

*CURRICULUM VITAE (November 2018-16 pages)***HARRY HARIHARAN**

**Current Position:** Professor, (Bacteriology/Pathobiology)  
School of Veterinary Medicine, St. George's University,  
Grenada, West Indies

**E-Mail:** [hhariharan@sgu.edu](mailto:hhariharan@sgu.edu)

**ACADEMIC QUALIFICATIONS:**

<u>Degrees, Diplomas, Board Certification</u>	<u>University or Board</u>	<u>Area of Certification</u>
<b>BVSc</b>	U. of Kerala (India)	Veterinary Medicine
<b>DVSM</b>	U. of Edinburgh (U.K.)	Veterinary Medicine
<b>MSc</b>	U. of Guelph (Canada)	Veterinary Bacteriology & Mycology, Zoonoses
<b>PhD</b>	U. of Guelph (Canada)	Bacteriology, Epidemiology

**EMPLOYMENT HISTORY:**

July 1, 2007 onwards: **Professor**, St. George's University School of Veterinary Medicine, Grenada, West Indies. Responsibilities include teaching Bacteriology & Mycology (**Course Director**) to DVM students, research, establishing graduate courses, graduate student supervision, and diagnostic bacteriology. Also, serving several research committees.

**Winner of the Pfizer Award for Research Excellence, 2009.**

**Winner of Teaching Excellence Award, St. George's University, 2006 (Visiting Professor)**

**Previous employments:**

1996 - June 2007: **Professor**, Bacteriology, Department of Pathology and Microbiology, Atlantic Veterinary College, University of P.E.I., Charlottetown, Canada

Responsibilities included teaching in the DVM and graduate programs, diagnostic bacteriology, research, supervision of graduate students, and participation in MSc and PhD examination committees. Also, **Served the Board of Scientific Reviewers for American Journal of Veterinary Research (AVMA) 2002-2005.**  
**Winner of UPEI Academic Scholarly Achievement Merit Award, 2004.**

1988-1996: **Associate Professor**, Atlantic Veterinary College, PEI, Canada.

1986-1988: **Senior Lecturer**, Microbiology, Department of Disease Control, School of Veterinary Medicine, University of Zambia, Lusaka, Zambia.

1984-1986: Post-doctoral Fellow, Department of Microbiology, School of Medicine, University of Missouri-Columbia, Missouri, USA

1983-1984: Microbiologist/ Veterinary Officer for the Division of Animal Health, United Nations Food and Agriculture Organization, Rome.

1982-1983: Microbiologist, Department of Microbiology, Sarabhai Research Center, Baroda, India

1979-1981: Microbiologist (Bacteriology) for the Division of Animal Health, United Nations Food and Agriculture Organization, Rome.

1977-1979: Microbiologist/Scientist, Research Department, Division of Infectious Diseases, Ciba-Geigy Ltd. Basel, Switzerland

### **TEACHING RESPONSIBILITIES (10 years at the Atlantic Veterinary College, Canada)**

DVM Courses (Co-ordinator / Course Director for VPM 201)

Bacteriology and Mycology (VPM 201)  
 Diagnostic Services (VPM 450)  
 Clinical Pathology and Microbiology (VPM 470)  
 Foreign Animal Diseases (VPM 421) (Sept.2000)

Graduate Courses: (Co-ordinator / Course Director)  
 Advances in Bacteriology (VPM 822)

### GRADUATE STUDENTS SUPERVISED AT UPEI (Canada)

MSc Students: 10                      PhD Students: 3

### **Graduate Student - Examiner ( excluding examinership of students supervised)**

MSc: 12 (Chair in 7 exam committees)    PhD: 3 (supervisory committee member)

### **Graduate Students supervised at St. George's University, Grenada:**

**MSc (completed):18, (current): 1, PhD (current): 1**

### **Scholarly Awards, Honours**

1. **The Pfizer Award for Research Excellence, 2009**
2. **St. George's University Teaching Excellence Award, 2006**
3. **University of Prince Edward Island Research & Scholarly Achievement Award, 2004.**
4. **Member, Scientific Board, American Journal of Veterinary Research, 2002-2005.**

5. **Commonwealth Bureau of Animal Health (UK) Prize, 1975**
6. **Ballard Fellowship Canada for PhD: 1973-1974**

