Gametogenesis and the Early Embryo

44th Symposium of the Society for Developmental Biology. Edited by Joseph G Gall. (Pp 444; £33.00.) New York: Alan R Liss. 1986.

A symposium volume is a sample of the mass of information available at a particular moment, frozen in print. When analysing the sample we have to consider if it is worth preserving in such a way; worth our (or our libraries') money to buy and worth our time to read. If the sample is to be worthwhile it should be representative of the moment and of the whole mass of information, despite being only a small fraction of the whole. Many volumes are not worth the money. Others contain timely, well written reviews which will survive because the symposium organisers have brought together the right people at the right time, and the participants have written reviews which are not merely descriptions of their own work but thoughtful discussions of the science which surrounds them.

The Cold Spring Harbor Symposia volumes are often classics of the latter type. Generations of undergraduates must have used them as lively reviews of contemporary work. The 50th CSH Symposium on Molecular Biology of Development is surely a classic among them. The 44th Symposium of the Society for Developmental Biology's volume *Gametogenesis and the Early Embryo* does not suffer by comparison with it. The symposium was held within a few weeks and a few hundred miles of Cold Spring Harbor, and almost half the contributors to this volume travelled between the two. The editor, Joe Gall, aimed to produce a summary of recent work in the field, which would be useful for research workers but also be an entry point for students. He has succeeded very well.

The 23 papers in the book range from *C elegans*, *Drosophila*, and sea urchins to *Xenopus* and mouse. These five are the major experimental species of modern developmental biology. None is ideal, but each has particular benefits to offer the researcher

and for the most part the papers highlight the benefits. While the book is divided into two sections, oogenesis and embryogenesis, the divisions between them, as in real life, are not rigid. Thus, Anderson and Nusslein-Volhard's excellent review of dorsal group mutants of *Drosophila*, which are maternal effect genes resulting in defects of embryogenesis, is in essence describing defects of oogenesis. Susan Strome's analysis of the asymmetry of early nematode embryos uses antibodies which recognise the contributions made by sperm and egg to the embryo. Doug Melton's laboratory examine mRNA in *Xenopus* embryos, both those produced during oogenesis and regionally localised in the egg and early embryo, and those activated at the mid-blastula stage of the embryo. Although one can always find omissions in a volume like this, it is generally inevitable in the symposium format. On the whole, most papers are written by leaders in their field, and contain enough background to satisfy the uninitiated.

What will the medical geneticist learn from the book? While humans are a rich source of genetic diversity and mutation, only infrequently can the genetics of particularly rare and interesting developmental defects be pursued, nor can recessive embryonic lethal mutations easily be studied. The genetics of other species impinges on the study of human development in an important way. Similarly, while experimental analysis of preimplantation human embryos is now possible, simple paucity of supply means that it will never be possible to investigate human (or even mouse) early embryos in the same way as *Xenopus* or sea urchins. All of us are concerned in the end with improving the human condition, but it is important that we and the funding agencies realise that the study of man is not necessarily man himself. I recommend this book to all who would learn from the diversity and the unity of animal development.

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