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CONTENTS

No. 1 (AUGUST 1996)

Vero cytotoxin-producing <i>Escherichia coli</i>, particularly serogroup O157, associated with human infections in England and Wales: 1992-4	
Thomas, A., Cheasty, T., Frost, J. A., Chart, H., Smith, H. R. and Rowe, B.	1
Enteroaggregative <i>Escherichia coli</i> associated with an outbreak of diarrhoea in a neonatal nursery ward	
Čobeljić, M., Miljković-Selimović, B., Paunović-Todosijević, D., Veličković, Z., Lepšanović, Z., Zec, N., Savić, P., Ilić, R., Konstantinović, S., Jovanović, B. and Kostić, V.	11
Distribution, gene sequence and expression <i>in vivo</i> of the plasmid encoded fimbrial antigen of <i>Salmonella</i> serotype Enteritidis	
Woodward, M. J., Allen-Vercoe, E. and Redstone, J. S.	17
Recurrent outbreaks of <i>Salmonella</i> Enteritidis infections in a Texas restaurant: phage type 4 arrives in the United States	
Boyce, T. G., Koo, D., Swerdlow, D. L., Gomez, T. M., Serrano, B., Nickey, L. N., Hickman-Brenner, F. W., Malcolm, G. B. and Griffin, P. M.	29
<i>Salmonella virchow</i> PT 26 infection in England and Wales: a case control study investigating an increase in cases during 1994	
Willcocks, L. J., Morgan, D., Sufi, F., Ward, L. R. and Patrick, H. E.	35
Resurgence of cholera in Hong Kong	
Lee, S. H., Lai, S. T., Lai, J. Y. and Leung, N. K.	43
Comparison of pulsed-field gel electrophoresis and ribotyping for subtyping of <i>Vibrio cholerae</i> O139 isolated in Thailand	
Dalsgaard, A., Skov, M. N., Serichantalergs, O. and Echeverria, P.	51
Detection of pathogenic <i>Yersinia enterocolitica</i> using the multiplex polymerase chain reaction	
Harnett, N., Lin, Y. P. and Krishnan, C.	59
World Health Organisation – supervised interlaboratory comparison of ELISAs for the serological detection of <i>Salmonella enterica</i> serotype Enteritidis in chickens	
Barrow, P. A., Desmidt, M., Ducatelle, R., Guittet, M., Van der Heijden, H. M. J. F., Holt, P. S., Huis in't Velt, J. H. J., McDonough, P., Nagaraja, K. V., Porter, R. E., Proux, K., Sisak, F., Staak, C., Steinbach, G., Thorns, C. J., Wray, C. and van Zijderveld, F.	69
Isolates of <i>Salmonella enterica</i> Enteritidis PT4 with enhanced heat and acid tolerance are more virulent in mice and more invasive in chickens	
Humphrey, T. J., Williams, A., McAlpine, K., Lever, M. S., Guard-Petter, J. and Cox, J. M.	79
Occurrence of <i>Listeria</i> species in prepacked retail sandwiches	
Wilson, I. G.	89
Pneumococcal meningitis in the North East Thames Region UK: epidemiology and molecular analysis of isolates	
Urwin, G., Yuan, M. F., Hall, L. M. C., Brown, K., Efstratiou, A. and Feldman, R. A.	95
Antibiotic prescribing during an outbreak of meningococcal disease	
Stuart, J. M., Robinson, P. M., Cartwright, K. and Noah, N. D.	103
Respiratory syncytial virus infection and meningococcal disease	
Stuart, J. M., Cartwright, K. and Andrews, N. J.	107
Iatrogenic outbreak of <i>M. chelonae</i> skin abscesses	
Camargo, D., Saad, C., Ruiz, F., Ramirez, M. E., Lineros, M., Rodriguez, G., Navarro, E., Pulido, B. and Orozco, L. C.	113
Ante-natal screening for hepatitis B surface antigen: an appraisal of its value in a low prevalence area	
Dwyer, M. J. and McIntyre, P. G.	121
Hepatitis B virus infection in general population in Madagascar: evidence for different epidemiological patterns in urban and in rural areas	
Boiser, P., Rabarijaona, L., Piollet, M., Roux, J. F. and Zeller, H. G.	133

