Mononuclear phagocytes—functional aspects. Parts I and II

Edited by R. VAN FURTH. 1980. Martinus Nijhoff, The Hague. Pp. xviii and 892, and xviii and 1938. Dutch guilders 360.

The reviewer contemplating this massive work must consider three important questions. Firstly, is it logical to publish a compendious treatise devoted solely to the macrophage? Almost every important question in immunology concerns the macrophage to some extent, and its various roles in host defence, antigen handling, cell interactions and tumour destruction seem to justify a prolonged dissertation on this cell and its many functions. On the other hand, the very diversity of these roles might equally argue that it would be better to take each such immunological topic separately and include the macrophage in each context rather than try to gain a panoramic view of immunology from this one vantage point. However, the decision to produce a separate work centred on the macrophage is on the whole justified. This conclusion is based mainly on the increasing knowledge of the biochemical and metabolic processes that characterise the macrophage membrane and the various processes involved in the intracellular handling of antigens and microbial products. Certainly the scope of this work is encyclopaedic and, although many of the immunological topics are dealt with in other works, there is no rival treatise that so successfully integrates these and other aspects of macrophage function. The first part of the work considers the origin of macrophages, their enzyme activities, and their cytochemistry. The diverse nature of monocyte-macrophages has long been recognised and the properties of alveolar macrophages, Kupffer cells, and osteoclasts all receive separate consideration. The function and distribution of Langerhans cells have also recently been appreciated and are fully discussed. Whilst the kinetics of monocyte production and circulation have been the subject of several elegant studies by the editor and other workers, newer techniques in cell culture have enabled the maturation and function of macrophages to be analysed in more detail than was previously possible. The activities of macrophages during such functions as cell division, endocytosis, and chemotaxis are also now amenable to biochemical dissection, as this volume makes clear. The second volume deals on the same grand scale with the biophysics of phagocytosis, and the enzyme changes that ensue during this process. Even more impressive are the advances in studying oxygen-dependent antimicrobial systems and macrophage secretion. Whilst the contribution of macrophages to inflammatory reactions has been long recognised, there is more recent information concerning their response to products of the fibroanalytic pathway, the clotting system, prostaglandins, and complement components and these interactions are now being defined in biochemical terms; much of this material is included. Biological problems such as the contribution of macrophage activation to microbial inactivation and tumour destruction are also analysed in detail. Practising microbiologists and research workers in a variety of disciplines from basic immunology to cancer research will find material collated in this book that otherwise would have to be gleaned from publications in a variety of disciplines.

The second question concerns the propriety of publishing the proceedings of symposia and conferences. Usually this is rarely justified because the material is available elsewhere and the format of papers read to conferences is rarely ideal for a definitive work. Are these strictures sufficient to condemn this work, which reports the proceeding of a conference? This series of conferences on the macrophage is pre-eminent in this field and the editor and publishers could reasonably argue that, given the time, effort and expense of mounting the conference for a fortunate few, it was only reasonable to immortalise the proceeding for the benefit of the many. Certainly it is a mark of the organiser's skill and powers of persuasion that the publication reflects the excellence and unique merits of the conference. Nevertheless there are inevitable drawbacks. Two years is far too long a time to elapse between the conference and the publication of the proceedings, particularly given the rapid printing techniques that were evidently used. Also, the decision to publish the minutiae of almost forgotten discussions is rarely justified. See for example the exchange on page 1383, "Q; Did you try opsonized sheep red blood cells? A; No. Q; And when do you trypsinize our macrophages? A; We do not trypsinize our macrophages. Why should we?" Do even politicians embroider their memoirs with such details? Thus, one has reservations about the decision to publish the proceedings in this form.

The final question is more mundane: should any library, let alone any individual, pay so much for any work however meritorious? This book is surely this expensive because it is too long. Much of the text could have been cut if the decision had been taken to distill these reports into a definitive work of sufficient length to summarise our knowledge of the macrophage. Surely, in two years this could have been done? Otherwise the proceedings could have been brought out without all this delay. I am not sure why the covers of the book are embellished with reproductions from Heironymus Bosch but perhaps the prospect that the fourth volume on the macrophage will, on present extrapolations, extend to 4000 pages is sufficient to suggest the Devil and all his works.

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