in for good measure.

The first four chapters (Samuelsson, Piper, Parker and Bach) provide a good introduction to the flurry of recent research on slow reacting substance/leukotrienes. Henson described his work on the newly identified 'platelet activating factor', also lipid-derived (acetyl glyceryl ether phosphorylcholine), and concluded that it too must be considered as a more general inflammatory mediator with implications beyond those of the acute allergic reaction. Mast cell mediators occupy a time-honoured place in research on immediate hypersensitivity, and they received full measure: proteoglycans (Austen), neutral proteases (Lagunoff), acid hydrolases (Austen again), glycosaminoglycans of basophils (Dvorak). Anaphylatoxin C5a was reviewed by Hugli and the chemoattractant peptides and lipids by Becker and Goetzl respectively.

Receptor-mediated mechanisms for molecular recognition and activation of inflammatory cells were considered in eight chapters: IgE receptors (Metzger, Ishizaka), C3b receptors (Kay), phospholipid metabolism following receptor activation (Sullivan, Becker) and calcium mechanisms in platelets and mast cells (Feinstein, Foreman, Metzger). Two research groups (Austen and Oates) collaborated for a chapter outlining the interesting discovery that PGD_2 is the predominant prostaglandin released during mast cell activation. The functions of this potent but neglected prostanoid have not yet been determined, but it may serve as a useful marker for mast cell-dependent reactions in vivo.

Even at the price this well produced and highly relevant book should appeal to many clinical and laboratory researchers concerned with inflammation and allergy or the mediators themselves. I wonder if there will be as much exciting progress by the time the fifth conference is convened.

Robin Hoult