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UNITED STATES OF AMERICA
BEFORE THE FOOD AND DRUG ADMINISTRATION
DEPARTMENT OF HEALTH AND HUMAN SERVICES

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In the Matter of:)
)
Enrofloxacin for Poultry: Withdrawal)
of Approval of Bayer Corporation's)
New Animal Drug Application)
(NADA) 140-828 (Baytril))
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_____)

FDA DOCKET: 00N-1571
DATE: August 5, 2002

Center for Veterinary Medicine's Motion to Add a Witness

The Center for Veterinary Medicine ("CVM" or "the Center") respectfully requests permission to add Dr. Catherine Logue as a witness on its behalf in the Enrofloxacin Hearing. The addition of this witness will allow the record to reflect new information that is relevant to the question of whether enrofloxacin has been shown to be safe. CVM became aware of this data when Dr. Logue presented an abstract of her study at the National Foundation for Infectious Diseases meeting in July 2002.

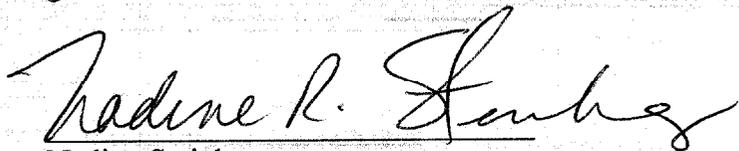
Dr. Logue holds a Ph.D. in Food Microbiology from the University of Ulster (Ireland) and currently works in the Department of Veterinary and Microbiological Sciences at the North Dakota State University. Dr. Logue can testify about *Campylobacter* and fluoroquinolone-resistant *Campylobacter* on processed poultry.

Attached is a copy of Dr. Logue's current Curriculum Vitae, and an abstract of the relevant studies.

00N-1571

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Respectfully submitted, this 5th day of August, 2002 by:



Nadine Steinberg
Counsel for the Center for Veterinary Medicine
5600 Fishers Lane (GCF-1)
Rockville, MD 20857
(301) 827-5050

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ORDER

On August 5, 2002, the Center for Veterinary Medicine ("CVM" or "the Center") filed a Motion to Add a Witness on its behalf in the above-referenced Enrofloxacin Hearing. After an evaluation of the materials submitted by CVM, I find that the addition of this witness will provide relevant information to the record concerning the issue of whether enrofloxacin is shown to be safe. I also find that Bayer Corporation will not be prejudiced by this addition. The Center for Veterinary Medicine's Motion to Add a Witness is HEREBY GRANTED.

Dated this _____ day of August, 2002.

SO ORDERED:

Daniel J. Davidson
Administrative Law Judge
Food and Drug Administration
5600 Fishers Lane
Rockville, MD 20857
Telephone: (301) 827-7120
FAX: (301) 594-6800

Curriculum Vitae

Catherine M. Logue

Revised June 2002

Address

Home 2058 52nd St SW,
Fargo, ND 58103
Phone 701 492 3196

Work Department of Veterinary and
Microbiological Sciences,
130A Van Es Hall,
North Dakota State University,
Fargo, ND 58105

Phone 701 231 7692

Fax 701 231 9692

e mail Catherine.Logue@ndsu.nodak.edu

Current Position:

Assistant Professor, Department of Veterinary and Microbiological Sciences,
Member, Cellular and Molecular Biology Faculty; Member, Graduate
Faculty; North Dakota State University, Fargo, ND 58105. August 1999 -
present

Education

1991 - 1996 University of Ulster, Jordanstown, Newtownabbey Co. Antrim,
Ireland. D.Phil. in Food Microbiology October 1996

1990 - 1991 College of Technology, Kevin Street, Dublin. Graduate
Diploma in Food Science and Technology (IFST)

1987 - 1990 St. Patrick's College, Maynooth, Co. Kildare. B.Sc. (Gen)

Academic Awards

Travel to 1st Annual Meeting of the National Alliance for Food Safety –
Washington October 1999, and meeting held November 2001

Travel to the Conference for Research Workers in Animal Disease CRWAD
– Chicago November 1999, 2000, 2001