Microbiology of HIV associated bacteraemia and diarrhoea in adults from Nairobi, Kenya	
Batchelor, B. I. F., Kimari, J. N. and Brindle, R. J.	139
Are homosexual males a risk group for hepatitis A infection in intermediate endemicity areas?	
Ballesteros, J., Dal-Ré, R., González, A. and Del Romero, J.	145
Outbreak of vertigo in Wyoming: possible role of an enterovirus infection	
Simonsen, L., Khan, A. S., Gary, H. E., Hanson, C., Pallansch, M. A., Music, S., Holman R. C., Stewart, J. A., Erdman, D. D., Arden, N. H., Arenberg, I. K. and Schonberger, L. B.	149
Seroprevalence of astrovirus types 1 and 6 in London, determined using recombinant virus antigen	
Kriston, S., Willcocks, M. M., Carter, M. J. and Cubitt, W. D.	159
An analysis of infection control of varicella-zoster virus infections in Addenbrooke's Hospital Cambridge over a 5-year period, 1987-92	
Wreghitt, T. G., Whipp, J., Redpath, C. and Hollingworth, W.	165
Impact of incomplete coverage of neonatal dried blood spot screening on estimating HIV-1 seroprevalence	
Hutchinson, E. J., Streetly, A., Grant, C., Pollitt, R., Eldridge, P. and Nicoll, A.	173
An epidemiological study of influenza viruses among Chinese farm families with household ducks and pigs	
Shu, L. L., Zhou, N. N., Sharp, G. B., He, S. Q., Zhang, T. J., Zou, W. W. and Webster, R. G.	179
The incidence of <i>Cyclospora cayentanensis</i> in stool samples submitted to a district general hospital	
Clarke, S. C. and McIntyre, M.	189
Past exposure and the dynamics of lymphatic filariasis infection in young children	
Srividya, A., Das, P. K., Subramanian, S., Ramaiah, K. D., Grenfell, B. T., Michael, E. and Bundy, D. A. P.	195
Role of enteric pathogens in the aetiology of neonatal diarrhoea in lambs and goat kids in Spain	
Muñoz, M., Álvarez, M., Lanza, I. and Cármenes, P.	205
Increased colonization potential of <i>Campylobacter jejuni</i> strain 81116 after passage through chickens and its implication on the rate of transmission within flocks	
Cawthraw, S. A., Wassenaar, T. M., Ayling, R. and Newell, D. G.	213
Book Reviews	217
Epidemiological Studies: A Practical Guide	
Democracy, Chaos and the New School Order	
Manual of Clinical Problems in Infectious Diseases	

No. 2 (OCTOBER 1996)

A novel relationship between O-antigen variation, matrix formation, and invasiveness of <i>Salmonella enteritidis</i>	
Guard-Petter, J., Keller, L. H., Mahbubur Rahman, M., Carlson, R. W. and Silvers, S.	219
The application of genotyping techniques to the epidemiological analysis of <i>Campylobacter jejuni</i>	
Jackson, C. J., Fox, A. J., Wareing, D. R. A., Hutchinson, D. N. and Jones, D. M.	233
Epidemiological study on risk factors and risks reducing measures for campylobacter infections in Dutch broiler flocks	
Van de Giessen, A. W., Bloemberg, B. P. M., Ritmeester, W. S. and Tilburg, J. J. H. C.	245
Prevalence and characteristics of <i>Escherichia coli</i> serotype O157:H7 and other verotoxin-producing <i>E. coli</i> in healthy cattle	
Blanco, M., Blanco, J. E., Blanco, J., Gonzalez, E. A., Mora, A., Prado, C., Fernandez, L., Rio, M., Ramos, J. and Alonso, M. P.	251
Risk factors for <i>Neisseria meningitidis</i> carriage in a school during a community outbreak of meningococcal infection	
Davies, A. L., O'Flanagan, D., Salmon, R. L. and Coleman, T. J.	259
Virulence of <i>Staphylococcus epidermidis</i> in a mouse model: significance of extracellular slime	
Deighton, M. A., Borland, R. and Capstick, J. A.	267
Seroprevalence of brucella antibodies among persons in high-risk occupation in Lebanon	
Araj, G. F. and Azzam, R. A.	281

