Editor's Foreword

The choice of 'Diseases of Connective Tissue' for the 1978 Symposium of the Royal College of Pathologists recognised the important part that knowledge of this large group of disorders plays in contemporary medicine. Because of the very rapid extension of our understanding of these diseases it is salutary to recall their origins.

Although Xavier Bichat (1800, 1801) examined connective tissue macroscopically, it was only with the proper development of the compound microscope (Lister, 1830) and the evolution of the Cell Theory (Schleiden, 1838; Schwann, 1839) that a rational approach to connective tissue structure became practicable. It is of absorbing interest to pathologists that many of the central arguments of Virchow's *Cellular Pathology* (1858) are based on his studies of mesenchymal, cartilaginous, and bone cells. Many years passed before these revolutionary views were accepted into the corpus of pathological teaching. Indeed, it is probably fair to suggest that, notwithstanding the great contributions of Klinge (1933) and Klemperer (1955), modern views on the diseases of connective tissue began to emerge only when the techniques of x-ray diffraction and of electron microscopy allowed collagen fibres to be dissected in biophysical detail (Astbury, 1933) and when the cryostat (Coons and Kaplan, 1950) encouraged immunofluorescence microscopy.

From that time the floodgates opened. The extraordinary diversity and depth of the new knowledge is mirrored in the reviews contained in the present volume. The choice of subjects has been determined by the wish of the Royal College of Pathologists to present to their fellows and members a 'representative transverse section' of modern understanding of the connective tissue diseases. Recognising the extent of the subject, no attempt has been made to cover all its aspects. But an endeavour *has* been made to grasp the reader's interest by following a progression of physiological thought from cells to fibres to intercellular matrix and to accept the logic of an analysis that examines aspects of connective tissue physiology, of the principles of connective tissue disease, and of their expression in pathological practice.

This volume is therefore a selected and selective view of important contemporary areas of knowledge and investigation in the connective tissues and their diseases. It represents the proceedings of a symposium, but its publication is intended to permit the reader to refresh his understanding of the pathogenesis of the connective tissue diseases in a compact series of up-to-date, authoritative reviews.

D. L. GARDNER

References

- Astbury, W. T. (1933). *Fundamentals of Fibre Structure*. Oxford University Press, London.
- Bichat, M. F. X. (1800). *Recherches Physiologiques sur la Vie et la Mort*. Brosson, Gabon et Cie, Paris. an VIII.
- Bichat, M. F. X. (1801). *Anatomie Générale, appliquée à la Physiologie et à la Médecine*. Brosson, Gabon et Cie, Paris. an X.

- Coons, A. H., and Kaplan, M. H. (1950). Localization of antigen in tissue cells II. Improvements in a method for the detection of antigen by means of fluorescent antibody. *Journal of Experimental Medicine*, **91**, 1-13.
- Klemperer, P. (1955). The significance of the intermediate substances of the connective tissue in human disease. *Harvey Lectures*, **49**, 100-123.
- Klinge, F. (1933). *Der Rheumatismus; pathologisch-anatomische und experimentell-pathologische Tatsachen und ihre Auswertung für ärztliche Rheumaproblem*. Bergmann, Munich.
- Lister, J. J. (1830). On some properties in achromatic object-glasses applicable to the improvement of the microscope. *Philosophical Transactions of the Royal Society of London*, **120**, 187-200.
- Schleiden, M. J. (1838). Beiträge zur Phytogenesis. *Archiv für Anatomie, Physiologie und wissenschaftliche Medizin*, **2**, 137-177. (English translation (1847) by H. Smith in T. Schwann's 'Microscopical researches'. Sydenham Society, London.)
- Schwann, T. (1839). *Mikroskopische Untersuchungen über die Übereinstimmung in der Struktur und dem Wachsthum der Tiere und Pflanzen*. Sander, Berlin. (English translation (1847) by H. Smith, Sydenham Society, London.)
- Virchow, R. (1858). *Die Cellularpathologie in ihrer Begründung auf physiologische und pathologische Gewebelehre*. Hirschwald, Berlin. (English translation (1860) from the 2nd edition (1859) by F. Chance, published (1971) with a new introductory essay by L. J. Rather. Dover Publications, New York.