

# INFECTION AND IMMUNITY

Volume 57

October 1989

No. 10

## BACTERIAL INFECTIONS AND IMMUNITY

- Surface-Exposed and Antigenically Conserved Determinants of Outer Membrane Proteins of *Branhamella catarrhalis*.** Timothy F. Murphy and Linda C. Bartos ..... 2938–2941
- Immunochemical and Structural Characterization of a Serotype-Specific Polysaccharide Antigen from *Actinobacillus actinomycetemcomitans* Y4 (Serotype b).** Katsuhiko Amano, Tatsuji Nishihara, Naoto Shibuya, Toshihide Noguchi, and Toshihiko Koga..... 2942–2946
- Antibody Response to *Ehrlichia risticii* and Antibody Reactivity to the Component Antigens in Horses with Induced Potomac Horse Fever.** Sukanta K. Dutta, Bonnie L. Mattingly, and Basavaraju Shankarappa ..... 2959–2962
- Antichlamydial Specificity of Conjunctival Lymphocytes during Experimental Ocular Infection.** Judith A. Whittum-Hudson and Hugh R. Taylor..... 2977–2983
- Treatment of Mice with Human Recombinant Interleukin-2 Augments Resistance to the Facultative Intracellular Pathogen *Listeria monocytogenes*.** Mary Haak-Frendscho, Karen M. Young, and Charles J. Czuprynski ..... 3014–3021
- Intraperitoneal Host Cellular Responses and In Vivo Killing of *Bacteroides fragilis* in a Bacterial Containment Chamber.** Andrew B. Onderdonk, Ronald L. Cisneros, Joseph H. Crabb, Robert W. Finberg, and Dennis L. Kasper .... 3030–3037
- Antigenic Drift of *Haemophilus influenzae* in Patients with Chronic Obstructive Pulmonary Disease.** Kees Groeneveld, Loek van Alphen, Christina Voorter, Paul P. Eijk, Henk M. Jansen, and H. C. Zanen ..... 3038–3044
- Differences in Adhesion of *Pseudomonas aeruginosa* to Mucin Glycopeptides from Sputa of Patients with Cystic Fibrosis and Chronic Bronchitis.** Reuben Ramphal, Nichole Houdret, Lilia Koo, Genevieve Lamblin, and Philippe Roussel ..... 3066–3071
- Antigenic and Genetic Relatedness of Eight *Rickettsia tsutsugamushi* Antigens.** Edwin V. Oaks, Robert M. Rice, Daryl J. Kelly, and C. Ken Stover ..... 3116–3122
- Cloning, Sequence Determination, and Expression of a 32-Kilodalton-Protein Gene of *Mycobacterium tuberculosis*.** Martine Borremans, Luk De Wit, Guido Volckaert, Josette Ooms, Jacqueline De Bruyn, Kris Huygen, Jean-Paul Van Vooren, Martine Stelandre, Roger Verhofstadt, and Jean Content ..... 3123–3130
- Generation of Monoclonal Antibodies to the Specific Sugar Epitopes of *Mycobacterium avium* Complex Serovars.** Becky Rivoire, Barbara J. Ranchoff, Delphi Chatterjee, Harvey Gaylord, Anna Y. Tsang, Arend H. J. Kolk, Gerald O. Aspinnall, and Patrick J. Brennan ..... 3147–3158
- Activation of Macrophages in an Experimental Rat Model of Arthritis Induced by *Erysipelothrix rhusiopathiae* Infection.** Harald Renz, Uwe Gentz, Anette Schmidt, Thomas Dapper, Marianne Nain, and Diethard Gemsa..... 3172–3180
- Fusion of Inclusions following Superinfection of HeLa Cells by Two Serovars of *Chlamydia trachomatis*.** John C. Ridderhof and Robert C. Barnes..... 3189–3193
- Coaggregation of *Fusobacterium nucleatum*, *Selenomonas flueggei*, *Selenomonas infelix*, *Selenomonas noxia*, and *Selenomonas sputigena* with Strains from 11 Genera of Oral Bacteria.** Paul E. Kolenbrander, Roxanna N. Andersen, and Lillian V. H. Moore..... 3194–3203

Continued on following page

<b>Inhibition of Coaggregation between <i>Fusobacterium nucleatum</i> and <i>Porphyromonas (Bacteroides) gingivalis</i> by Lactose and Related Sugars.</b> Paul E. Kolenbrander and Roxanna N. Andersen .....	3204–3209
<b>Immunological Responsiveness of Chinchillas to Outer Membrane and Isolated Fimbrial Proteins of Nontypeable <i>Haemophilus influenzae</i>.</b> Lauren O. Bakaletz, Barbara M. Tallan, Witold J. Andrzejewski, Thomas F. DeMaria, and David J. Lim .....	3226–3229
<b>Spontaneous Mutation Results in Loss of the Cytadhesin (P1) of <i>Mycoplasma pneumoniae</i>.</b> Chung-Jey Su, Arturo Chavoya, and Joel B. Baseman .....	3237–3239
<b>Identification of an Immunodominant Antigenically Conserved 32-Kilodalton Protein from <i>Cowdria ruminantium</i>.</b> Frans Jongejan and Marion J. C. Thielemans .....	3243–3246