Travel to XXI Worlds Poultry Congress, Montreal, August 2000

Travel to the 2nd NSF International Conference on Food Safety Savannah,
GA October 2000

Travel to the 101st American Society for Microbiology (ASM) annual general
meeting, Orlando FL May 2001, Salt Lake Utah, 2002

NDSU, Bison Ambassadors' Apple Polisher Award, 2002
Who's Who Among Americas Teachers, 2002

Teaching and Academic Work Experience

Research Student 1991-1996 The National Food Center, Teagasc, Dublin, Ireland
Research Officer 1996-1997 Biojen International, Dublin, Ireland
Research Officer 1997-1998 The National Food Center, Teagasc, Dublin, Ireland
Executive Analytical Chemist, 1998-1999, Eastern Health Board, Sir Patrick Dun's Hospital, Dublin, Ireland
Instructor 460/660 - Etiology of Foodborne Illness (member of a team; I am also coordinator of the course) 2000 - present
Instructor SAFE 480/680 - Food Safety Practicum (member of the team; I am also a co-coordinator of the course) 2000 - present
Instructor and Course organizer BIOL 202 - Introductory Microbiology 2001-present
Instructor and seminar organizer MICR 790 Graduate Seminar, Spring 2001-
Mentor - MICR 494/497 - Individual Study - Food Safety Research 1999 - present
Instructor and mentor MICR Capstone experience in Microbiology 2002 -

Administrative Experience

Course coordinator of the Etiology of Foodborne Illness - The Great Plains Institute of Food Safety 2000 -
Co-coordinator, of the Food Safety Practicum - The Great Plains Institute of Food Safety 2000-
Course coordinator, Capstone Experience in Microbiology 2002-
Course coordinator, Introductory Microbiology 2001 -

Professional Memberships

Member of the Institute of Food Science and Technology (IFST) U.K. 1991 - present
Member of the Professional Food Microbiology Group (PFMG) U.K. 1996 - present
Society for Applied Microbiology (SfAM) U.K. 1993 - present
National Alliance of Food Safety (NAFS) U.S. 1999 - present
American Society for Microbiology (ASM) 1999 - present
Conference of Research Workers in Animal Disease (CRWAD) 2000 - present

Research Interests

Interests in the isolation and detection of foodborne pathogens from meat and other products, development of rapid methods for the detection of foodborne pathogens, and examination of the influence of slaughter practice on meat contamination and pathogen carriage.

Pathogenicity of *Yersinia enterocolitica* and its behavior.

Foodborne pathogens on meat slaughter lines, their distribution, incidence, isolation, detection, pathogenicity, and antimicrobial resistance.

The development of sensor technology for the detection of pathogens and spoilage in foodstuffs.

Studies in Risk Assessment, Analysis and Intervention, and Model Development.

Teaching Interests

Foodborne pathogens and their association with human disease through the consumption of foodstuffs.

Laboratory studies of current and rapid methods for the isolation and detection of foodborne pathogens in foodstuffs.

Introduction to Microbiology.

Capstone experience in microbiology

Continuing Education

Attended an online workshop "Teaching Online" – April 2001

Attended a workshop "Teaching for Understanding" – Faculty Training, NDSU – June 2001

Attended a Workshop on Technology Transfer, NDSU – August 2001

Attended a Workshop on Peer Review Evaluation of Teaching - August 2001

Service

Appointee, National Advisory Committee on Meat and Poultry Inspection (NACMPI) (USDA/FSIS) 2001 –

Nominee, National Advisory Committee on the Microbiological Criteria for Foods (NACMF) 2000

Nominee, ECOP/ESCOP Food Safety sub Committee 2000

Nominee, National Academy of Sciences Reviewer of PNAS 2001

Mentor, Mc Nair Scholarship Program, 1999 - present

Assisted organizing The "Hotzone" Party North Dakota State University 2000, 2001

Organizer, Hotzone Party North Dakota State University, 2002

Advisor, Sigma Alpha Professional Sorority, North Dakota State University
2000 – 2001

