Pseudomonas Infection and Alginates: Biochemistry, Genetics and Pathology. Ed. P. Gacesa and N. J. Russell. Pp. 233. London: Chapman and Hall. 1990. £45.

This book, which arose from a conference, though it is not the book-of-the-conference, will fascinate those interested in the microbial ecology of the human body. Acknowledged as an opportunist pathogen, *Pseudomonas aeruginosa* is here described chiefly in the context of its ability to produce a mucoid substance, the alginate of the title, which protects it in a fluid environment. Living as part of a biofilm in an equatic environment is shown to afford a micro-organism protection against phagocytosis, bacteriophage and antibacterial agents as well as against mechanical removal. In natural aquatic environments adhesion of *P. aeruginosa* to clean surfaces is mediated by alginate fibres: once adherent large amounts of alginate are produced to enclose the developing micro-colonies. This biofilm also acts as a nutrient trap enabling large populations to develop even under poor nutrient conditions. In a medical context the importance of alginate production by *P. aeruginosa* lies in infection of patients with cystic fibrosis where the properties of the biofilm also serve to resist removal from habitat. About 1 in 2000 infants in the UK will be affected by cystic fibrosis, a disease in which there is progressive deterioration of lung function as a consequence of chronic bacterial infection. *P. aeruginosa* infection is common in cystic fibrosis and alginate production results in a viscid lung secretion which it is difficult for the patient to remove.

The 12 chapters of this book take the reader through a sequence from colonization of human lung and country stream to the biochemical pathway and genetics of alginate production. This is not a book for the laboratory bench nor a medical treatise on cystic fibrosis but a good read on applied ecology. As such it should be frequently off the library shelf.

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