Biology of Fibrous Components — Development Beyond the Cell Membrane. A. C. Neville, Cambridge University Press, Cambridge, 1993. vii + 214 pp. Price £35.00. ISBN 0-521-41051-7.

Biological fibrous components occur in an enormous spectrum of systems, in fact any system that possesses a skeletal structure of some type will have these extracellular structures, obvious examples being bone, cuticle, plant cell walls, cornea, etc. Perhaps the nearest analogy to cellular fibrous components from the man-made world is fibre-glass. Like fibre-glass, the components in these biological composites consist of fibres set into a matrix. By necessity these fibres are long, extracellular and water-insoluble. Most importantly of all, however, to form effective materials they must be strategically orientated, and it is this molecular, but extracellular, orientation that forms the interest area and central hypothesis of *Biology of Fibrous Components*; attempting to answer the important question 'how does chemistry control and create architecture in the extracellular environment?'

Neville is a well known and respected figure in the field, with in excess of 30 years experience, and as such he has produced a book of considerable interest and importance. His central theme is that these fibrous biological composites are actively (one could even say strategically) orientated in the extracellular environment during a period of self-assembly in a mobile liquid crystalline phase at points just outside the cell. These correct orientations are subsequently stabilised into the conventional solid forms. Of the many possible forms of composites, two are the most common; the first of these is described as a plywood laminate (either orthogonal or helicoidal) in which the composite exhibits structure (and indeed properties) similar to that of man-made plywood; the second common orientation is a parallel fibre form.

In conclusion this volume is an excellently written, referenced and indexed work which is not only of high quality but which is also eminently readable. A book that will be of interest to a wide number of scientists in a variety of related disciplines (e.g. biochemistry, material science, chemistry, biology, biophysics, etc.), as well as providing essential background information for just about any reader of this journal, it is thus highly recommended.

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