

Contents

List of abbreviations

xiii

Part 1 The infectious organisms

1. Introduction: parasites, pathogens, and immunity	3
2. Viruses	11
3. Bacteria	19
4. Fungi	27
5. Protozoa	31
6. Helminths (worms)	39
7. Prions	47
8. Disease: virulence and susceptibility	49
Tutorial 1	57

Part 2 The immune system

9. External defences: entry and exit	61
10. The immune system: introduction	69
11. Innate immunity	77
12. How pathogens escape innate immunity	95
13. Disease due to innate immunity	101
14. Immunodeficiency I: primary defects of innate immunity	107
Tutorial 2	113
15. Adaptive immunity: introduction	117
16. B cells and antibody	125
17. T cells and the MHC	135
18. The antibody response	147
19. Cell-mediated responses	157
20. Regulation of immune responses and memory	167
21. How pathogens escape adaptive immunity	175
22. Disease due to adaptive immunity I: hypersensitivity	185
23. Disease due to adaptive immunity II: autoimmunity	193

24.	Immunodeficiency II: primary defects of adaptive immunity	201
25.	Immunodeficiency III: secondary immunodeficiency and AIDS	207
	Tutorial 3	217

Part 3 The host–pathogen balance

26.	Epidemiology	223
27.	Control of infectious disease: vaccination	231
28.	Control of infectious disease: chemotherapy	243
29.	Control of infectious disease: public health measures	251
30.	Viral and prion disease and immunity	255
31.	Bacterial disease and immunity	261
32.	Fungal disease and immunity	271
33.	Protozoal disease and immunity	275
34.	Helminth disease and immunity	281
35.	Emerging and future infectious diseases	285
	Tutorial 4	291
	 <i>Appendix 1. The major pathogens of man</i>	 295
	<i>Appendix 2. Cytokines</i>	297
	<i>Appendix 3. CD molecules</i>	299
	<i>Further reading</i>	301
	<i>Index</i>	307