

INFECTION AND IMMUNITY

Volume 62

November 1994

No. 11

MOLECULAR AND CELLULAR PATHOGENESIS

- | | | |
|---|---|-----------|
| Invasion of Rabbit Ileal Tissue by <i>Enterobacter cloacae</i> Varies with the Concentration of OmpX in the Outer Membrane | G. de Kort, A. Bolton, G. Martin, J. Stephen, and J. A. M. van de Klundert | 4722-4726 |
| Cloning and Sequencing of a <i>Bordetella pertussis</i> Serum Resistance Locus | Rachel C. Fernandez and Alison A. Weiss | 4727-4738 |
| Localization of Binding Sites of Staphylococcal Enterotoxin B (SEB), a Superantigen, for HLA-DR by Inhibition with Synthetic Peptides of SEB | Jack L. Komisar, Shelia Small-Harris, and Jeenan Tseng | 4775-4780 |
| The Maltose Regulon of <i>Vibrio cholerae</i> Affects Production and Secretion of Virulence Factors | Hannu Lång, Gunhild Jonson, Jan Holmgren, and E. Tapio Palva | 4781-4788 |
| Age-Related Resistance to 987P Fimbria-Mediated Colonization Correlates with Specific Glycolipid Receptors in Intestinal Mucus in Swine | Evelyn A. Dean-Nystrom and James E. Samuel | 4789-4794 |
| Phosphatidylinositol-Specific Phospholipase C from <i>Listeria monocytogenes</i> Contributes to Intracellular Survival and Growth of <i>Listeria innocua</i> | William R. Schwan, Andreas Demuth, Michael Kuhn, and Werner Goebel | 4795-4803 |
| Virulence Factors Determine Attachment and Ingestion of Nonopsonized and Opsonized <i>Bordetella pertussis</i> by Human Monocytes | Wouter L. W. Hazenbos, Bernard M. van den Berg, Jan W. van't Wout, Frits R. Mooi, and Ralph van Furth | 4818-4824 |
| Protein D, the Glycerophosphodiester Phosphodiesterase from <i>Haemophilus influenzae</i> with Affinity for Human Immunoglobulin D, Influences Virulence in a Rat Otitis Model | Håkan Janson, Åsa Melhus, Ann Hermansson, and Arne Forsgren | 4848-4854 |
| Characterization and Virulence Analysis of Catalase Mutants of <i>Haemophilus influenzae</i> | William R. Bishai, Nathan S. Howard, Jerry A. Winkelstein, and Hamilton O. Smith | 4855-4860 |
| Identification of a New Locus Involved in Expression of <i>Haemophilus influenzae</i> Type b Lipooligosaccharide | Gregory P. Jarosik and Eric J. Hansen | 4861-4867 |
| <i>Chlamydia trachomatis</i> Serovar L2 Induces Protein Tyrosine Phosphorylation during Uptake by HeLa Cells | Svend Birkelund, Helle Johnsen, and Gunna Christiansen | 4900-4908 |
| Growth of <i>Moraxella catarrhalis</i> with Human Transferrin and Lactoferrin: Expression of Iron-Repressible Proteins without Siderophore Production | Anthony A. Campagnari, Kathryn L. Shanks, and David W. Dyer | 4909-4914 |
| Identification of <i>hifD</i> and <i>hifE</i> in the Pilus Gene Cluster of <i>Haemophilus influenzae</i> Type b Strain Eagan | Kirk W. McCrea, Wendy J. Watson, Janet R. Gilsdorf, and Carl F. Marrs | 4922-4928 |
| An Endo-Acting Proline-Specific Oligopeptidase from <i>Treponema denticola</i> ATCC 35405: Evidence of Hydrolysis of Human Bioactive Peptides | Pirkko-Liisa Mäkinen, Kauko K. Mäkinen, and Salam A. Syed | 4938-4947 |
| Fusions of Anthrax Toxin Lethal Factor with Shiga Toxin and Diphtheria Toxin Enzymatic Domains Are Toxic to Mammalian Cells | Naveen Arora and Stephen H. Leppla | 4955-4961 |
| <i>Salmonella typhimurium</i> Invasion of Epithelial Cells: Role of Induced Host Cell Tyrosine Protein Phosphorylation | Ilan Rosenshine, Sharon Ruschkowski, Vida Foubister, and B. Brett Finlay | 4969-4974 |