Genomic diversity of <i>mec</i> regulator genes in methicillin-resistant <i>Staphylococcus aureus</i> and <i>Staphylococcus epidermidis</i>	
Kobayashi, N., Taniguchi, K., Kojima, K., Urasawa, S., Uehara, N., Omizu, Y., Kishi, Y., Yagihashi, A., Kurokawa, I. and Watanabe, N.	289
Cryptosporidiosis in Wisconsin: A case-control study of post-outbreak transmission	
Osewe, P., Addiss, D. G., Blair, K. A., Hightower, A., Kamb, M. L. and Davis, J. P.	297
The UK Register of HIV Seroconverters: methods and analytical issues	
UK Register of HIV Seroconverters	305
Epidemiological patterns of hepatitis B virus (HBV) in highly endemic areas	
Edmunds, W. J., Medley, G. F., Nokes, D. J., O'Callaghan, C. J., Whittle, H. C. and Hall, A. J.	313
The occurrence of hepatitis B and C viruses in Pakistani patients with chronic liver disease and hepatocellular carcinoma	
Tong, C. Y. W., Khan, R., Beeching, N. J., Tariq, W. U. Z., Hart, C. A., Ahmad, N. and Malik, I. A.	327
An outbreak of hepatitis A associated with a bakery, New York, 1994: The 1968 'West Branch, Michigan' outbreak repeated	
Weltman, A. C., Bennett, N. M., Ackman, D. A., Misage, J. H., Campana, J. J., Fine, L. S., Doniger, A. S., Balzano, G. J. and Birkhead, G. S.	333
Seroepidemiology of HTLV-I in relation to that of HIV-1 in the Gauteng region, South Africa, using dried blood spots on filter papers	
Taylor, M. B., Parker, S. P., Crewe-Brown, H. H., McIntyre, J. and Cubitt, W. D.	343
Isotype-specific antibody responses to foot-and-mouth disease virus in sera and secretions to 'carrier' and 'non-carrier' cattle	
Salt, J. S., Mulcahy, G. and Kitching, R. P.	349
Evidence of hantavirus in wild rodents in Northern Ireland	
McCaughey, C., Montgomery, W. I., Twomey, N., Addley, M., O'Neill, H. J. and Coyle, P. V.	361
Antigenic and genetic analysis of equine influenza viruses from tropical Africa in 1991	
Adeyefa, C. A. O., James, M. L. and McCauley, J. W.	367
Foal diarrhoea between 1991 and 1994 in the United Kingdom associated with <i>Clostridium perfringens</i>, rotavirus, <i>Strongyloides westeri</i> and <i>Cryptosporidium</i> spp.	
Netherwood, T., Wood, J. L. N., Townsend, H. G. G., Mumford, J. A. and Chanter, N.	375
Restriction fragment length polymorphism of the pMJ101-like plasmid and ribo-typing in the fish pathogen <i>Vibrio ordalii</i>	
Pedersen, K., Koblavi, S., Tiainen, T. and Grimont, P. A. D.	385
Genetic analysis of <i>Clavibacter toxicus</i>, the agent of annual ryegrass toxicity	
Johnston, M. S., Sutherland, S. S., Constantine, C. C. and Hampson, D. J.	393
Human parvovirus B19 infection within a family and the risk for pregnant women	
Azzi, A., Trotta, M., Zakrzewska, K., Balzer, E., Rogasi, P. G., Carocci, A. and Leoncini, F.	401
Book Reviews	405
Current Topics in Microbiology and Immunology. Measles Virus	
Yersiniosis: Present and Future	
Molecular Basis of Virus Evolution	
Tuberculosis	
Erratum	409
The transmission dynamics of hepatitis B in the UK, a mathematical model of evaluating costs and effectiveness of immunization programmes	
Williams, J. R., Nokes, D. J., Medley, G. F. and Anderson, R. M.	

No. 3 (DECEMBER 1996)

Incidence of invasive pneumococcal disease and distribution of capsular types of pneumococci in Denmark, 1989-94