#### **PAPERS PUBLISHED IN REFEREED JOURNALS**

1. Amadi V, **Hariharan H**, Arya G, Matthew V, Nicholas-Thomas R, Pinckney R, Sharma R, Johnson R. **2018**. Serovars and antimicrobial resistance of non-typhoidal *Salmonella* isolated from non-diarrheic dogs in Grenada. *Veterinary Medicine and Science* (Wiley/UK). 4:26-34.
2. Taurisano N, Butler B, Stone D, **Hariharan H**, Fields P, Ferguson H, Haulena M, Cottrell P, Nielsen O, Raverty S. **2018**. *Streptococcus phocae* in marine mammals of the Northeastern Pacific and Arctic Canada: A retrospective analysis of 85 post-mortem investigations. *Journal of Wildlife Diseases*. 54:101-111.
3. Amadi V, **Hariharan H**, Tiwari K, Matthew-Belmar V, Haan JS, Singh A, Mor SK, Goyal SM, Sharma R. **2017**. Molecular typing of *Campylobacter* species isolated from healthy chickens in Grenada. *Annual Reserch & Review in Biology* 21: 1-8.
4. **Hariharan H**, Hariharan SH. **2017**. Zoonotic bacteria associated with cats. *Veterinary Medicine Open Journal*. **2017**; 2(3):68-75.
5. Amadi VA, Matthew-Belmar V, Subbarao C, KashomaI, Rajashekara G, Sharma R, **Hariharan H**, Stone D. **2017**. *Campylobacter* species isolated from pigs in Grenada exhibited novel clones: Genotypes and antimicrobial resistance profiles of sequence types. *Foodborne Pathog Dis*. 14:419-425.
6. **Hariharan H**, Amadi V. **2016**. Shellfish as reservoirs of bacterial pathogens. *Journal of Coastal Life Medicine*. 4: 253-258.
7. **Hariharan H**. **2016**. Observation on emerging zoonotic enteric bacterial pathogens – Editorial. *Veterinary Medicine Open Journal*. Accepted.
8. **Hariharan H**, Brathwaite-Sylvester E, Matthew-Belmar V, Sharma R. **2016**. Bacterial isolates from urinary tract infection in dogs in Grenada, and their antibiotic susceptibility. *Open Journal of Veterinary Medicine*. 6: 85-88.
9. **Hariharan H**, Rovira A, Matthew-Belmar V, Volger T, Stratton G, Sharma R. **2016**. Gram-negative bacteria from pharynx and nasal cavity of domestic goats in Grenada, and resistance of *Mannheimia haemolytica* and *Bibersteinia trehalosi* to tulathromycin and trimethoprim-sulfamethoxazole. *British Microbiol Res J*. 11 (1):1-8.
10. Sharma R, Tiwari K, Matthew-Belmar V, Kumar S, Goyal SM, **Hariharan H**. **2016**. Prevalence and antimicrobial resistance of *Campylobacter* species isolated from backyard chickens in Grenada. *British Microbiol Res J*. 11 (4):1-8.
11. Miller S, Zieger U, Ganser C, Satterlee SA, Bankovich B, Amadi, S, **Hariharan H**. Stone D, Wisely SM. **2015**. Influence of land use and weather on he prevalence of *Salmonella* in the small Indian Mongoose. *J Wildlife Dis* 51:60-68.