Continued on following page

Continued from preceding page

Sulfated Glycoconjugate Receptors for the <i>Bordetella pertussis</i> Adhesin Filamentous Hemagglutinin (FHA) and Mapping of the Heparin-Binding Domain of FHA	Julie H. Hannah, Franco D. Menozzi, Geneviève Renaud, Camille Loch, and Michael J. Brennan	5010–5019
Cloning, Sequencing, and Viscometric Adhesion Analysis of Heat-Resistant Agglutinin 1, an Integral Membrane Hemagglutinin from <i>Escherichia coli</i> O9:H10:K99	Peter Lutwyche, Rosemarie Rupps, John Cavanagh, R. Antony J. Warren, and Donald E. Brooks	5020–5026
Role of Alpha-Toxin in <i>Clostridium perfringens</i> Infection Determined by Using Recombinants of <i>C. perfringens</i> and <i>Bacillus subtilis</i>	Masaki Ninomiya, Osamu Matsushita, Junzaburo Minami, Haruhiko Sakamoto, Misao Nakano, and Akinobu Okabe	5032–5039
Primate Antibody Response to Immunotoxin: Serological and Computer-Aided Analysis of Epitopes on a Truncated Form of <i>Pseudomonas</i> Exotoxin	Donna M. Roscoe, Sun-Hee Jung, Itai Benhar, Lee Pai, B. K. Lee, and Ira Pastan	5055–5065
Further Characterization of the PhoP Regulon: Identification of New PhoP-Activated Virulence Loci	William J. Belden and Samuel I. Miller	5095–5101
Mammalian Cells Transfected with the Listeriolysin Gene Exhibit Enhanced Proliferation and Focus Formation	Andreas Demuth, Trinad Chakraborty, Georg Krohne, and Werner Goebel	5102–5111
<i>Vibrio cholerae</i> Iron Transport Systems: Roles of Heme and Siderophore Iron Transport in Virulence and Identification of a Gene Associated with Multiple Iron Transport Systems	Douglas P. Henderson and Shelley M. Payne	5120–5125
Some Structures and Processes of Human Epithelial Cells Involved in Uptake of Enterohemorrhagic <i>Escherichia coli</i> O157:H7 Strains	Tobias A. Oelschlaeger, Tim J. Barrett, and Dennis J. Kopecko	5142–5150
pH Changes during In Vitro Adherence of <i>Escherichia coli</i> to HeLa Cells	K. McCabe, M. D. Mann, and M. D. Bowie	5164–5167
Specificity of the Complement Resistance and Cell Association Phenotypes Encoded by the Outer Membrane Protein Genes <i>rck</i> from <i>Salmonella typhimurium</i> and <i>aif</i> from <i>Yersinia enterocolitica</i>	Edwin J. Heffernan, Lydia Wu, Janice Louie, Sharon Okamoto, Joshua Fierer, and Donald G. Guiney	5183–5186
Spatial Distribution of <i>Escherichia coli</i> in the Mouse Large Intestine Inferred from rRNA In Situ Hybridization	Lars K. Poulsen, Fusheng Lan, Claus S. Kristensen, Palle Hobolth, Søren Molin, and Karen A. Krogfelt	5191–5194

BACTERIAL INFECTIONS

Invasiveness and Persistence of <i>Salmonella enteritidis</i>, <i>Salmonella typhimurium</i>, and a Genetically Defined <i>S. enteritidis aroA</i> Strain in Young Chickens	Gerard L. Cooper, Lindsay M. Venables, Martin J. Woodward, and Carlos E. Hormaeche	4739–4746
Composition and Diversity of Intestinal Coliform Flora Influence Bacterial Translocation in Rats after Hemorrhagic Stress	M. Katouli, T. Bark, O. Ljungqvist, T. Svenberg, and R. Möllby	4768–4774
Analysis of the Role of M24 Protein in Group A Streptococcal Adhesion and Colonization by Use of Ω-Interposon Mutagenesis	Harry S. Courtney, Michael S. Bronze, James B. Dale, and David L. Hasty	4868–4873
A Surface Epitope Undergoing High-Frequency Phase Variation Is Shared by <i>Mycoplasma gallisepticum</i> and <i>Mycoplasma bovis</i>	David Yogev, Dimitry Menaker, Katrin Strutzberg, Sharon Levisohn, Helga Kirchhoff, Karl-Heinz Hinz, and Renate Rosengarten	4962–4968
Recombinant Antigens Prepared from the Urease Subunits of <i>Helicobacter</i> spp.: Evidence of Protection in a Mouse Model of Gastric Infection	Richard L. Ferrero, Jean-Michel Thiberge, Michel Huerre, and Agnès Labigne	4981–4989