Nielsen, S. V. and Henriksen, J. 411

Epidemiological aspects of group B streptococci of bovine and human origin	
Jensen, N. E. and Aarestrup, F. M.	417
An 18 year clinical review of septic arthritis from tropical Australia	
Morgan, D. S., Fisher, D., Merianos, A. and Currie, B. J.	423
A foodborne outbreak of gastroenteritis involving <i>Listeria monocytogenes</i>	
Salamina, G., Dalle Donne, E., Niccolini, A., Poda, G., Cesaroni, D., Bucci, M., Fini, R., Maldini, M., Schuchat, A., Swaminathan, B., Bibb, W., Rocourt, J., Binkin, N. and Salmaso, S.	429
<i>Listeria</i> species in domestic environments	
Beumer, R. R., te Giffel, M. C., Spoorenberg, E. and Rombouts, F. M.	437
Preventing epidemics in a community of households	
Hall, R. and Becker, N. G.	443
A milk-borne campylobacter outbreak following an educational farm visit	
Evans, M. R., Roberts, R. J., Ribeiro, C. D., Gardner, D. and Kembrey, D.	457
Experimental studies on the infectivity of non-culturable forms of <i>Campylobacter</i> spp. in chicks and mice	
Van de Giessen, A. W., Heuvelman, C. J., Abbe, T. and Hazeleger, W. C.	463
Plasmid profiles, restriction fragment length polymorphisms and O-serotypes among <i>Vibrio anguillarum</i> isolates	
Pedersen, K., Tiainen, T. and Larsen, J. L.	471
Problems in the diagnosis of foodborne infection in general practice	
Palmer, S., Houston, H., Lervy, B., Ribeiro, D. and Thomas, P.	479
Tuberculosis outbreak in a Texas prison, 1994	
Bergmire-Sweat, D., Barnett, B. J., Harris, S. L., Taylor, J. P., Mazurek, G. H. and Reddy, V.	485
The dynamics of scarlet fever epidemics in England and Wales in the 19th century	
Duncan, C. J., Duncan, S. R. and Scott, S.	493
Distribution of <i>mip</i>-related sequences in 39 species (48 serogroups) of <i>Legionellaceae</i>	
Riffard, S., Vandenesch, F., Reyrolle, M., and Etienne, J.	501
Viral meningitis due to echovirus types 6 and 9: epidemiological data from Western Australia	
Ashwell, M. J. S., Smith, D. W., Phillips, P. A. and Rouse, I. L.	507
Association of <i>Chlamydia pneumoniae</i> IgA antibodies with recently symptomatic asthma	
Hahn, D. L., Anttila, T. and Saikku, P.	513
A study of maternally derived measles antibody in infants born to naturally infected and vaccinated women	
Brugha, R., Ramsay, M., Forsey, T. and Brown, D.	519
Nutritional status and delayed mortality following early exposure to measles	
Aaby, P., Andersen, M. and Knudsen, K.	525
Genotyping of hepatitis C virus isolates from Basque Country, Spain	
Cilla, G., Garcia-Bengoechea, M., Perez-Trallero, E., Montalvo, I., Vicente, D. and Arenas, J. I.	533
The consequences of uncertainty for the prediction of the effects of schistosomiasis control programmes	
Chan, M. S.	537
Severe giardiasis and cryptosporidiosis in Scotland, UK	
Robertson, L. J.	551
Detection of four species of <i>Borrelia burgdorferi</i> sensu lato in <i>Ixodes ricinus</i> ticks collected from roe deer (<i>Capreolus capreolus</i>) in the Netherlands	
Rijpkema, S. G. T., Herbes, R. G., Verbeerk-de Kruif, N. and Schellekens, J. F. P.	563
Book Reviews	567
Atlas of Infectious Diseases	
Principles and Practice of Infectious Diseases: Antimicrobial Therapy	
Indexes	569

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(9) Published proceedings paper

Dupont B. Bone marrow transplantation in severe combined immuno-deficiency with an unrelated MLC compatible donor. In: White HJ, Smith R, eds. Proceedings of the third annual meeting of the International Society for Experimental Hematology. Houston: International Society for Experimental Hematology, 1974: 44–6.

(10) Monograph in a series

Hunninghake GW, Gadek JE, Szapiel SV, et al. The human alveolar macrophage. In: Harris CC, ed. Cultured human cells and tissue in biomedical research. New York: Academic Press, 1980: 54–6. (Stoner GD, ed. Methods and perspectives in cell biology; vol 1.)

(11) Agency publication

Ranofsky AL. Surgical operations in short-stay hospitals: United States – 1975. Hyattsville, Maryland: National Center for Health Statistics, 1978; DHEW publication no (PHS) 78-1785. (Vital and health statistics; series 13: no. 34.)

(12) Dissertation or thesis

Cairns RB. Infrared spectroscopic studies of solid oxygen [dissertation]. Berkeley, California: University of California, 1965. 156 pp.