12. Amadi V, Peterson R, Matthew V, Sharma R, **Hariharan H. 2015.** Prevalence and antibiotic susceptibility of Gram-negative aerobic bacteria cultured from the intestines and hepatopancreas of blue land crab (*Cardisoma guanhumi*) in Grenada, West Indies. *British Microbiol Res J.* 5: 169-179.
13. Amadi V, Watson N, Onyegbule OA, Mathew-Belmar V, Avendano E, Tiwari K, Sharma R, **Hariharan H. 2015.** Antimicrobial resistance profiles of *Escherichia coli* recovered from feces of healthy free-range chickens in Grenada, West Indies. *International J Current Microbiol Appl Sc.* 4: 168-175.
14. **Hariharan H**, Bhaiyat MI, Tiwari KP, Chikweto A. **2015.** Multifocal pulmonary abscesses due to *Trueperella pyogenes* in a sheep. *EC Vet Sc.* 2.2 (2015): 98-102.
15. Amadi VA, Avendano E, Onyegbule OA, Pearl Z, Graeme S, Sharma R, **Hariharan H. 2015.** Antimicrobial drug resistance in *Escherichia coli* including an O157:H7 isolate from feces of healthy goats in Grenada. *Ann Res Rev Biol.* 7:68-74.
16. Matthew-Belmar V, Amadi A, Stone D, Subbarao C, Sharma R, **Hariharan H. 2015.** Antimicrobial resistance profiles of *Campylobacter jejuni* and *Campylobacter coli* recovered from feces of young healthy domestic pigs in Grenada. *Intl J Curr Microbiol Appl Sc.* 4:197-206.
17. Amadi V, Matthew-Belmar V, Tiwari K, Brathwaite E, Sharma R, **Hariharan H. 2015.** Antimicrobial resistance profiles of *Escherichia coli* recovered from feces of young healthy domestic pigs in Grenada, West Indies. *British Microbiol Res J.* 5: 300-306.
18. **Hariharan H**, Tiwari KP, Kumthekar S, Thomas D, Hegamin-Younger C, Edwards B, Sharma RN. **2015.** Serological detection of caseous lymphadenitis in sheep and goats using a commercial ELISA in Grenada, West Indies. *International Journal of Veterinary Medicine – Research & Reports.* ID. 473459. 7 pages. DOI: 10.5171/2015.473459
19. Amadi V, Zieger U, Onyegbule OA, Matthew-Belmar V, Sharma R, **Hariharan H. 2015.** Absence of *Escherichia coli* O157:H7 serotype in small Indian mongooses (*Herpestes auropunctatus*) in Grenada and antimicrobial drug resistance of the non-O157 isolates. *Ann Res Rev Biol.* 7: 91-99.
20. **Hariharan H**, Gibson K, Peterson R, Frankie M, Matthew V, Daniels J, Martin NA, Andrews I, Paterson T, Sharma RN. **2014.** *Staphylococcus pseudintermedius* and *Staphylococcus schleiferi* subspecies *coagulans* from canine pyoderma cases in Grenada, West Indies, and their susceptibility to beta-lactam drugs. *Vet Med International.* 2014. ID. 850126. 7 pages.
21. Miller S (**MSc student**), Amadi V, Bekele AZ, Zieger U, **Hariharan H**, Stone DM. **2014.** Identification of human and poultry *Campylobacter* sequence types in small Indian mongooses (*Herpestes auropunctatus*) in Grenada. *Int J Vet Med Res Rep.* 2014. ID.67608. 6 pages,
22. Stone DM, Chander Y, Bekele AZ, Goyal SM, **Hariharan H** **2014.** Genotypes, antibiotic resistance, and ST-8 genetic clone in *Campylobacter* isolates from sheep and goats in Grenada. *Vet Med International,* 2014: ID, 212864; 8 pages.
23. Peterson R (**MSc student**), **Hariharan H**, Matthew V, Stratton G, Hegamin-Younger C, Sharma R. **2014.** Comparison of culture of goat milk with measurement of somatic cell count using a commercial kit, and antimicrobial susceptibility of bacterial isolates. *Int. J. Vet Med. Res. Rep.* 2014. ID: 710797. 6 pages.

