

ADVISORY COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF FOOD

Items of possible interest from the literature

A list of items from the literature which may be of interest to Members is attached.

**Secretariat
March 2005**

Bacillus cereus

Kaptan Olmez H, Aran N. Modeling the growth kinetics of *Bacillus cereus* as a function of temperature, pH, sodium lactate and sodium chloride concentrations. *Int J Food Microbiol.* 2005; **98(2)**: 135-43

Ehling-Schulz M, Svensson B, Guinebretiere MH, Lindback T, Andersson M, Schulz A, Fricker M, Christiansson A, Granum PE, Martlbauer E, Nguryn-The C, Salkinoja-Salonen M, Scherer S. Emetic toxin formation of *Bacillus cereus* is restricted to a single evolutionary lineage of closely related strains. *Microbiology.* 2005; **151(Pt 1)**: 183-97

Taylor JM, Sutherland AD, Aidoo KE, Logan NA. Heat-stable toxin production by strains of *Bacillus cereus*, *Bacillus firmus*, *Bacillus megaterium*, *Bacillus simplex* and *Bacillus licheniformis*. *FEMS Microbiol Lett.* 2005; **242(2)**: 313-7.

Bundy JG, Willey TL, Castell RS, Ellar DJ, Brindle KM. Discrimination of pathogenic clinical isolates and laboratory strains of *Bacillus cereus* by NMR-based metabolomic profiling. *FEMS Microbiol Lett.* 2005 **1**; **242(1)**: 127-36.

Priest FG, Barker M, Baillie LW, Holmes EC, Maiden MC. Population structure and evolution of the *Bacillus cereus* group. *J Bacteriol.* 2004; **186(23)**: 7959-70.

Campylobacter

Cornelius AJ, Nicol C, Hudson JA. *Campylobacter* spp. in New Zealand raw sheep liver and human campylobacteriosis cases. *Int J Food Microbiol.* 2005; **99(1)**: 99-105.

Hudock JF, Borger AC, Kaspar CW. Temperature-Dependent Genome Degradation in the Coccoid Form of *Campylobacter jejuni*. *Curr Microbiol.* 2005 Feb 14; [Epub ahead of print]

Hutchinson ML, Walters LD, Moore T, Thomas DJ, Avery SM. Fate of pathogens present in livestock wastes spread onto fescue plots. *Appl Environ Microbiol.* 2005; **71(2)**: 691-6.

Meeyam T, Padungtod P, Kaneene JB. Molecular characterization of *Campylobacter* isolated from chickens and humans in northern Thailand. *Southeast Asian J Trop Med Public Health.* 2004; **35(3)**: 670-5.

Rao D, Rao JR, Crothers E, McMullan R, McDowell D, McMahon A, Rooney PJ, Millar BC, Moore JE. Increased erythromycin resistance in clinical *Campylobacter* in Northern Ireland – an update. *J Antimicrob Chemother.* 2005; [Epub ahead of print]

Griggs DJ, Johnson MM, Frost JA, Humphrey T, Jorgensen F, Piddock LJ. Incidence and mechanism of ciprofloxacin resistance in *Campylobacter* spp.

isolated from commercial poultry flocks in the United Kingdom before, during, and after fluoroquinolone treatment. *Antimicrob Agents Chemother.* 2005; **49(2)**: 699-707.

Humphrey TJ, Jorgensen F, Frost JA, Wadda H, Domingue G, Elviss NC, Griggs DJ, Piddock LJ. Prevalence and subtypes of ciprofloxacin-resistant *Campylobacter* spp. in commercial poultry flocks before, during, and after treatment with fluoroquinolones. *Antimicrob Agents Chemother.* 2005; **49(2)**: 690-8.

Fouts DE, Mongodin EF, Madrell RE, Miller WG, Rasko DA, Ravel J, Brinkac LM, DeBoy RT, Parker CT, Daugherty SC, Dodson RJ, Durkin AS, Madupu R, Sullivan SA, Shetty JU, Ayodeji MA, Shvartsbeyn A, Schatz MC, Badger JH, Fraser CM, Nelson KE. Major structural differences and novel potential virulence mechanisms from the genomes of multiple *campylobacter* species. *PLoS Biol.* 2005; **3(1)**: e15. Epub 2005 Jan 04.