Other articles

(13) Newspaper article

Shaffer RA. Advances in chemistry are starting to unlock mysteries of the brain: discoveries could help cure alcoholism and insomnia, explain mental illness. How the messengers work. *Wall Street Journal* 1977 Aug 12: 1 (col 1), 10 (col 1).

(14) *Magazine article*

Rouche B. *Annals of medicine: the Santa Claus culture*. The New Yorker 1971 Sep 4: 66-81.

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Continued from back cover

Nutritional status and delayed mortality following early exposure to measles Aaby, P., Andersen, M. and Knudsen, K.	525
Genotyping of hepatitis C virus isolates from Basque Country, Spain Cilla, G., Garcia-Bengoechea, M., Perez-Trallero, E., Montalvo, I., Vicente, D. and Arenas, J. I.	533
The consequences of uncertainty for the prediction of the effects of schistosomiasis control programmes Chan, M. S.	537
Severe giardiasis and cryptosporidiosis in Scotland, UK Robertson, L. J.	551
Detection of four species of <i>Borrelia burgdorferi</i> sensu lato in <i>Ixodes ricinus</i> ticks collected from roe deer (<i>Capreolus capreolus</i>) in the Netherlands Rijpkema, S. G. T., Herbes, R. G., Verbeerk-de Kruif, N. and Schellekens, J. F. P.	563
Book Reviews :	567
Atlas of Infectious Diseases	
Principles and Practice of Infectious Diseases : Antimicrobial Therapy	

Epidemiology & Infection



CONTENTS

- Incidence of invasive pneumococcal disease and distribution of capsular types of pneumococci in Denmark, 1989-94**
Nielsen, S. V. and Henriksen, J. 411
- Epidemiological aspects of group B streptococci of bovine and human origin**
Jensen, N. E. and Aarestrup, F. M. 417
- An 18 year clinical review of septic arthritis from tropical Australia**
Morgan, D. S., Fisher, D., Merianos, A. and Currie, B. J. 423
- A foodborne outbreak of gastroenteritis involving *Listeria monocytogenes***
Salamina, G., Dalle Donne, E., Niccolini, A., Poda, G., Cesaroni, D., Bucci, M., Fini, R., Maldini, M., Schuchat, A., Swaminathan, B., Bibb, W., Rocourt, J., Binkin, N. and Salmaso, S. 429
- Listeria* species in domestic environments**
Beumer, R. R., te Giffel, M. C., Spoorenberg, E. and Rombouts, F. M. 437
- Preventing epidemics in a community of households**
Hall, R. and Becker, N. G. 443
- A milk-borne campylobacter outbreak following an educational farm visit**
Evans, M. R., Roberts, R. J., Ribeiro, C. D., Gardner, D. and Kembrey, D. 457
- Experimental studies on the infectivity of non-culturable forms of *Campylobacter* spp. in chicks and mice**
Van de Giessen, A. W., Heuvelman, C. J., Abbe, T. and Hazeleger, W. C. 463
- Plasmid profiles, restriction fragment length polymorphisms and O-serotypes among *Vibrio anguillarum* isolates**
Pedersen, K., Tiainen, T. and Larsen, J. L. 471
- Problems in the diagnosis of foodborne infection in general practice**
Palmer, S., Houston, H., Lervy, B., Ribeiro, D. and Thomas, P. 479
- Tuberculosis outbreak in a Texas prison, 1994**
Bergmire-Sweat, D., Barnett, B. J., Harris, S. L., Taylor, J. P., Mazurek, G. H. and Reddy, V. 485
- The dynamics of scarlet fever epidemics in England and Wales in the 19th century**
Duncan, C. J., Duncan, S. R. and Scott, S. 495
- Distribution of *mip*-related sequences in 39 species (48 serogroups) of *Legionellaceae***
Riffard, S., Vandenesch, F., Reyrolle, M. and Etienne, J. 501
- Viral meningitis due to echovirus types 6 and 9: epidemiological data from Western Australia**
Ashwell, M. J. S., Smith, D. W., Phillips, P. A. and Rouse, I. L. 507
- Association of *Chlamydia pneumoniae* IgA antibodies with recently symptomatic asthma**
Hahn, D. L., Anttila, T. and Saikku, P. 513
- A study of maternally derived measles antibody in infants born to naturally infected and vaccinated women**
Brugha, R., Ramsay, M., Forsey, T. and Brown, D. 519

Continued on inside back cover

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