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BOOK REVIEW

BRYANT, J. A., FRANCIS, D. (ed.): THE CELL DIVISION CYCLE IN PLANTS. — Cambridge University Press, Cambridge—London—New York—New Rochelle—Melbourne—Sydney 1985. 258 pp., US \$ 32.50, £ 18.50.

Several lines of investigation are now converging towards the goal of understanding the organization and specificity of the cell division cycle in plants. This book represents the proceedings of a Seminar Series Symposium on the Cell Cycle in Plants, which formed part of the 213th meeting of the Society of Experimental Biology, held at Cardiff, in 1984. The aim of the seminar was to bring together biochemists, molecular and cell biologists and plant physiologists in order to take a multidisciplinary approach to the cell cycle in both lower and higher plants. The introductory lecture given by J. Van'Hof reviews the control points within the cell cycle and presents evidence supporting the view that the cell cycle is controlled by genes acting in sequences whose time of expression is determined by mitosis and the amount of nuclear DNA in the cell. Subsequent papers deal with the DNA replication, covering such topics as the organization of replicons, enzymic controls of DNA replication and DNA replication in relation to DNA C values. Several papers provide a wide range of examples of how the distinctive structural features of active chromatin, histone modifications, changes in non-histone protein composition, nuclease sensitivity, etc. correlate with gene activity during the cell cycle. Included in the volume are also papers discussing other factors that influence the cell cycle such as growth substances, cytoplasmic calcium levels, and papers on the cell cycle in cultured plant cells, *Chlorella*, *Chlamydomonas* and yeasts. A review of the chloroplast division cycle closes the publication.

All those concerned with the cell division, not only in plants, will find a stimulating amount of material in the volume.

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