Bae W, Kaya KN, Hancock DD, Call DR, Park YH, Besser TE. Prevalence and antimicrobial resistance of thermophilic *Campylobacter* spp. from cattle farms in Washington State. *Appl Environ Microbiol.* 2005; **71(1)**: 169-74.

Louis VR, Gillespie IA, O'Brien SJ, Russek-Cohen E, Pearson AD, Colwell RR. Temperature-driven *campylobacter* seasonality in England and Wales. *Appl. Environ Microbiol.* 2005; **71(1)**: 85-92.

Dingle KE, Colles FM, Falush D, Maiden MC. Sequence typing and comparison of population biology of *Campylobacter coli* and *Campylobacter jejuni*. *J Clin Microbiol.* 2005; **43(1)**: 340-7.

Luo N, Pereira S, Sahin O, Lin J, Huang S, Michel L, Zhang Q. Enhanced *in vivo* fitness of fluoroquinolone-resistant *Campylobacter jejuni* in the absence of antibiotic selection pressure. *Proc Natl Acad Sci USA* 2005; **102(3)**: 541-6. Epub 2005 2005 Jan 05.

Patrick ME, Christiansen LE, Waino M, Ethelberg S, Madsen H, Wegener HC. Effects of climate on incidence of *Campylobacter* spp. in humans and prevalence in broiler flocks in Denmark. *Appl Environ Microbiol.* 2004; **70(12)**: 7474-80.

Bhaduri S, Cattrell B. Survival of cold-stressed *Campylobacter jejuni* on ground chicken and chicken skin during frozen storage. *Appl Environ Microbiol.* 2004; **70(12)**: 7103-9.

Sari Kovats R, Edwards SJ, Charron D, Cowden J, D'Souza RM, Ebi KL, Gauci C, Gerner-Smidt P, Hajat S, Hales S, Hernandez Pezzi G, Kriz B, Kutsar K, McKeown P, Mellou K, Menne B, O'Brien S, van Pelt W, Schmid H. Climate variability and *campylobacter* infection: an international study. *Int J Biometeorol.* 2004 Nov 23; [Epub ahead of print]

Karenlampi R, Hanninen ML. Survival of *Campylobacter jejuni* on various fresh produce. *Int J Food Microbiol.* 2004; **97(2)**: 187-95.

Brown PE, Christensen OF, Clough HE, Diggle PJ, Hart CA, Hazel S, Kemp R, Leatherbarrow AJ, Moore A, Sutherst J, Turner J, Williams NJ, Wright EJ, French NP. Frequency and spatial distribution of environmental *Campylobacter* spp. *Appl Environ Microbiol.* 2004; **70(11)**: 6501-11.

Mayrhofer S, Paulsen P, Smulders FJ, Hilbert F. Antimicrobial resistance profile of five major food-borne pathogens isolated from beef, pork and poultry. *Int J Food Microbiol.* 2004; **97(1)**: 23-9.

Clostridium botulinum

Bohnel H, Neufeld B, Gessler F. Botulinum neurotoxin type B in milk from a cow affected by visceral botulism. *Vet J.* 2005; **169(1)**: 124-5.

Dressler D. [Botulism caused by consumption of smoked salmon.] *Nervenarzt.* 2005 Jan 22; [Epub ahead of print] German.

Johnston MD, Lawson S, Otter JA. Evaluation of hydration peroxide vapour as a method for the decontamination of surfaces contaminated with *Clostridium botulinum* spores. *J Microbiol Methods.* 2005; **60(3)**: 403-11.

Eklund MW, Poysky FT, Peterson ME, Paranjpye RN, Pelroy GA. *J Food Prot.* 2004; **67(12)**: 2682-7.

Glik D, Harrison K, Davoudi M, Riopelle D. Public perceptions and risk communications for botulism. *Biosecur Bioterror.* 2004; **2(3)**: 216-23.

Margosch D, Ehrmann MA, Ganzle MG, Vogel RF. Comparison of pressure and heat resistance of *Clostridium botulinum* and other endospores in mashed carrots. *J Food Prot.* 2004; **67(11)**: 2530-7.