Advisor, WISMET student group 2000 -

Judge, Bison Brevs, Blue Key Honor Society, North Dakota State University,
2001

Judge, Annual Science Fair, Grace Lutheran School, Fargo, ND 2001

Member, Search Committee for the Chair of the Department of Veterinary
and Microbiological Sciences, North Dakota State University, Fargo, ND
2000 – 2001

Member, Beehive Research Committee 2001 -

Member, HATCH Station Project Review Committee 2001 –

Member, Search Committee, for a Director of the Agricultural Experiment
Station, North Dakota State University, Fargo, ND 2001 –

Member, Search Committee for a Faculty Epidemiologist position in the
Department of Veterinary and Microbiological Sciences, North Dakota
State University, Fargo, ND 2002

Member, Search Committee for post doctoral positions in the Department of
Veterinary and Microbiological Sciences, Fargo, ND 2002

Member, Search Committee for post doctoral position in the Department of
Agribusiness and Applied Finance, North Dakota State University, Fargo,
ND, 2002

Member, Institutional Biosafety Committee (IBC), North Dakota State
University, Fargo, ND 2002

Extra University Service

University Senate 2000 - present

Chair and Co-Chair, Food and Environmental Safety, Conference of
Research Workers in Animal Disease (CRWAD), Chicago, IL 1999, 2000,
2001

International Service

Collaborator with Dr. James J. Sheridan, Head of the Department of Food
Safety, The National Food Center, Teagasc, Ireland, in areas of food
safety, meat safety and decontamination.

Graduate Student Direction

Major Professor, Quiongzhen Li, PhD candidate 2005, Department of
Veterinary and Microbiological Sciences Food Safety Research - Isolation
and Detection of Foodborne Pathogens on Bison.

Major Professor, Pamela Olah, MS candidate 2003, Department of
Veterinary and Microbiological Sciences, Virulence Characteristics of
Salmonella and *Campylobacter*

Graduate Student Committees Served On

- Member, graduate committee Ashirawia Kannipur, PhD Candidate 2004,
Department of Veterinary and Microbiological Sciences
- Member, graduate committee, Aaron Lynn, PhD Candidate 2003,
Department of Veterinary and Microbiological Sciences
- Member, graduate committee, Steven Venette, PhD Candidate 2002,
Department of Communications.
- Member, graduate committee Erick Handegard, MS Candidate 2002,
Department of Veterinary and Microbiological Sciences.
- Member, graduate committee Michelle Kahan, MS candidate Graduated
2001, Department of Veterinary and Microbiological Sciences.
- Member, graduate committee, Jane Schuh, PhD Candidate graduated 2000
– Cellular and Molecular Biology Program.

Undergraduate Student Direction

- Mentor, Tiffany Priebe, - Studies of *Salmonella spp.*
- Mentor, Mark Sundrud, Investigation of the Growth of *Yersinia spp.* in the
Presence of Antimicrobials.
- Mentor, Joey Rexine, Studies of Foodborne Pathogens on Poultry.
- Mentor, Lisa Elijah (Mc Nair Scholar), Investigation of *Campylobacter spp.*
on Processed Poultry.
- Mentor, Pamela Olah – Studies of Virulence Factors Associated with *E. coli*
and Studies of the Growth Characteristics of *Y. enterocolitica* in the
Presence of Antimicrobials.
- Mentor, Melissa Casteel, An Investigation of the Incidence of *Salmonella*
spp. in Poultry.
- Mentor, Murray Leraas, Serotyping of *Salmonella* Isolates.
- Mentor, Michelle Dockter, A study of the Influence of Antimicrobials on the
Growth of *Y. enterocolitica*.
- Mentor, Christy Oliver, Virulence Factors Associated with Avian *E. coli*.
- Mentor, John Passman, Isolation, Detection and Identification of *Salmonella*
and *Campylobacter* from Processed Poultry.
- Mentor, Megan Koole, Isolation, Detection and Characterization of
Campylobacter spp. from Processed Poultry.
- Mentor, Anne Littlefield, Serology of *Salmonella* Isolates.
- Mentor, Melissa Benson, Procedures for Use in a Food Microbiology
Laboratory.
- Mentor, Kylie Rodriguez, Identification of *Campylobacter* Isolates.
- Mentor, Lance Griffin – Foodborne pathogens on Bison
- Mentor, David Perkins – Studies of *Campylobacter*
- Mentor capstone experience students – Joshua Carlson, Andrea Matson,
Paula Erdmann, Rebekah Oliver, Lisa Elijah and Jessi Christ. Food Safety
and Bioterrorism – case scenarios