Continued on following page

Continued from preceding page

- Antigen Heterogeneity among Isolates of *Mycoplasma bovis* Is Generated by High-Frequency Variation of Diverse Membrane Surface Proteins** Renate Rosengarten, Annett Behrens, Anja Stetefeld, Martin Heller, Meike Ahrens, Konrad Sachse, David Yogeve, and Helga Kirchhoff 5066–5074
- A Family of Phase- and Size-Variant Membrane Surface Lipoprotein Antigens (Vsps) of *Mycoplasma bovis*** Annett Behrens, Martin Heller, Helga Kirchhoff, David Yogeve, and Renate Rosengarten 5075–5084
- Inhibition of Infection of Macrophages with *Ehrlichia risticii* by Cytochalasins, Monodansylcadaverine, and Taxol** Yasuko Rikihisa, Yilan Zhang, and Jaechan Park 5126–5132
- Strains of *Mycobacterium tuberculosis* Differ in Susceptibility to Reactive Nitrogen Intermediates In Vitro** Lyn O'Brien, Jenny Carmichael, Douglas B. Lowrie, and Peter W. Andrew 5187–5190

HOST RESPONSE AND INFLAMMATION

- Soluble Peptidoglycan-Induced Monokine Production Can Be Blocked by Anti-CD14 Monoclonal Antibodies and by Lipid A Partial Structures** Birgit Weidemann, Helmut Brade, Ernst T. Rietschel, Roman Dziarski, Vladimir Bazil, Shoichi Kusumoto, Hans-Dieter Flad, and Artur J. Ulmer 4709–4715
- Modulation of *Mycoplasma arthritidis*-Derived Superantigen-Induced Cytokine Gene Expression by Dexamethasone and Interleukin-4** K. Mehindate, R. Al-Daccak, L. Rink, S. Mecheri, J. Hébert, and W. Mourad 4716–4721
- Activation of Human Effector Cells by Different Bacterial Toxins (Leukocidin, Alveolysin, and Erythrogenic Toxin A): Generation of Interleukin-8** B. König, M. Köller, G. Prevost, Y. Piemont, J. E. Alouf, A. Schreiner, and W. König 4831–4837
- Comparison of the Antibody Responses to the 77 *Klebsiella* Capsular Types in Ankylosing Spondylitis and Various Rheumatic Diseases** Hany Sahly, Jörn Kekow, Rainer Podschun, Marco Schaff, Wolfgang L. Gross, and Uwe Ullmann 4838–4843
- Low Levels of Vitronectin and Clusterin in Acute Meningococcal Disease Are Closely Associated with Formation of the Terminal Complement Complex and the Vitronectin-Thrombin-Antithrombin Complex** Kolbjørn Høgåsen, Tom Eirik Mollnes, and Petter Brandtzaeg 4874–4880
- Comparative Study of Cytokine Release by Human Peripheral Blood Mononuclear Cells Stimulated with *Streptococcus pyogenes* Superantigenic Erythrogenic Toxins, Heat-Killed Streptococci, and Lipopolysaccharide** Heide Müller-Alouf, Joseph E. Alouf, Dieter Gerlach, Jorg-Hermann Ozegowski, Catherine Fitting, and J.-M. Cavaillon 4915–4921
- Evidence for Lipopolysaccharide as the Predominant Proinflammatory Mediator in Supernatants of Antibiotic-Treated Bacteria** Michael C. Leeson, Yasuko Fujihara, and David C. Morrison 4975–4980
- Beneficial Effects of Interleukin-6 in Neonatal Mouse Models of Group B Streptococcal Disease** Giuseppe Mancuso, Francesco Tomasello, Maria Migliardo, Demetrio Delfino, Joel Cochran, James A. Cook, and Giuseppe Teti 4997–5002
- Purified Shiga-Like Toxins Induce Expression of Proinflammatory Cytokines from Murine Peritoneal Macrophages** Vernon L. Tesh, Belakere Ramegowda, and James E. Samuel 5085–5094