Clostridium perfringens

Rafii F, Park M, Novak JS. Alterations in DNA gyrase and topoisomerase IV in resistant mutants of *Clostridium perfringens* found after *in vitro* treatment with fluoroquinolones. *Antimicrob Agents Chemother.* 2005; **49(2)**: 488-92.

Nakamura M, Kato A, Tanaka D, Gyobu Y, Higaki S, Karasawa T, Yamagishi T. PCR identification of the plasmid-borne enterotoxin gene (cpe) in *Clostridium perfringens* strains isolated from food poisoning outbreaks. *Int J Med Microbiol.* 2004; **294(4)**: 261-5.

Dhillon AS, Roy P, Lauerman L, Schaberg D, Weber S, Bandli D, Wier F. High mortality in egg layers as a result of necrotic enteritis. *Avian Dis.* 2004; **48(3)**: 675-80.

De Jong AE, Rombouts FM, Beumer RR. Behavior of *Clostridium perfringens* at low temperatures. *Int J Food Microbiol.* 2004 1; **97(1)**: 71-80.

Smedley JG 3rd, Fisher DJ, Sayeed S, Chakrabarti G, McClane BA. The enteric toxins of *Clostridium perfringens*. *Rev Physiol Biochem Pharmacol.* 2004; **152**: 183-204. Epub 2004 Oct 23.

McCabe-Sellers BJ, Beattie SE. Food safety: emerging trends in foodborne illness surveillance and prevention. *J Am Diet Assoc.* 2004; **104(11)**: 1708-17.

Cryptosporidium

Moriarty EM, Duffy G, McEvoy JM, Caccio S, Sheridan JJ, McDowell D, Blair IS. The effect of thermal treatments on the viability and infectivity of *Cryptosporidium parvum* on beef surfaces. *J Appl Microbiol.* 2005; **98(3)**: 618-23.

Robertson LJ, Greig JD, Gjerde B, Fazil A. The potential for acquiring cryptosporidiosis or gardiosis from consumption of mung bean sprouts in Norway: a preliminary step-wise risk assessment. *Int J Food Microbiol.* 2005; **98(3)**: 291-300.

Hlavsa MC, Watson JC, Beach MJ. Cryptosporidiosis surveillance – United States 1999-2002. *MMWR Surveill Summ.* 2005; **54(1)**: 1-8.

Davies CM, Altavilla N, Krogh M, Ferguson CM, Deere DA, Ashbolt NJ. Environmental inactivation of *Cryptosporidium* oocysts in catchment soils. *J Appl Microbiol.* 2005; **98(2)**: 308-17.

MacRae M, Hamilton C, Strachan NJ, Wright S, Ogden ID. The detection of *Cryptosporidium parvum* and *Eschericia coli* O157 in UK bivalve shellfish. *J Microbiol Methods.* 2005; **60(3)**: 395-401.

Listeria

Njagi LW, Mbuthia PG, Bebora LC, Nyaga PN, Minga U, Olsen JE. Carrier status for *Listeria monocytogenes* and other *Listeria* species in free range farm and market healthy indigenous chickens and ducks. *East Afr Med J.* 2004; **81(10)**: 529-33.

Schmid MW, Ng EY, Lampidis R, Emmerth M, Walcher M, Kreft J, Goebel W, Wagner M, Schleifer KH. Evolutionary history of the genus *Listeria* and its virulence genes. *Syst Appl Microbiol.* 2005; **28(1)**: 1-18.

Franciosa G, Maugliani A, Floridi F, Aureli P. Molecular and experimental virulence of *Listeria monocytogenes* strains isolated from cases with invasive

listeriosis and febrile gastroenteritis. FEMS Immunol Med Microbiol. 2005; **43(3)**: 431-9.

Bruhn JB, Vogel BF, Gram L. Bias in the *Listeria monocytogenes* enrichment procedure: lineage 2 strains outcompete lineage 1 strains in University of Vermont selective enrichments. Appl Environ Microbiol. 2005; **71(2)**: 961-7.

Sauders BD, Pettit D, Currie B, Suits P, Evans A, Stellrecht K, Dryja DM, Slate D, Wiedmann M. Low prevalence of *Listeria monocytogenes* in human stool. J Food Prot. 2005; **68(1)**: 178-81.

