

---

# Contents

<i>Preface</i> .....	v
<i>Contributors</i> .....	xi
1 Using Bioinformatics and Molecular Biology to Streamline Construction of Effector Libraries for Phytopathogenic <i>Pseudomonas syringae</i> Strains .....	1
<i>Jay Jayaraman, Morgan K. Halane, Sera Choi, Honour C. McCann, and Kee Hoon Sohn</i>	
2 Immunoprecipitation Under Non-Denaturing or Denaturing Conditions of Lysine-Acetylated Proteins Expressed <i>in Planta</i> .....	13
<i>Maxime Escouboué and Laurent Deslandes</i>	
3 Protein Acetylation in Pathogen Virulence and Host Defense: In Vitro Detection of Protein Acetylation by Radiolabeled Acetyl Coenzyme A .....	23
<i>Karl J. Schreiber and Jennifer D. Lewis</i>	
4 A Novel Assay Based on Confocal Microscopy to Test for Pathogen Silencing Suppressor Functions .....	33
<i>Mustafa Adhab and James E. Schoelz</i>	
5 Quantification of Extracellular ATP in Plant Suspension Cell Cultures .....	43
<i>Sowmya R. Ramachandran, Sonika Kumar, and Kiwamu Tanaka</i>	
6 Measuring Pectin Properties to Track Cell Wall Alterations During Plant–Pathogen Interactions .....	55
<i>Gerit Bethke and Jane Glazebrook</i>	
7 Method to Study Dynamics of Membrane-Bound Plant Transcription Factors During Biotic Interactions in Tomato .....	61
<i>Supriyo Chowdhury, Payel Bhattacharjee, Shrabani Basak, Shreya Chowdhury, and Pallob Kundu</i>	
8 Preparation of Plant Material for Analysis of Protein–Nucleic Acid Interactions by FRET-FLIM .....	69
<i>Maxime Escouboué, Laurent Camborde, Alain Jauneau, Elodie Gaulin, and Laurent Deslandes</i>	
9 Analysis of DNA Methylation Profile in Plants by Chop-PCR .....	79
<i>Pratiti Dasgupta and Shubho Chaudhuri</i>	
10 Change in Nucleosome Dynamics During Stress Responses in Plants .....	91
<i>Amit Paul and Shubho Chaudhuri</i>	
11 Measuring Cell Ploidy Level in <i>Arabidopsis thaliana</i> by Flow Cytometry .....	101
<i>Leiyun Yang, Zhixue Wang, and Jian Hua</i>	
12 A Method for Investigating the <i>Pseudomonas syringae</i> - <i>Arabidopsis thaliana</i> Pathosystem Under Various Light Environments .....	107
<i>Daniel L. Leuchtman, Anthony D. Shumate, Walter Gassmann, and Emmanuel Liscum</i>	

13	Isolation and Characterization of Plant Metabolite Signals that Induce Type III Secretion by the Plant Pathogen <i>Pseudomonas syringae</i> . . . . .	115
	<i>Conner J. Rogan and Jeffrey C. Anderson</i>	
14	Quantification of Cauline Leaf Abscission in Response to Plant Pathogens . . . . .	127
	<i>O. Rahul Patharkar</i>	
15	Methods for Replicating Leaf Vibrations Induced by Insect Herbivores . . . . .	141
	<i>Sabrina C. J. Michael, Heidi A. Appel, and Reginald B. Cocroft</i>	
16	Infection Assay for <i>Xanthomonas campestris</i> pv. <i>campestris</i> in <i>Arabidopsis thaliana</i> Mimicking Natural Entry via Hydathodes . . . . .	159
	<i>Marieke van Hulten, Sayantani Chatterjee, and Harrold A. van den Burg</i>	
17	The Apple Fruitlet Model System for Fire Blight Disease . . . . .	187
	<i>Sara M. Klee, Judith P. Sinn, and Timothy W. McNellis</i>	
18	Generating Transgenic <i>Arabidopsis</i> Plants for Functional Analysis of Pathogen Effectors and Corresponding R Proteins . . . . .	199
	<i>Sharon Pike, Walter Gassmann, and Jianbin Su</i>	
19	Identification of Novel Pararetroviral Promoters for Designing Efficient Plant Gene Expression Systems . . . . .	207
	<i>Ankita Shrestha, Ahamed Khan, and Nrisingha Dey</i>	
20	Biochemical and Molecular Characterization of Novel Pararetroviral Promoters in Plants. . . . .	223
	<i>Ahamed Khan, Ankita Shrestha, and Nrisingha Dey</i>	
21	Sampling and Handling of Soil to Identify Microorganisms with Impacts on Plant Growth . . . . .	237
	<i>Robert J. Kremer</i>	
22	A New Strategy for the Selection of Epiphytic and Endophytic Bacteria for Enhanced Plant Performance. . . . .	247
	<i>Eduardo Balsanelli, Vânia Carla Pankievicz, Valter Antonio Baura, Fábio de Oliveira Pedrosa, and Emanuel Maltempi de Souza</i>	
	<i>Index</i> . . . . .	257