FUNGAL AND PARASITIC INFECTIONS

- Interleukin-10 Is Expressed by Bovine Type 1 Helper, Type 2 Helper, and Unrestricted Parasite-Specific T-Cell Clones and Inhibits Proliferation of All Three Subsets in an Accessory-Cell-Dependent Manner** Wendy C. Brown, Vivienne M. Woods, Carol G. Chitko-McKown, Stephen M. Hash, and Allison C. Rice-Ficht 4697–4708
- Pathogenesis of Pulmonary *Cryptococcus neoformans* Infection in the Rat** David Goldman, Sunhee C. Lee, and Arturo Casadevall 4755–4761

Continued on following page

Continued from preceding page

A Novel Type of Glutathione S-Transferase in <i>Onchocerca volvulus</i>	Eva Liebau, Gabriele Wildenburg, Rolf D. Walter, and Kimberly Henkle-Dührsen	4762–4767
Maternal Transmission of Immunity to <i>Eimeria maxima</i>: Western Blot Analysis of Protective Antibodies Induced by Infection	N. C. Smith, M. Wallach, C. M. D. Miller, R. Braun, and J. Eckert	4811–4817
Susceptibility of Different Strains of Mice to Hepatic Infection with <i>Plasmodium berghei</i>	Libia F. Scheller, Robert A. Wirtz, and Abdu F. Azad	4844–4847
Use of Anti-CD4⁺ Hybridoma Cells To Induce <i>Pneumocystis carinii</i> in Mice	Diane C. McFadden, Mary Ann Powles, Jeffrey G. Smith, Amy M. Flattery, Ken Bartizal, and Dennis M. Schmatz	4887–4892
The Kinetoplastid Membrane Protein 11 of <i>Leishmania donovani</i> and African Trypanosomes Is a Potent Stimulator of T-Lymphocyte Proliferation	Douglas L. Tolson, Armando Jardim, Lionel F. Schnur, Caroline Stebeck, Corinna Tuckey, Robert P. Beecroft, Hung-Sia Teh, Robert W. Olafson, and Terry W. Pearson	4893–4899
Age-Related Resistance in Ovine Cryptosporidiosis: Patterns of Infection and Humoral Immune Response	L. M. Ortega-Mora and S. E. Wright	5003–5009
Molecular and Functional Analysis of the <i>LYSI</i> Gene of <i>Candida albicans</i>	Richard Garrad, T. M. Schmidt, and J. K. Bhattacharjee	5027–5031
<i>Entamoeba histolytica</i> Interactions with Polarized Human Intestinal Caco-2 Epithelial Cells	Ellen Li, William F. Stenson, Cynthia Kunz-Jenkins, Paul E. Swanson, Randall Duncan, and Samuel L. Stanley, Jr.	5112–5119
Response of <i>Leishmania chagasi</i> Promastigotes to Oxidant Stress	Mary E. Wilson, Kurt A. Andersen, and Bradley E. Britigan	5133–5141
Endothelial Cell Proliferation Associated with Lesions of Murine Systemic Candidiasis	R. B. Ashman and J. M. Papadimitriou	5151–5153
Production of a Hemolytic Factor by <i>Candida albicans</i>	Joanne M. Manns, David M. Mosser, and Helen R. Buckley	5154–5156
Hypoglycemia and Hyperinsulinemia in Rodent Models of Severe Malaria Infection	K. Elased and J. H. L. Playfair	5157–5160
Arginine-Derived Nitric Oxide Reduces Fecal Oocyst Shedding in Nude Mice Infected with <i>Cryptosporidium parvum</i>	Gordon J. Leitch and Qing He	5173–5176
Nitric Oxide Is Involved in Control of <i>Trypanosoma cruzi</i>-Induced Parasitemia and Directly Kills the Parasite In Vitro	Glauca N. R. Vespa, Fernando Q. Cunha, and João S. Silva	5177–5182
MICROBIAL IMMUNITY AND VACCINES		
Vaccination of Chickens with Strain CVL30, a Genetically Defined <i>Salmonella enteritidis aroA</i> Live Oral Vaccine Candidate	Gerard L. Cooper, Lindsay M. Venables, Martin J. Woodward, and Carlos E. Hormaeche	4747–4754
Abrogation of Gamma Interferon-Induced Inhibition of <i>Ehrlichia chaffeensis</i> Infection in Human Monocytes with Iron Transferrin	Roy E. Barnewall and Yasuko Rikihisa	4804–4810
Inhibition of Bacterial Motility with Human Antiflagellar Monoclonal Antibodies Attenuates <i>Pseudomonas aeruginosa</i>-Induced Pneumonia in the Immunocompetent Rat	W. J. Landsperger, K. D. Kelly-Wintenberg, T. C. Montie, L. S. Knight, M. B. Hansen, C. C. Huntenburg, and M. J. Schneidkraut	4825–4830
Structural Characteristics of Polysaccharides That Induce Protection against Intra-abdominal Abscess Formation	Arthur O. Tzianabos, Andrew B. Onderdonk, Dori F. Zaleznik, Roger S. Smith, and Dennis L. Kasper	4881–4886