Aymerick T, Jofre A, Garriga M, Hugas M. Inhibition of *Listeria monocytogenes* and *Salmonella* by natural antimicrobials and high hydrostatic pressure in sliced cooked ham. J Food Prot. 2005; **68(1)**: 173-7.

Edelson-Mammel SG, Whiting RC, Joseph SW, Buchanan RL. Effect of prior growth conditions on the thermal inactivation of 13 strains of *Listeria monocytogenes* in two heating menstrea. J Food Prot. 2005; **68(1)**: 168-72.

Moltz AG, Martin SE. Formation of biofilms by *Listeria monocytogenes* under various growth conditions. J Food Prot. 2005; **68(1)**: 92-7.

Neunlist MR, Ralazamahaleo M, Cappelier JM, Besnard V, Federighi M, Leroi F. Effect of salting and cold-smoking process on the culturability, viability and virulence of *Listeria monocytogenes* strain Scott A. J Food Prot. 2005; **68(1)**: 85-91.

Liu D, Lawrence ML, Ainsworth AJ, Austin FW. Comparative assessment of acid, alkali and salt tolerance in *Listeria monocytogenes* virulent and avirulent strains. FEMS Microbiol Lett. 2005; **243(2)**: 373-8.

Gale P. Land application of treated sewage sludge: quantifying pathogen risks from consumption of crops. J Appl Microbiol. 2005; **98(2)**: 380-96.

Norovirus

Widdowson MA, Sulka A, Bulens SN, Beard RS, Chaves SS, Hamond R, Salehi ED, Swanson E, Totaro J, Woron R, Mead PS, Bresee JS, Monroe SS, Glass RI. Norovirus and foodborne disease, United States, 1991-2000. Emerg Infect Dis. 2005; **11(1)**: 95-102.

Rockx BH, Vennema H, Hoebe CJ, Duizer E, Koopmans MP. Association of histo-blood group antigens and susceptibility to norovirus infections. J Infect Dis. 2005; **191(5)**: 749-54. Epub 2005 Jan 25.

Loisy F, Atmar RL, Guillon P, Le Cann P, Pommepuy M, Le Guyader FS. Real-time RT-PCR for norovirus screening in shellfish. J Virol Methods. 2005; **123(1)**: 1-7.

Parashar U, Quiroz ES, Mounts AW, Monroe SS, Fankhauser RL, Ando T, Noel JS, Bulens SN, Beard SR, Li JF, Bresee JS, Glass RI. "Norwalk-like viruses". Public health consequences and outbreak management. MMWR Recomm Rep. 2001; **50(RR-9)**: 1-17.

Goller JL, Dimitriadis A, Tan A, Kelly H, Marshall JA. Long-term features of norovirus gastroenteritis in the elderly. J Hosp Infect. 2004; **58(4)**: 286-91.

Allwood PB, Malik YS, Maherchandani S, Vought K, Johnson LA, Braymen C, Hedberg CW, Goyal SM. Occurrence of *Escherichia coli*, noroviruses, and F-specific coliphages in fresh market-ready produce. J Food Prot. 2004; **67(11)**: 2387-90.

Lopman BA, Reacher MH, Vipond IB, Hill D, Perry C, Halladay T, Brown DW, Edmunds WJ, Sarangi J. Epidemiology and cost of nosocomial gastroenteritis, Avon, England, 2002-2003. Emerg Infect Dis. 2004; **10(10)**: 1827-34.

Salmonella

Swaggerty CL, Ferro PJ, Pevzner IY, Kogut MH. Heterophils are associated with resistance to systemic *Salmonella enteritica* infections in genetically distinct chicken lines. FEMS Immunol Med Microbiol. 2005; **43(2)**: 149-54.

Ekdahl K, de Jong B, Wollin R, Andersson Y. Travel-associated non-typhoidal salmonellosis: geographical and seasonal differences and serotype distribution. Clin Microbiol Infect. 2005; **11(2)**: 138-44.

Varma JK, Molbak K, Barrett TJ, Beebe JL, Jones TF, Rabatsky-Ehr T, Smith KE, Vugia DJ, Chang HG, Angulo FJ. Antimicrobial-Resistant Nontyphoidal Salmonella Is Associated with Ex Bloodstream Infections and Hospitalizations. J Infect Dis. 2005; **191(4)**: 554-561. Epub 2005 Jan 7.