Grants/Subcontracts

Under Review

- PI- Microscope for Food safety and Pathogenic Research \$75,000
- PI- Understanding Antimicrobial Resistance on the farm using animal models and evaluating the transfer to the food chain, \$75,000
- Risk Analysis, Assessment and Intervention Strategies to Ensure a Safer Food Supply, \$2,000,000
- Co-PI, Fellowships to Promote Expertise in Infectious Disease of Animals, \$276,000

Funded or Ongoing

- PI, Risk Analysis, Assessment and Intervention for Foodborne Contaminants - \$800,000
- Co-PI, Multidisciplinary Research Infrastructure and Activities for Intelligent MEM (Micro-electro-mechanical) Sensors for Safe Food Products, \$360,000
- PI – A study of the Incidence of Antibiotic Resistant *Salmonella* and *Campylobacter* on Poultry - \$8,000
- Co-PI – Fellowships to Promote Expertise in Infectious Disease of Animals – \$138,000
- Co-PI – Funding for Food Safety Library Books - \$1,050
- PI - An Investigation of the Bacteriological Status of Slaughterhouse and Processed Poultry – \$28,000
- Collaborator – Filling the Food Safety Expertise Gap – The Great Plains Summer Institute \$90,000 with match \$180,000
- Co-PI, ND-EPSCoR Small Equipment Grant Program, August 2000, \$2,500 (\$5000 with match).
- Co-PI, ND-EPSCoR Small Equipment Grant Program, December 2000, \$2,500 (\$5000 with match).
- Co-PI, ND EPSCoR Small Equipment Program, January 2001, \$2,000 (\$8,000 with Match)
- Co-PI, ND EPSCoR Small Equipment Program, September 2001, \$1,500
- Co-PI, Intelligent Quality Sensors (IQS) for Safe Food Products. USDA Special Research Grant, April 2001, \$132,828
- PI – A Study of Foodborne Pathogens on Bison – Determining the Potential Risk to Man- \$75,000
- PI- Understanding Antimicrobial resistance on the farm, \$19,000

Interdisciplinary Projects/Collaborations

- With Suranjan Panigrahi in the Development of Intelligent Quality Sensors (IQS) for Safe Food Products
- With Dickinson Agricultural Research Station (Doug Landblom), Antimicrobial Resistance in Cattle Due to Sub-therapeutic Interventions

With Lisa K. Nolan, William Nganje, Tim Sellnow, and Verlin Hinsz – Risk Assessment Analysis and Intervention Strategies to Ensure a Safer Food Supply.

With Martin Marchello shelf life studies of meat from animals treated with different levels of selenium and selenite.

Publications/Accepted Manuscripts in Refereed Journals

Walsh, D., Duffy, G., Sheridan, J.J., Logue, C.M., Harrington, D., Blair, I.S., and Mc Dowell, D.A. (2001) Comparison of selective and non-selective enrichment media in the isolation of *Listeria monocytogenes* from meat containing *Listeria innocua*. *J. Appl. Microbiology* **90**:6:994-999

Sheridan, J.J., Logue, Catherine M., Mc Dowell, D.A., Blair, I.S., and Hegarty, T. (2000) The effect of temperature and selective agents on the growth of *Yersinia enterocolitica* serotype O:3 in pure culture. *J. Appl. Microbiol* **88**:6:1001-1008

Duffy, Geraldine, Walsh, D., Logue, Catherine. M., Sheridan, J.J., McDowell, D.A. and Blair, I.S. (2000) Behaviour of *L. monocytogenes* in the presence of *L. innocua* during storage in minced beef under vacuum or in air at 0 and 10°C. *Food Microbiol.* **17**:571-578.

