

Interaction of Circadian Oscillators and the Cell Developmental Cycle in *Euglena*
 L.N. Edmunds, Jr. 1

Control Points in the *Chlamydomonas* Cell Cycle
 P.C.L. John (With 3 Figures) 9

Two Possibilities for Time Measurement in Synchronous *Chlorella* - Circadian Rhythm and Timing
 R. Tischner and H. Lorenzen (With 12 Figures) 17

Diatom Mitosis: Implications of a Model System
 J.D. Pickett-Heaps 28

Wall Morphogenesis in Centric Diatoms
 A.-M. M. Schmid (With 3 Figures) 34

Cell Elongation in the Red Alga *Griffithsia*: Control by Light, Ions, and an Endogenous Glycoprotein Hormone
 S.D. Waaland (With 2 Figures) 42

Molecular Signals During Sexual Induction of *Volvox carteri* F. Nagariensis
 R. Gilles, D. Balshüsemann, and L. Jaenicke (With 2 Figures) 50

Pheromone-Inducible Glycoproteins of the Extracellular Matrix of *Volvox* and Their Possible Role in Sexual Induction
 S. Wenzl and M. Sumper (With 3 Figures) 58

Environmental and Pheromonal Control of Sexual Reproduction in *Laminaria* (Phaeophyceae)
 I. Maier (With 3 Figures) 66

Action of Cell Wall Autolysins in Asexual Reproduction of Filamentous Green Algae: Evidence and Species Specificity
 U.G. Schlösser (With 12 Figures) 75

Sexual Agglutination in *Chlamydomonas eugametos*
 A. Musgrave (With 1 Figure) 83

Molecular Recognition Properties of *Chlamydomonas* HRGP's
 W.S. Adair 90

Maturation of a Flagellum/Basal Body Requires More Than One Cell Cycle in Algal Flagellates: Studies on *Nephroselmis olivacea* (Prasinophyceae)
 M. Melkonian, I.B. Reize, and H.R. Preisig (With 8 Figures) 102

Protein Synthesis in Chloroplasts
 A. Boschetti, E. Breidenbach, S. Leu, and J. Clemetson-Nussbaum (With 6 Figures) 114

Comparison of Envelope Membranes from Higher Plants and Algae Plastids and of Outer Membranes from Cyanobacteria (Blue-Green Algae) J. Joyard, M.A. Block, A.-J. Dorne, and R. Douce (With 1 Figure).	123
Regulation of Chloroplast Differentiation: Cooperation Between Light-Induced Processes and Internal Adaptation P. Brandt, J. Winter, B. von Kessel, and B. Kohnke (With 9 Figures)	134
Interaction of Nuclear and Chloroplast Mutations in Biogenesis of Chloroplast Ribosomes in <i>Chlamydomonas</i> E.H. Harris, J.E. Boynton, and N.W. Gillham (With 3 Figures)	142
Evidence for Multiple Functions of the Intrinsic, 32-34 kDa Chloroplast Membrane Polypeptide of <i>Scenedesmus</i> in Photosystem II Reactions N.I. Bishop (With 4 Figures)	150
"Life Cycle" of the 32 kDa-Protein of <i>Chlamydomonas</i> Chloroplasts R. Hartmann and M. Wettren (With 7 Figures)	156
Two Different Forms of LHC in the Green Alga <i>Chlamydomonas stellata</i> B. Kohnke, P. Brandt, K. Kloppstech, D. Mende, A. Radunz, and W. Wiessner (With 8 Figures)	164
Taxonomic Index	177
Subject Index	181