#### FUNGAL AND PARASITIC INFECTIONS AND IMMUNITY

<b>Characterization of the Macrophage Subset Affected and Its Response to a T Suppressor Factor (TsFmp) Found in Cryptococcosis.</b> Rebecca Blackstock and Nancy C. Hernandez .....	2931–2937
<b>In Vivo Activation of Peripheral Blood Polymorphonuclear Neutrophils by Gamma Interferon Results in Enhanced Fungal Killing.</b> Christine J. Morrison, Elmer Brummer, and David A. Stevens .....	2953–2958
<b>Identification of Antigens Recognized by T Cells in Human Leishmaniasis: Analysis of T-Cell Clones by Immunoblotting.</b> Peter C. Melby and David L. Sacks .....	2971–2976
<b><i>Trichomonas vaginalis</i> Surface Proteinase Activity Is Necessary for Parasite Adherence to Epithelial Cells.</b> Rossana Arroyo and John F. Alderete .....	2991–2997
<b>Purification and Characterization of a 27,000-<i>M<sub>r</sub></i> Extracellular Proteinase from <i>Trichophyton rubrum</i>.</b> Gerard Apodaca and James H. McKerrow .....	3072–3080
<b>Regulation of <i>Trichophyton rubrum</i> Proteolytic Activity.</b> Gerard Apodaca and James H. McKerrow .....	3081–3090
<b>Comparison of T-Cell Responses in Self-Limiting versus Progressive Visceral <i>Leishmania donovani</i> Infections in Golden Hamsters.</b> Chaltu Gifawesen and Jay P. Farrell .....	3091–3096
<b>Augmentation of the Neutrophil Response to <i>Naegleria fowleri</i> by Tumor Necrosis Factor Alpha.</b> Antonio Ferrante .....	3110–3115
<b><i>Plasmodium falciparum</i> Schizont Sonic Extracts Suppress Lymphoproliferative Responses to Mitogens and Antigens in Malaria-Immune Adults.</b> Eleanor M. Riley, Ousman Jobe, Michael Blackman, Hilton C. Whittle, and Brian M. Greenwood .....	3181–3188
<b>Release of Merozoite Dense Granules during Erythrocyte Invasion by <i>Plasmodium knowlesi</i>.</b> Motomi Torii, John H. Adams, Louis H. Miller, and Masamichi Aikawa .....	3230–3233
<b>Antigenic Variation within Serotypes of <i>Cryptococcus neoformans</i> Detected by Monoclonal Antibodies Specific for the Capsular Polysaccharide.</b> Christina Spiropulu, Robin A. Eppard, Elmer Otteson, and Thomas R. Kozel .....	3240–3242
<b>Effect of Glutaraldehyde Fixation on Cell Surface Binding Capacity of <i>Candida albicans</i>.</b> Jozef Mleczko, Larry L. Litke, Hal S. Larsen, and W. LaJean Chaffin .....	3247–3249
<b>Beta Interferon Inhibits <i>Toxoplasma gondii</i> Growth in Human Monocyte-Derived Macrophages.</b> John L. Schmitz, Joseph M. Carlin, Ernest C. Borden, and Gerald I. Byrne .....	3254–3256

**Efficacy of Interleukin-1 $\beta$  against Systemic *Candida albicans* Infections in Normal and Immunosuppressed Mice.** Ruth A. Pecyk, Elizabeth B. Fraser-Smith, and Thomas R. Matthews. . . . . 3257–3258

VIRULENCE FACTORS, PATHOGENESIS, AND HOST RESPONSE

**Host Response to *Escherichia coli* Heat-Labile Enterotoxin via Two Microvillus Membrane Receptors in the Rat Intestine.** Boris V. Zemelman, Shu-heh W. Chu, and W. Allan Walker . . . . . 2947–2952

**Identification of *Shigella* Invasion Genes by Isolation of Temperature-Regulated *inv::lacZ* Operon Fusions.** Alexander E. Hromockyj and Anthony T. Maurelli . . . . . 2963–2970

**Adhesion to and Invasion of HEp-2 Cells by *Campylobacter* spp.** Michael E. Konkel and Lynn A. Joens . . . . . 2984–2990

**Cloning and Expression of *Staphylococcus saprophyticus* Urease Gene Sequences in *Staphylococcus carnosus* and Contribution of the Enzyme to Virulence.** Sören Gatermann and Reinhard Marre . . . . . 2998–3002

**Pellicle Receptors for *Actinomyces viscosus* Type 1 Fimbriae In Vitro.** William B. Clark, J. Elaine Beem, Warren E. Nesbitt, John O. Cisar, C. C. Tseng, and Michael J. Levine . . . . . 3003–3008

