
Contents

Preface	v
Contributors	ix
1 An Overview of Adjuvant Use	1
Robert Edelman	
2 Harmful and Beneficial Activities of Immunological Adjuvants	29
Duncan E. S. Stewart-Tull	
3 Freund's Adjuvants	49
Erik B. Lindblad	
4 Aluminum Compounds as Vaccine Adjuvants	65
Rajesh K. Gupta and Bradford E. Rost	
5 Poly(Lactide-Coglycolide) Microparticles As Vaccine Adjuvants	91
Derek T. O'Hagan and Manmohan Singh	
6 Poly(Methyl Methacrylate) Nanoparticles as Vaccine Adjuvants	105
Jörg Kreuter	
7 Aqueous Formulation of Adjuvant-Active Nonionic Block Copolymers	121
Charles W. Todd and Mark J. Newman	
8 Liposomes As Immunological Adjuvants and Vaccine Carriers	137
Gregory Gregoriadis, Brenda McCormack, Mia Obrenovic, Yvonne Perrie, and Roghieh Saffie	
9 Immunopotentiating Reconstituted Influenza Virosomes (IRIVs)	151
Reinhard Glöck	
10 Cochleates for Induction of Mucosal and Systemic Immune Responses	179
Susan Gould-Fogerite and Raphael J. Mannino	
11 Virus-like Particles As Vaccine Adjuvants	197
Sarah C. Gilbert	
12 The Adjuvant MF59: A 10-Year Perspective	211
Gary Ott, Ramachandran Radhakrishnan, Jia-Hwa Fang, and Maninder Hora	

13	Preparation of the Syntex Adjuvant Formulation (SAF, SAF-m, and SAF-1)	229
	Deborah M. Lidgate	
14	The ISCOM™ Technology	239
	Karin Lövgren-Bengtsson and Bror Morein	
15	QS-21 Adjuvant.....	259
	Charlotte Read Kensil	
16	MPL® Immunostimulant: <i>Adjuvant Formulations</i>	273
	J. Terry Ulrich	
17	Cytokines As Vaccine Adjuvants: <i>The Use of Interleukin-2</i>	283
	Martin A. Giedlin	
18	DNA As an Adjuvant	299
	David C. Neujahr and David S. Pisetsky	
19	Transcutaneous Immunization	315
	Gregory M. Glenn, Tanya Scharton-Kersten, and Russell Vassell	
20	Mutant Heat-Labile Enterotoxins As Adjuvants for CTL Induction.....	327
	Jason A. Neidleman, Gary Ott, and Derek O'Hagan	
	Index	337