

2736-7072

# Homologous Recombination and Gene Silencing in Plants

Edited by

Jerzy Paszkowski

*Friedrich Miescher Institute, Basel, Switzerland*



**KLUWER ACADEMIC PUBLISHERS**  
DORDRECHT / BOSTON / LONDON

# Table of contents

Preface	vii
List of contributors	ix
1. Genetic RNA-RNA recombination in positive-stranded RNA viruses of plants <i>Jozef J. Bujarski and Peter D. Nagy</i>	1
2. Recombination of a plant pararetrovirus: Cauliflower mosaic virus <i>Thomas Hohn</i>	25
3. Recombination in geminiviruses: Mechanisms for maintaining genome size and generating genomic diversity <i>David M. Bisaro</i>	39
4. Recombination of plant mitochondrial genomes <i>Patricia L. Conklin and Maureen R. Hanson</i>	61
5. Homologous recombination and integration of foreign DNA in plastids of higher plants <i>Pal Maliga, Jeffrey Staub, Helaine Carrer, Ivan Kanevski and Zora Svab</i>	83
6. Intrachromosomal recombination between genomic repeats <i>Conrad P. Lichtenstein, Jerzy Paszkowski and Barbara Hohn</i>	95
7. Substrate specificity of plant recombinases determined in extra-chromosomal recombination systems <i>Holger Puchta and Peter Meyer</i>	123
8. Plant genes and proteins involved in homologous recombination <i>Alain F. Tissier and Ethan R. Signer</i>	157
9. Homology recognition during T-DNA integration into the plant genome <i>Csaba Koncz, Kinga Németh, George P. Rédei and Jeff Schell</i>	167
10. Gene replacement in plants <i>Stephan Ohl, Remko Offringa, Peter J.M. van den Elzen and Paul J.J. Hooykaas</i>	191
11. Use of site-specific recombination systems in plants <i>Joan T. Odell and Sandra H. Russell</i>	219

12. Inactivation of repeated genes – DNA-DNA interaction? 271  
*Marjori Matzke, Antonius J.M. Matzke and Ortrun Mittelsten Scheid*
13. Post-transcriptional inhibition of gene expression: Sense and anti-sense genes 309  
*Joseph N.M. Mol, Rik van Blokland, Pieter de Lange, Maike Stam and Jan M. Kooter*
14. Silencing of chitinase expression in transgenic plants: An autoregulatory model 335  
*Frederick Meins Jr. and Christian Kunz*
15. Inactivation of maize transposable elements 349  
*Nina V. Fedoroff and Vicki Chandler*