Lukinmaa S, Nakari UM, Eklund M, Siitonen A. Application of molecular genetic methods in diagnostics and epidemiology of food-borne bacterial pathogens. APMIS. 2004; **112(11-12)**: 908-29.

Weinberger M, Andorn N, Agmon V, Cohen D, Shohat T, Pitlik SD. Blood invasiveness of *Salmonella enterica* as a function of age and serovar. Epidemiol Infect. 2004; **132(6)**: 1023-8.

Casey PG, Butler D, Gardiner GE, Tangney M, Simpson P, Lawlor PG, Stanton C, Ross RP, Hill C, Fitzgerald GF. Salmonella carriage in an Irish pig herd: correlation between serological bacteriological detection methods. J Food Prot. 2004; **67(12)**: 2797-800.

Abe K, Saito N, Kasuga F, Yamamoto S. Prolonged incubation period of salmonellosis associated with low bacterial doses. *J Food Prot.* 2004; **67(12)**: 2735-40.

Allan JT, Yan Z, Genzlinger LL, Kornacki JL. Temperature and biological soil effects on the survival of selected foodborne pathogens on a mortar surface. *J Food Prot.* 2004; **67(12)**: 2661-5.

Doran G, Sheridan F, Delappe N, O'Hare C, Anderson W, Corbett-Feeney G, Cormican M. *Salmonella enterica* serovar Kedougou contamination of commercially mushrooms. *Diagn Microbiol Infect Dis.* 2005; **51(1)**: 73-6.

Braoudaki M, Hilton AC. Mechanisms of resistance in *Salmonella enterica* adapted to erythromycin benzalkonium chloride and triclosan. *Int J Antimicrob Agents.* 2005; **25(1)**: 31-7.

Xiao Y, Bowers RG, Clancy D, French NP. Understanding the dynamics of Salmonella infections in dairy herds: a modelling approach. *J Theor Biol.* 2005; **233(2)**: 159-75. Epub 2004 Nov 10.

Parsons DJ, Orton TG, D'Souza J, Moore A, Jones R, Dodd CE. A comparison of three modelling approaches for quantitative risk assessment using the case study of Salmonella spp. in poultry meat. *Int J Food Microbiol.* 2005; **98(1)**: 35-51.

Peleg M, Normand MD. Calculating microbial survival parameters and predicting survival curves from non-isothermal inactivation data. *Crit Rev Food Sci Nutr.* 2004; **44(6)**: 409-18.

Bourassa DV, Fletcher DL, Buhr RJ, Berrang ME, Cason JA. Recovery of *Salmonellae* from trisodium phosphate-treated commercial processed broiler carcasses after chilling and after seven-day storage. *Poult Sci.* 2004; **83(12)**: 2079-82.

Bialka KL, Demirci A, Knabel SJ, Patterson PH, Puri VM. Efficacy of electrolyzed oxidizing water for the microbial safety and quality of eggs. *Poult Sci.* 2004; **83(12)**: 2071-8.

Fluit AC. Towards more virulent and antibiotic-resistance Salmonella? *FEMS Immunol Med Microbiol.* 2005; **43(1)**: 1-11.

Centers for Disease Control and Prevention (CDC). *Salmonella* serotype Typhimurium outbreak associated with commercial processed egg salad – Oregon, 2003. *MMWR Morb Mortal Wkly Rep.* 2004; **53(48)**: 1132-4.

Fisher IS. Dramatic shift in the epidemiology of *Salmonella enterica* serotype Enteritidis phage types in western Europe, 1998-2003 – results from the Enter-net international Salmonella database. *Euro Surveill.* 2004 Nov 01; **9(11)** [Epub ahead of print].

Fisher IS. International trends in salmonella serotypes 1998-2003 – a surveillance from the Enter-net international surveillance network. Euro Surveill. 2004 Nov 01; **9(11)** [Epub ahead of print]

Weill FX, Lailier R, Praud K, Kerouanton A, Fabre L, Brisabois A, Grimont PA, Cloeckaert A. Emergence of extended-spectrum-beta-lactamase (CTX-M-9)-producing multiresistant strains of *Salmonella enterica* serotype Virchow in poultry humans in France. J Clin Microbiol. 2004; **42(12)**: 5767-73.