Logue, Catherine. M., Sheridan, J.J., Mc Dowell, D.A., Blair, I.S., and Harrington, D. (1998) A study of the growth of plasmid bearing and plasmid cured strains of antibiotic resistant *Yersinia enterocolitica* serotype O:3 on beef, pork and lamb. *Food Microbiol.* **15**:6:603-615.

Sheridan, J.J., Logue, Catherine M., Mc Dowell, D.A., Blair, I.S., and Hegarty, T. (1998) A study of the growth kinetics of *Yersinia enterocolitica* serotype O:3 in pure and meat culture systems. *J. Appl. Microbiol.* **85**:2:293-301.

Logue, Catherine. M., Sheridan, J.J., Mc Dowell, D.A., Blair, I.S., Hegarty, T. and Toivanen, P. (1998) The use of a surface adhesion immunofluorescent (SAIF) method for the rapid detection of *Yersinia enterocolitica* serotype O:3 in meat. *J. Appl. Microbiol.* **85**:4:737-745.

Logue, Catherine M., Sheridan, J.J., Wauters G, Mc Dowell, D.A., Blair, I.S., (1996). *Yersinia* spp. and numbers, with particular reference to *Y. enterocolitica* bio/serotypes, occurring on Irish meat and meat products, and the influence of alkali treatment on their isolation. *Int. J. Food Microbiol.* **33**:257-274.

Logue, Catherine M. (1996) A study of *Yersinia enterocolitica* and the development of a rapid method for its detection in meat. D.Phil Thesis, University of Ulster.

Manuscripts Submitted/In Preparation for Refereed Journals

Logue, C.M., Sheridan, J.J., Harrington, D. (2002) Studies of Steam Decontamination of Beef Inoculated with *Escherichia coli* O157:H7 and its Effect on Subsequent Storage. In preparation for the *J.Appl. Micro.*

Logue, C.M., Sherwood, J.S., Olah, P.A., Elijah, L.M., and Dockter, M.R., (2002) The Incidence of antimicrobial resistant *Salmonella spp.* on freshly processed poultry from Midwestern processing plants. Submitted to the *Journal of Applied Microbiology* 04/02

Elijah, L.M., and Logue, C.M., (2001) Isolation and Identification of *Campylobacter spp.* on Processing Line Turkey Carcasses. *McNair Scholars Research Journal. In Press*

Elijah, L.M., and Logue, C.M. (2002) Antimicrobial resistance of *Campylobacter* Isolates. *Mc Nair Scholars Research Journal In Press*

Published Abstracts/Proceedings of Meetings

P.A. Olah, J.S. Sherwood, L.M. Elijah, M.R. Dockter, D.G. Perkins, L.M. Griffin and C.M. Logue (2002) Antimicrobial resistance of *Salmonella* and *Campylobacter* isolated from poultry. Submitted abstract – poster/oral presentation Conference on Antimicrobial Resistance, Bethesda, MD June 27-29.

C.M. Logue, L.M. Elijah, J.S. Sherwood, P.A. Olah, Q. Li, M.R. Dockter (2002) Incidence of *Campylobacter spp.* on Processed Poultry from Midwestern States. Abstract and Poster Presentation American Society for Microbiology Annual Meeting (ASM), Salt Lake City, UT May 19 – 23.

P.A. Olah, C.M. Logue, J.S. Sherwood, L.M. Elijah, Q. Li, M.R. Dockter (2002) Comparison of Antimicrobial resistant *Salmonella* and *Campylobacter* isolated from Processed Poultry. Abstract and Poster Presentation American Society for Microbiology Annual Meeting (ASM), Salt Lake City, UT May 19 – 23.

