CONTENT

I. GENETICS OF BACTERIAL ADHESINS	
Minor pilus components acting asadheesisns	3
Regulation and biogenesis of digalactoside-binding pili	13
Genetics and biogenesis of the k88ab and K99 fimbrial adhesisns	19
Two modes of control of pilA, the gene encoding type 1 Pilim in Escherichia coli	27
Structural variation of a P-fimbriae from uropathogenic Escherichia coli	39
The fim genes of Escherichia coli K-12: Aspects of structure, organization and expression	47
Poster Session	
Transfer of the plasmid-mediating AF/R1 pili from enrteropathogenic Esceerichia coli	
srtrain RDEC-1	51
Molecular clonign of the CS3 fimbriae determinant of enterotoxigenic Escherichia coli	
Of serotype 06:K 15:H16 or H	53
Mahnnose-resistant haemagglutination gene(s) of Salmonella typhimurium	55
Regulatory aspects of the K99 fimbriae syntyhesis	57
Characterization and cloning of non-fimbrial protein adhesions of two Escherichia	
coli strains of human origin	61
II. ANTIGENIC VARIATION OF BACTERIAL ADHESINS	
Regulation and production of Neisseria gkonorrhoeae pilus phase and antigenic variation	65
Structural model for Neisseria gonorrhoeae pilin and identification of a non-pilin-mediated	
Glycolipid binding activity	73
Genomic organization of pilus and opacity genes in Neisseria gonorrhoeae	81
Antigenetic variation of gonococcal surface proteins: effect on virulence	89
Serological variants of the K88 antigen	95
Novel type I fimbriae of Salmonella enteritidis	103
Prospects for a gonorrhoea vaccine based on gonococcal adhesisns	109
POSTER SESSION	
Characterization of fikmbriae from Bacteroides fragilis	113
Monoclonal antibodies raised against five different P fimbriae and type IA and IC fimbriae	117
Antigenic and fuctional properties of P- and X-haemagglutinins of extra-kintestinal Escherichia	
coli	119
III. ROLE OF PILI AND ADHESINS IN PATHOGENICITY	
Genetic and in vivo studies with S-fimbriae antigens and related virulence determinants	
Of extra-intestianal Excherichia coli strains	125
Bacterial attachment to glycoconjugate receptors: Uropathogenic Escericia coli	135

Fimbriae (pili) adhesins as vaccines	143
Development of enteric vaccines based on synergism between antitoxin and anti-colonization	
Immunity	147
POSTER SESSION	
Pilus-mediated interactions of the Escherichia coli strain RDEC-1 with intestinal mucus	155
The role of fimbriae of uropatghogenic Escherichia coli as carriers of the adhesin involved	
In mannose-resistant haemagglutination	157
Carriage of th emannose-resistant haemagglutination gene by an R-plasmid which kpersists	
Through a recurrent urinary tract infection	161
IV.CARBOHYDRATE RECEPTORS: IDENTIFICATION, ANALYSIS ANI)
THEIR BIOLOGICAL ROLE	
Monocional antiboldies to bacterial O-antigens in combination with synthetic glycoconjugaates	
For mapping the combined site	165
Protein-carbohydrate interactions: the substrate specificity of amyloglycosidase (EC 3.2.1.3)	173
0.17 mm X-ray structure of an L-arabinose bindin gprotein-ligand complex: detailed new	
understandin gof protein –sugar interactions	183
Protein-bond carbohydrate involvement in plasma membrane assembly: The retinal rod	
Photoreceptor cell as a model	191
Fine dissection of binding epitopes on carbohydrate receptors for microbiological ligands	207
Snthesis of neo-glcoconjugates	215
POSTER SESSION	
Host-parasite interactions underlying non-secretion of blood group antigens and susceptibility to	
Recurrent urinary tract infections	229
Host-parasite interactions underlyoing non-secretion of blood group antigens and susceptibility	
To infections by Candida albicans	231
Influence of secretor status on the availability of receptors for attaching Escherichia coli	239
Pertussis toxin: identification of the carbohydrate receptor	241
V. ADHESINS: THEIR RECEPTORS AND INTERACTIONS	
Fimbrial phase variationo in Escherichia coli: a mechanism of bacterial virulence?	245
Characte4rization and receptor binding specificity of the X-binding UTI Excherichia coli adhesion	1
AFA-I	253
Characterization of a fibronectin binding protein of Staphylococcus aurous	263
Biophysical properties of adhesins and other surface antigens	269
Interaciton of bacterial adhesins with inflammatory cells	275
POSTER SESSION	
Breast milk inhibition of adhesion of S. pnekumoniae and H. inflenzae	281
Fimbriae of Rhizobium leguminosarum and Rhizobium trifolii	285
Adhesikon of an ETEC strain mediated by a non-fimbrial adhesin	287
Fimbriae fo Bordetella pertussis	291
Structrure-fkunction relationships in diphtheria toxin as deduced from the sequence of three non-	

Toxic nutants	295
Conformation of small peptides in solution, determined by N.M.R. spectroscopy and computer	
Simulation	397
	397

VI. BACTERIAL INVASION

303
311
317
329
335
343
351
354

VII. BACTERIAL SURFACE COMPONENTS AND THEIR IMPORTANCE FOR VIRULENCE

Genetic basis of virulence and type b capsule expression in Haemophilus influenzae	361	
Identification of Mycoplasma hyopneumoniae proteins from an Escerichi coli expression library		
And analysis of transcription and translation signals	369	
Nutritional character, O antigen, cryptic plasmid and manose resistant adhesin-relevance to virule	nce	
Of Salmonella	375	
POSTER SESSION		
The protective effect of monoclonal antibodies directed against gonococcal outer		
membrane protein IB	381	
Virulence factorsa in avian Escherichia coli	383	
Virulence and congo red binding ability encoded by the 140MD plasmid of Shigella flexneri 2a	387	
Virulence factors of uropathogenic Escherichia coli	389	
Capsular polysaccharide structures of Pasteurella haemolytica and their potential as virulence		
Factors	391	
Monoclonal antibodies to weak immunogenic Escherichia coli and meningococcal capsular		
Polysaccharides	395	
VIII. BACTERIAL TOXINS AND RECEPTORS		
Potoaffinity labelling and site-directed mutagenesis of an active site residue of diphtheria toxin	399	
Genetics of cholera toxin	407	
Mechanisms of enterotoxin secretion from Escherichia coli and Vibrio cholerae	415	
Identification of the Escherichia coli heat-stable enterotoxin receptor on rat intestinal brush border		
Membranes	423	
The Escherichia coli haemolysin: its gene organization and interaction with neutrophil receptors	431	

TOXIN AND ADDITIONAL POSTER SESSION

Application of multilocus enzyme gel electrophoresis to Haemophilus influenzae	447
Antibiotics are necessary for plasmid isoliation from Clostridium difficile	451
Translocatable kanamycin resistance in Campylobacter	453
Genetic studies on the production of Shiga-like toxin	455
Index	457