McReynolds JL, Byrd JA, Moore RW, Anderson RC, Poole TL, Edrington TS, Kubena LF, Nisbet DJ. Utilization of the nitrate reductase enzymatic pathway to reduce enteric pathogens in chickens. Poult Sci. 2004; **83(11)**: 1857-60.

Lievonen S, Havulinna AS, Maiala R. Egg consumption patterns and Salmonella risk in Finland. J Food Prot. 2004; **67(11)**: 2416-23.

Ivanek R, Snary EL, Cook AJ, Grohn YT. A mathematical model for the transmission of *Salmonella Typhimurium* within a grower-finisher pig herd in Great Britain. J Food Prot. 2004; **67(11)**: 2403-9.

Schroeter A, Hoog B, Helmuth R. Resistance of Salmonella isolates in Germany. J Vet Med B Infect Dis Vet Public Health. 2004; **51(8-9)**: 389-92.

Mobak K. Spread of resistant bacteria and resistance genes from animals to humans public health consequences. J Vet Med B Infect Dis Vet Public Health. 2004; **51(8-9)**: 364-9. Review.

Bywater RJ. Veterinary use of antimicrobials and emergence of resistance in zoonotic sentinel bacteria in the EU. J Vet Med B Infect Dis Vet Public Health, 2004; **51(8-9)**: 361-3. Review.

Prikazska M, Prikazsky V, Benes C. [Trends in the incidence of salmonellosis and campylobacteriosis in the Czech Republic] Epidemiol Mikrobiol Immunol. 2004; **53(3)**: 100-5. Czech.

Other

Montville R, Schaffner D. Monte Carlo simulation of pathogen behavior during the sprout production process. Appl Environ Microbiol. 2005; **71(2)**: 746-53.

Werber D, Dreesman J, Feil F, van Treeck U, Fell G, Ethelberg S, Hauri AM, Roggentin P, Prager R, Fisher IS, Behnke SC, Bartelt E, Weise E, Ellis A, Siitonen A, Andersson Y, Tschape H, Kramer MH, Ammon A. International outbreak of *Salmonella Oranienburg* due to German chocolate. BMC Infect Dis 2005; **5(1)**: 7 [Epub ahead of print]

Seo KH, Brackett RE. Rapid, specific detection of *Enterobacter sakazakii* in infant formula using a real-time PCR assay. J Food Prot. 2005; **68(1)**: 59-63.

Allwood PB, Jenkins T, Paulus C, Johnson L, Hedberg CW. Hand washing compliance among retail food establishment workers in Minnesota. J Food Prot. 2004; **67(12)**: 2825-8.

Casey PG, Butler D, Gardiner GE, Tangney M, Simpson P, Lawlor PG, Stanton C, Ross RP, Hill C, Fitzgerald GF. Salmonella carriage in an Irish pig herd: correlation between serological and bacteriological detection methods. J Food Prot. 2004; **67(12)**: 2797-800.

HACCP

Frisvad JC, Lund F, Elmholt S. Ochratoxin A producing *Penicillium verrucosum* isolates from cereals reveal large AFLP fingerprinting variability. J Appl Microbiol. 2005; **98(3)**: 684-92.

Castellanos Rey LC, Villamil Jimenez LC, Romero Prada JR. [Incorporation of the Hazard Analysis and Critical Control Point system (HACCP) in food legislation] Rev Salud Publica (Bogota). 2004; **6(3)**: 289-301. Spanish.

Godfree A, Farrell J. Processes for managing pathogens. J Environ Qual. 2005; **34(1)**: 105-13.

Abernathy T, Hart R. Evaluation of a HACCP pilot program for the food service industry. Can J public Health. 2004; **95(6)**: 470-2.

Bou Rached L, Ascanio N, Hernandez P. [Design of a Hazard Analysis and Critical Control points (HACCP) plan to assure the safety of a bologna product produced by a meat processing plant] Arch Latinoam Nutr. 2004; **54(1)**: 72-80. Spanish.