C.E. Wolf-Hall, M. Bhattacharya, A.C. Bratanich, W. Coleman, J. Garden-Robinson, J. Haggart, E. Holm, S.M. Horne, P. Jensen, G. Lardy, C.M. Logue, M. Marchello, W. Nganje, L.K. Nolan, S. Panigrahi, M. Robinson, J. Schwarz, T. Sellnow, C. Stoltenow, and D. Tomanek. (2001)

Development of a Multidisciplinary Undergraduate Minor in Food Safety. Abstract and Poster Presentation. The Science of Pre-harvest Food Safety Bringing Science to the Table. Michigan State University WI, May 8 – 10

C.M. Logue, J.S. Sherwood, M.C. Casteel, M.R. Dockter, L.M. Elijah, R.J. Hinnenkamp, M.C. Leraas, P.A. Olah, C.E. Oliver, J. Passman, T. Priebe, J. Rexine, M. Sundrud (2001) Preliminary Data on the Incidence of Antibiotic Resistant *Salmonella spp.* in Processed Poultry from Midwestern Plants. Abstract and Poster Presentation, American Society for Microbiology Annual Meeting (ASM), Orlando, FL May 20 – 24.

J.J. Haggart, L.K. Nolan, M. Bhattacharya, A.C. Bratanich, W. Coleman, J. Garden-Robinson, E. Holm, S.M. Horne, P.A. Jensen, G. Lardy, C.M. Logue, M. Marchello, W. Nganje, S. Panigrahi, M. Robinson, J. Schwarz, T. Sellnow, C. Stoltenow, D. Tomanek, C. Wolf-Hall (2001) Implementation of a Food Safety Minor Using a Multidisciplinary Approach. Abstract and Poster Presentation, American Society for Microbiology Annual Meeting (ASM), Orlando, FL May 20 – 24.

J.J. Haggart, Lisa K. Nolan, Catherine M. Logue, M. Bhattacharya, A.C. Bratanich, W. Coleman, J.C. Colville, J. Garden Robinson, E. Holm, S.M. Horne, P.A. Jensen, G. Lardy, M. Marchello, W. Nganje, S. Panigrahi, M. Robinson, J. Schwarz, T. Sellnow, C. Stoltenow, D. Tomanek, C. Wolf-Hall (2000) Development of a Multidisciplinary Undergraduate Minor in Food Safety. Current Concepts in Foodborne Pathogens and Rapid Methods and Automated Methods in Food Microbiology, University of Wisconsin, River Falls Oct 18 – 20.

Catherine M. Logue, Lisa K. Nolan, J.J. Haggart, M. Bhattacharya, A.C. Bratanich, W. Coleman, J.C. Colville, J. Garden Robinson, E. Holm, S.M. Horne, P.A. Jensen, G. Lardy, M. Marchello, W. Nganje, S. Panigrahi, M. Robinson, J. Schwarz, T. Sellnow, C. Stoltenow, D. Tomanek, C. Wolf-Hall (2000) Addressing the Food Safety Expertise Gap: Development of a Food Safety Minor. Proceedings of the 2nd NSF International Conference on Food Safety, Savannah, Georgia 11-13 Oct.

Haggart, J.J., Nolan, L.K., Bhattacharya, M., Bratanich, A.C., Garden-Robinson, J., Holm, E., Horne, S.M., Jensen, P.A., Lardy, G., Logue, C.M., Marchello, M., Nganje, W., Panigrahi, S., Robinson, M., Schwarz, J., Stoltenow, C., Wolf-Hall, C. (2000) Development of a Multidisciplinary Undergraduate Minor in Food Safety. Abstract and poster presentation, American Society for Microbiology Annual Meeting (ASM), Los Angeles 21-25 May

Logue, Catherine M., Sheridan, J.J. (1999) The use of steam under sub-atmospheric pressures for the decontamination of meat. Abstract and poster presentation, 80th Conference of Research Workers in Animal Diseases (CRWAD), Chicago 6-9 Nov

Logue, Catherine M., Sheridan, J.J. (1999) The effect of the incorporation of organic acids with sub-atmospheric steam as a method for the decontamination of beef. Abstract and poster presentation, 1st Annual Meeting of The National Alliance of Food Safety (NAFS), Washington 9-13 Oct

Logue, Catherine M., Sheridan, J.J. (1999) An investigation of the effect of decontamination using steam under sub-atmospheric pressures on the survival of *E. coli* O157:H7. Abstract and poster presentation, Society for Applied Microbiology (SfAM) Summer Conference – *Escherichia coli* – friend and foe. University of York 13-16 July

Duffy, G., Logue, C. M., Cloak, O. M., Sheridan, J.J. (1996) The development of a surface adhesion immunofluorescent technique for the detection of pathogens from meat and meat products. Concerted Action CT94-1456. Microbial Control in the Meat Industry. Microbial Methods and Decontamination. Ghent, Belgium 14 - 16 October.