Continued on following page

Continued from preceding page

<i>Borrelia burgdorferi</i> Antigens That Are Targeted by Antibody-Dependent, Complement-Mediated Killing in the Rhesus Monkey	M. Kemal Aydintug, Yan Gu, and Mario T. Philipp	4929-4937
Deficient Induction of the Immune Response to Oral Immunization with Cholera Toxin in Malnourished Rats during Suckling	Juan Fló, María E. Roux, and Ernesto Massouh	4948-4954
Vaccination with <i>Brucella abortus</i> Rough Mutant RB51 Protects BALB/c Mice against Virulent Strains of <i>Brucella abortus</i>, <i>Brucella melitensis</i>, and <i>Brucella ovis</i>	M. P. Jiménez de Bagüés, P. H. Elzer, S. M. Jones, J. M. Blasco, F. M. Enright, G. G. Schurig, and A. J. Winter	4990-4996
Mouse Paneth Cell Defensins: Primary Structures and Antibacterial Activities of Numerous Cryptdin Isoforms	Andre J. Ouellette, Matthew M. Hsieh, Michael T. Nosek, Danielle F. Cano-Gauci, Kenneth M. Huttner, Ronald N. Buick, and Michael E. Selsted	5040-5047
Preparation, Characterization, and Immunological Properties in Mice of <i>Escherichia coli</i> O157 O-Specific Polysaccharide-Protein Conjugate Vaccines	Edward Konadu, John B. Robbins, Joseph Shiloach, Dolores A. Bryla, and Shousun C. Szu	5048-5054
Administration of Antigranulocyte Monoclonal Antibody RB6-8C5 Prevents Expression of Acquired Resistance to <i>Listeria monocytogenes</i> Infection in Previously Immunized Mice	Charles J. Czuprynski, James F. Brown, R. D. Wagner, and H. Steinberg	5161-5163
Construction and Characterization of Attenuated ΔaroA ΔvirG <i>Shigella flexneri</i> 2a Strain CVD 1203, a Prototype Live Oral Vaccine	Fernando R. Noriega, Jin Yuan Wang, Genevieve Losonsky, Dave R. Maneval, David M. Hone, and Myron M. Levine	5168-5172
Role for CD8⁺ T Cells in Antichlamydial Immunity Defined by Chlamydia-Specific T-Lymphocyte Clones	Joseph U. Igietseme, D. Mitchell Magee, Dwight M. Williams, and Roger G. Rank	5195-5197
Enhancement of Anti-<i>Shigella</i> Lipopolysaccharide (LPS) Response by Addition of the Cholera Toxin B Subunit to Oral and Intranasal Proteosome-<i>Shigella flexneri</i> 2a LPS Vaccines	Nadav Orr, Ruth Arnon, Guy Rubin, Dani Cohen, Hillel Bercovier, and George H. Lowell	5198-5200
Subcloning and Expression of the <i>Brucella abortus</i> L7/L12 Ribosomal Gene and T-Lymphocyte Recognition of the Recombinant Protein	Sergio C. Oliveira and Gary A. Splitter	5201-5204