

Contents

List of contributors	ix
1. Plants as sources of valuable products	1
<i>J. David Phillipson</i>	
2. Physiology of secondary product formation in plants	23
<i>Michael Wink</i>	
3. Manipulating the biosynthetic capacity of plant cell cultures	43
<i>Hans Becker and Martina Sauerwein</i>	
4. Transport and vacuolar storage of secondary metabolites in plant cell cultures	59
<i>J.P. Renaudin and J. Guern</i>	
5. Turnover and storage of secondary products in cell cultures	79
<i>W. Barz, A. Beimen, B. Dräger, U. Jaques, Ch. Otto, E. Süper, and B. Upmeyer</i>	
6. Regulation of secondary metabolism at the biochemical and genetic levels	103
<i>Richard A. Dixon and Christopher J. Lamb</i>	
7. Screening and selection for variant cell lines with increased levels of secondary metabolites	119
<i>Jochen Berlin</i>	

8. Exploitation of disorganized plant cultures for the production of secondary metabolites	139
<i>M.M. Yeoman, M.A. Holden, P. Corchet, P.R. Holden, J.G. Goy, and M.C. Hobbs</i>	
9. Accumulation of secondary compounds by organized plant cultures	167
<i>Barry V. Charlwood, Katharine A. Charlwood, and Jorge Molina-Torres</i>	
10. Properties of transformed root cultures	201
<i>M.J.C. Rhodes, R.J. Robins, J.D. Hamill, A.J. Parr, M.G. Hilton, and N.J. Walton</i>	
11. Biochemistry of alkaloid production <i>in vitro</i>	227
<i>Yasuyuki Yamada, Takashi Hashimoto, Tsuyoshi Endo, Yukihiro Yukimune, Junko Kohno, Nobuko Hamaguchi, and Birgit Dräger</i>	
12. Fermentation systems for plant cells	243
<i>A.H. Scragg</i>	
13. Commercial aspects of the production of secondary compounds by immobilized plant cells	265
<i>A.J. Lambie</i>	
Index	279