Presentations by Co-Investigators Without Corresponding Abstracts

Elijah*, L.M., and Logue, C.M. Isolation and Identification of *Campylobacter* spp. on Processing Line Turkey Carcasses. Mc Nair Annual Research Forum. April 2001

Elijah*, L.M., and Logue, C.M. Antimicrobial resistance of *Campylobacter* Isolates. Mc Nair Annual Research Forum. April 2002

Invited Scientific or Lay Presentations/Lectures

Logue, C.M. Food Safety Research at NDSU, ND Poultry Association, Annual Meeting, Fargo, ND December 1999.

Logue, C.M. Food Safety Research in VMS. Dept. of Food and Nutrition, NDSU - Graduate Student Seminar – April 2000.

Logue, C.M. Food Safety Research – Current Perspectives, Concordia College, Moorhead, Guest Lecture – June 2000.

Nolan, L.K., Logue, C.M. et al The New Food Safety Minor at NDSU, Minnesota Public Radio August 2000

* Under the Mentorship of C.M. Logue

- Logue, C.M. The Education of the Next Generation of Food Safety Experts: The Great Plains Institute of Food Safety – 2nd International NSF Conference on Food Safety, Interactive Poster Presentation, Savannah, Georgia, October 2000.
- Logue, C.M. Foodborne Pathogens and Safety Aspects – Meeting of the ND Environmental Health Association, Grand Forks, ND, November 2000
- Logue, C.M. Surveillance of *Salmonella* and *Campylobacter spp.* in Midwestern Poultry Plants – What can we learn? February 2001
- Nolan, L.K., Logue *et al* The New Food Safety Minor at NDSU, Prairie Public TV February 2001
- Nolan, L.K., Logue, C.M., *et al* Food Safety Minor at NDSU, *Fargo Forum*, June 2001
- Logue, C.M. Food Safety and Bioterrorism- How Can we keep our Food Supply Safe?, Phi Kappa Phi, Invited Speaker, NDSU, November 2001.
- Logue, C.M. Food Safety and Bioterrorism – Should we be Scared? Women's Studies Symposium, NDSU, April 2002
- Logue, C.M., Antimicrobial Resistant *Salmonella* and *Campylobacter* - The Food Safety View, Iowa State University, May 2002

References

Please notify me before any of the referees are contacted

Dr. Lisa K. Nolan,
Associate Professor
Director Great Plains Institute of Food Safety
Department of Veterinary and Microbiological Sciences
North Dakota State University
132 Van Es Hall
Fargo, ND 58105
701 231 8530 (office)
701 231 9692 (fax)
Lisa.Nolan@ndsu.nodak.edu

Dr. Nolan has been my faculty mentor in VMS and recruited me to NDSU

Dr. Donald R. Kirby
Interim Chair,
Department of Animal and Range Sciences
Hultz Hall 100
Fargo, ND 58105
701 231 7658
701 231 7590
dkirby@ndsuxext.nodak.edu

Dr. Kirby was my interim chair in VMS for approximately 1 year and also serves as a faculty mentor to me

Dr. Berdell Funke
2801 9 ½ St N
Fargo ND 58102
701 235 3959
brfunke@earthlink.net

Dr. Funke is a close friend and retired professor from NDSU.



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ASM Abstract Database

2002 General Meeting (5/19/2002 through 5/23/2002)

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Comparison of Antimicrobial Resistant Salmonella and Campylobacter Isolated from Processed Poultry

Pamela Olah, Catherine Logue, Julie Sherwood, Lisa Elijah, Quiongzhen Li, Michelle Dockter

