

The Plant Cytoskeleton

[DOWNLOAD HERE](#)

1;Preface;6 2;Contents;8 3;Contributors;10 4;Part I Molecular Basis of the Plant Cytoskeleton;14
4.1;Chapter 1: Actin Functions in the Cytoplasmic and Nuclear Compartments;15 4.1.1;1.1
Introduction;15 4.1.2;1.2 Evolutionary Origin and Phylogeny of Plant Actins and Actin Binding Proteins;16
4.1.3;1.3 The Actin Cytoskeleton in Plant Cell Polarity and Elongation;19 4.1.3.1;1.3.1 Genetic Studies
Demonstrate the Role of Actin and ABP Variants in Cell Polarity and Elongation;19 4.1.3.2;1.3.2 F-Actin
Filament Dynamics and Cell Elongation;22 4.1.3.3;1.3.3 Protein Variant Differences vs. Gene
Regulation;25 4.1.3.4;1.3.4 Protein Protein Interactions Among Actin and ABP Families;28 4.1.3.5;1.3.5
Organelle Streaming and Vesicle Movement Within a Relatively Stationary Cytoplasm;29 4.1.4;1.4
Nuclear Actin;31 4.1.4.1;1.4.1 History of Nuclear Actin Research;31 4.1.4.2;1.4.2 Plant Actin and ABPs in
the Nucleus;31 4.1.4.3;1.4.3 Molecular Genetic Functions of Nuclear Actin;33 4.1.4.4;1.4.4 Epigenetic
Functions for Actin in the Assembly of Chromatin Remodeling and Modifying Complexes;33 4.1.5;1.5
Actins and ADFs in Signal Transduction;35 4.1.6;References;37 4.2;Chapter 2: Plant Myosins;45
4.2.1;2.1 Introduction;45 4.2.2;2.2 Domain Structures of Plant Myosin Heavy Chains;47 4.2.3;2.3 The
Motor Domain;48 4.2.4;2.4 The Directional Determinant of Organelle Transport by the Polarity of Acitn
Filaments;49 4.2.5;2.5 The Neck Domain;50 4.2.6;2.6 a-Helical Coiled-Coil Domain in the Tail Region;51
4.2.7;2.7 Processive Movement of Higher Pant Myosin XI;53 4.2.8;2.8 Regulation of Higher Plant Myosin
XI Through CaM Light Chain;54 4.2.9;2.9 Regulation of Cytoplasmic Streaming or Organelle Transports
in Pollen Tubes;55 4.2.10;2.10 Globular Tail Domain;55 4.2.11;2.11 The Mechanism for Cargo
Recognition by Higher Plant Myosin XI;56 4.2.12;2.12 Functional Inter-Domain Communication Between
a-Helical Coiled-Coil and Globular Tail Domains;58 4.2.13;2.13 Direct Binding of Chara Myosin XI to
Phospholipid Vesicles;59 4.2.14;2.14 Cytoplasmic Streaming in Characean Cells;59 4.2.15;2.15 The
Regulation of Cytoplasmic Streaming in the Characean Cell;60 4.2.16;2.16 Cytoplasmic Streaming in
Higher Plant Cells;61 4.2.17;2.17 Conclusion;62 4.2.18;References;63 4.3;Chapter 3: Actin-Binding
Proteins and Actin Dynamics in Plant Cells;69 4.3.1;3.1 Introduction;70 4.3.2;3.2 Profilin;71 4.3.3;3.3
Arp2/3 Complex and Its Regulatory WAVE Complex;73 4.3.4;3.4 Formin;75 4.3.5;3.5 Capping Protein

(CP);77 4.3.6;3.6 Actin Depolymerizing Factors (ADFs);78 4.3.7;3.7 Villin/Gelsolin/Fragmin Superfamily Proteins;80 4.3.8;3.8 Conclusions;83 4.3.9;References;84 4.4;Chapter 4: Microtubule Nucleation and Organization in Plant Cells;93 4.4.1;4.1 Introduction;93 4.4.2;4.2 Microtubule Nucleation Sites in Land Plant Cells;93 4.4.2.1;4.2.1 Patterns of Microtubules in the Cell Cycle of Land Plants;93 4.4.2.2;4.2.2 Microtubule Nucleation in Interphase Cells;95 4.4.2.2.1;4.2.2.1 Nucleation Sites for the Cortical Array;95 4.4.2.2.2;4.2.2.2 Nucleation Sites for the Radial Array;96 4.4.2.3;4.2.3 Microtubule Nucleation for Preprophase Band Development;96 4.4.2.4;4.2.4 Microtubule Nucleation in Mitosis;97 4.4.2.4.1;4.2.4.1 Three Pathways in Metazoan Cells;97 4.4.2.4.2;4.2.4.2 Origin of Spindle Microtubules at Prophase;98 4.4.2.4.3;4.2.4.3 Microtubule Nucleation Sites During Spindle Development;98 4.4.2.5;4.2.5 Microtubule Nucleation in Cytokinesis;99 4.4.3;4.3 Proteins Involved in Microtubule Nucleation;99 4.4.3.1;4.3.1 g-Tubulin Complexes;99 4.4.3.2;4.3.2 Other Centrosomal Proteins;100 4.4.3.3;4.3.3 Is There g-Tubulin-Independent Nucleation?;101 4.4.4;4.4 Role of Microtubule Nucleation in Microtubule Organization;101 4.4.5;4.5 Concluding Remarks;102 4.4.6;References;103 4.5;Chapter 5: Microtubule Plus End-Tracking Proteins and Their Activities in Plants;107 4.5.1;5.1 Introduction;107 4.5.2;5.2 Microtubule Structure and Dynamics;109 4.5.3;5. EAN/ISBN : 9781441909879 Publisher(s) : Springer, Berlin, Springer Science & Business Media Discussed keywords: Pflanzenzelle Format: ePub/PDF Author(s): Liu, Bo

[DOWNLOAD HERE](#)

Similar manuals:

[The Plant Cytoskeleton](#)