**Regulation of Serum Tumor Necrosis Factor in Glucocorticoid-Sensitive and -Resistant Rodent Endotoxin Shock Models.** Steven H. Zuckerman and Alison M. Bendele . . . . . 3009–3013

**Type 1 Pili Are Not Necessary for Colonization of the Streptomycin-Treated Mouse Large Intestine by Type 1-Piliated *Escherichia coli* F-18 and *E. coli* K-12.** Beth A. McCormick, David P. Franklin, David C. Laux, and Paul S. Cohen . . . . . 3022–3029

**Identification of a Chromosomal Locus for Expression of Lipopolysaccharide Epitopes in *Haemophilus influenzae*.** Jeffrey N. Weiser, Alf A. Lindberg, E. Jane Manning, E. J. Hansen, and E. Richard Moxon. . . . . 3045–3052

**Inactivation of Botulinum and Tetanus Toxins by Chelators.** Satya D. Bhattacharyya and Hiroshi Sugiyama . . . . . 3053–3057

**Molecular Analysis of a Region of the Group B Streptococcus Chromosome Involved in Type III Capsule Expression.** Jane M. Kuypers, Laura M. Heggen, and Craig E. Rubens . . . . . 3058–3065

**Cloning and Sequencing of the Immunoglobulin A1 Protease Gene (*iga*) of *Haemophilus influenzae* Serotype b.** K. Poulsen, J. Brandt, J. P. Hjorth, H. C. Thøgersen, and M. Kilian . . . . . 3097–3105

**Chemical Differences in Lipopolysaccharides from *Actinobacillus (Haemophilus) actinomycetemcomitans* and *Haemophilus aphrophilus*: Clues to Differences in Periodontopathogenic Potential and Taxonomic Distinction.** Ilija Brondz and Ingar Olsen . . . . . 3106–3109

**Analysis of Endotoxin Fever in Rabbits by Using a Monoclonal Antibody to Tumor Necrosis Factor (Cachectin).** Hajime Kawasaki, Masami Moriyama, Yusaku Ohtani, Mariko Naitoh, Atsushi Tanaka, and Hideo Nariuchi . . . . . 3131–3135

**Functional Homology of Virulence Plasmids in *Salmonella gallinarum*, *S. pullorum*, and *S. typhimurium*.** Paul A. Barrow and Margaret A. Lovell . . . . . 3136–3141

**Purification, Composition, and Activity of Two Bactenecins, Antibacterial Peptides of Bovine Neutrophils.** Renato Gennaro, Barbara Skerlavaj, and Domenico Romeo . . . . . 3142–3146

<b>Characterization of the <i>Salmonella paratyphi</i> C Vi Polysaccharide.</b> Elaine M. Daniels, Rachel Schneerson, William M. Egan, Shousun C. Szu, and John B. Robbins .....	3159–3164
<b>Modulation of Leukotriene Generation by Pertussis Toxin.</b> T. Hensler, M. Raulf, F. Megret, J. E. Alouf, and W. König .....	3165–3171
<b>Immunoserological Comparison of 104-Kilodalton Proteins Associated with Hemolysis and Cytolysis in <i>Actinobacillus pleuropneumoniae</i>, <i>Actinobacillus suis</i>, <i>Pasteurella haemolytica</i>, and <i>Escherichia coli</i>.</b> J. Devenish, S. Rosendal, R. Johnson, and S. Hubler .....	3210–3213
<b>Human Hyperimmune Globulin Protects against the Cytotoxic Action of Staphylococcal Alpha-Toxin In Vitro and In Vivo.</b> Sucharit Bhakdi, Ute Mannhardt, Marion Muhly, Ferdinand Hugo, Hansjörg Ronneberger, and Klaus-Dieter Hungerer .....	3214–3220
<b>Evidence for Direct Regulation of Diphtheria Toxin Gene Transcription by an Fe<sup>2+</sup>-Dependent DNA-Binding Repressor, DtoxR, in <i>Corynebacterium diphtheriae</i>.</b> Geneviève Fourel, Armelle Phalipon, and Michel Kaczorek .....	3221–3225
<b>Virulence, Persistence, and Immunogenicity of <i>Yersinia enterocolitica</i> O:8 <i>aroA</i> Mutants.</b> Frances Bowe, Peadar O’Gaora, Duncan Maskell, Mary Cafferkey, and Gordon Dougan .....	3234–3236
<b>Immunolectron Microscopy of Lipopolysaccharide in <i>Chlamydia trachomatis</i>.</b> Svend Birkelund, Anker G. Lundemose, and Gunna Christiansen .....	3250–3253
<b>Relationship of <i>Haemophilus influenzae</i> Type b Pilus Structure and Adherence to Human Erythrocytes.</b> Janet R. Gilsdorf, W. John Judd, and Marianne Cinat .....	3259–3260