This study was carried out to compare to the antimicrobial resistance of Salmonella and Campylobacter recovered from poultry carcasses presented for processing at two Midwestern poultry plants. Isolates were recovered from carcasses either pre or post chill using standard isolation methods, screened and identified using microtitre (Sensititre) or API identification. Salmonella isolates were serotyped by the National Diagnostic Services Laboratory (NDSL). Salmonella and Campylobacter isolates identified as both being present on a carcass (n = 29) were selected for further study. All isolates were subjected to antimicrobial resistance screening according to FDA protocols. Salmonella isolates were subjected to antimicrobial resistance testing using the National Antimicrobial Resistance Monitoring Scheme (NARMS) panel (Sensititre). Campylobacter isolates were tested for antimicrobial resistance using the E-test (AB Biodisk). NARMS panels tested Salmonella resistance to 17 different antimicrobials while the E-test subjected Campylobacter to 11 antimicrobials. Breakpoints to determine the resistance levels of the strains were determined according to the FDA guidelines. Results to date indicate Salmonella had significant levels of resistance to Chloramphenicol, Ampicillin, Tetracycline, Kanamycin, Gentamicin, and Sulfamethoxazole. Campylobacter isolates showed resistance to Nalidixic acid, Tetracycline, Ciprofloxacin and Kanamycin. Overall, results showed relationships between antimicrobial resistances observed for Salmonella and Campylobacter recovered from the same carcass, 18 strains of Salmonella and Campylobacter were resistant to Tetracycline, a similar overlap was noted for Kanamycin (12 resistant) and 3 were resistant to Chloramphenicol. The study also noted a relationship between the flock being processed and the presence of antimicrobial resistant pathogens suggesting that farm practice may promote the creation of antimicrobial resistant bacteria in food animals.

Last Modified: February 17, 2000

Email: webmaster@asmusa.org

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ASM Abstract Database

2002 General Meeting (5/19/2002 through 5/23/2002)

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Incidence of *Campylobacter* spp. on Processed Poultry from Midwestern States

Catherine Logue, Lisa Elijah, Julie Sherwood, Pamela Olah, Quiongzhen Li, Michelle Dockter

Campylobacter is one of the most prominent pathogens implicated in foodborne illness and has been estimated to be responsible for up to 4 million cases annually. This study was carried out to determine the incidence of *Campylobacter* spp. on poultry presented for processing. Two plants in the Midwestern region participated in the study. The plants were visited on a monthly basis for a period of one year where samples were obtained. Poultry carcasses were examined at two points on the production line: pre chill and post chill. Approximately 50 carcasses were randomly selected from the line just prior to entering the chill tank and surface swabbed. On the post chill side, swabbing of carcasses was carried out immediately after removal from the chill tank. Samples of chill water were also obtained. All samples were subject to standard enrichment in Preston selective enrichment broth with selection to *Campylobacter* blood free agar (CCDA) and incubated microaerophilically. Following recovery, colonies of typical morphology were initially screened using the gram stain, oxidase and catalase reactions. All suspect isolates were identified using the API (BioMerieux) identification scheme. Results to date indicate that of 2413 swabs and samples collected 1000 (41.4%) were positive for suspect *Campylobacter*. Differences were observed in the contamination rates between the two plants with an overall contamination rate for Plant A of 44.4%, and 38.5% for Plant B. Analysis of pre and post chill data showed significantly less *Campylobacter* on carcasses post chill (45.9% pre chill vs 43% post chill) Plant A and 49.5% pre chill vs 27.8% post chill Plant B. The most common *Campylobacter* species identified included *C. jejuni* and *C. coli*. Preliminary data presented indicate that the levels of *Campylobacter* present were influenced by factors such as season, production speed and chilling regime used.

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Enrofloxacin Hearing
Docket No: 00N-1571

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Food and Drug Administration
5630 Fishers Lane (Room 1061)
Rockville, MD 20852

I also certify that a copy of the pleading has been hand delivered and e-mailed, this 5th day of August, 2002, to:

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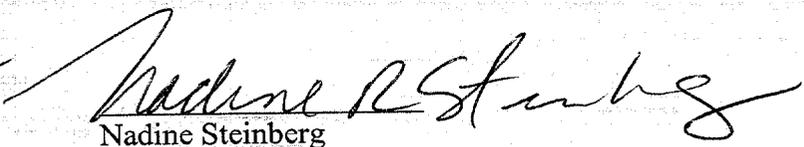
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