24. Miller S (**MSc student**), Amadi V, Stone D, Johnson R, **Hariharan H**, Zieger U. **2014**. Prevalence and antimicrobial susceptibility of *Salmonella* spp. in small Indian mongooses (*Herpestes auropunctatus*) in Grenada. *Comp Immuno Microbiol Infect Dis*. 37:205-210.
25. Sylvester WRB (**MSc student**), Amadi V, Pinckney R, Macpherson CNL, McKibben JS, Bruhl-Day, Johnson R, **Hariharan H (Corresponding author)**. **2014**. Prevalence, serovars and antimicrobial susceptibility of *Salmonella* spp. from wild and domestic green iguanas (*Iguana iguana*) in Grenada, West Indies. *Zoonoses & Public Health* 61:436-441.
26. Sylvester WRB, Amadi V, Hegamin-Younger C, Pinckney R, Macpherson CNL, McKibben JS, Bruhl-Day R, John-Sylvester KD, **Hariharan H**. **2014**. Occurrence of antibiotic resistant *Escherichia coli* in green iguanas (*Iguana Iguana*) in Grenada, West Indies. *Int J Vet Med Res Rep*. 2014. 260412. 8 pages.
27. Herbers M (**MSc student**), **Hariharan H**, Matthew V, Oliveira S, Rovira A, Sharma RN, Ferguson HW. **2013**. *Photobacterium damsela* in bigeye scad, *Selar crumenophthalmus* (Bloch, 1793) from Grenada, West Indies. *J Fish Diseases*. 37:675-677.
28. Chikweto A, **Hariharan H (Corresponding author)**, Bhaiyat MI, Kumthekar SM, Tiwari KP, Dragon L, Sharma RN. **2013**. *Klebsiella pneumoniae* infection in a squirrel monkey. *Int J Vet Med Res Rep*. 2013 ID:105171. 4 pages.
29. Drake M (**MSc student**), Amadi V, Zieger U, Johnson R, **Hariharan H (corresponding author)**. **2013**. Prevalence of *Salmonella* spp. in cane toads (*Bufo marinus*) from Grenada, West Indies, and their antimicrobial susceptibility. *Zoonoses & Public Health* 60: 437-441.
30. Peterson R (**MSc student**), **Hariharan H (corresponding author)**. Matthew V, Chappell, Davies R, Parker R, Sharma R, **2013**. Prevalence, serovars, and antimicrobial susceptibility of *Salmonella* isolated from Blue Land Crabs (*Cardisoma guanhumi*) in Grenada, West Indies. *J Food Protection* 76: 1270-1273.
31. Tiwari K, Chikweto A, Thomas D, **Hariharan H (Corresponding author)**, Sis R, Sharma RN. **2013**. Bovine tuberculosis in Grenada, West Indies: current status. *Int J Vet Med Res Rep*. 2013. ID. 169877. 4 pages.
32. Kumthekar S, Manning EJB, Ghosh P, Tiwari K, Sharma R, **Hariharan H (corresponding author)**. **2013**. *Mycobacterium avium* subspecies *paratuberculosis* confirmed following serological surveillance of small ruminants in Grenada. *J Vet Diagn Invest*. 25: 527-530.
33. Chikweto A, Tiwari K, Kumthekar S, Stone D, Louison B, Thomas D, Sharma R, **Hariharan H. (corresponding author)**. **2013**. Serologic detection of antibodies to *Brucella* spp. using a commercial ELISA in cattle in Grenada, West Indies. *Trop Biomedicine*. 30: 277-280.
34. Bhaiyat MI, **Hariharan H (Corresponding author)**, Chikweto A, Tiwari K, Sharma RN, Kobayashi Y. **2013**. Isolation of coagulase-negative *Staphylococcus* spp. and *Kocuria varians* in pure culture from tissues of cases of mortalities in parrots in Grenada, West Indies. *Int J Vet Med Res Rep*. 2013. 149634. 6 pages.
35. Roopnarine R, Stone D, **Hariharan H**, De Allie C, Hand C, Hegamin-Younger C, Matthew V, Sharma R. 2012. Fluoroquinolone and metronidazole resistance of *Campylobacter* spp. from broiler chickens and antimicrobial use on farms in Grenada, West Indies. *J Animal Res*. 2: 219-227.

36. Ganchingco JR (**MSc student**), Kumar K, Stone D, Matthew V, Stratton G, Sharma R, **Hariharan H (corresponding author)**. 2012. *Campylobacter coli* and *C. jejuni* isolated from farmed pigs in Grenada, West Indies and their antimicrobial resistance patterns. *J Animal Res.* 2: 237-245.
37. Sharma RN, **Hariharan H**, Roopnarine R. 2012. Ciprofloxacin resistance in campylobacters from chickens in Grenada. *Ind J Vet Res.* 21: 6-9.
38. **Hariharan H**, Rodriguez A, Hariharan S. 2011. Update on Guillain-Barre Syndrome-like conditions in animals. *WMC Vet Medicine* 2011; 2 (6):1-9.
39. Rodriguez AI, **Hariharan H**, Nimrod S. 2011. Occurrence and antimicrobial drug resistance of potential bacterial pathogens from shellfish, including queen conchs (*Strombus gigas*) and whelks (*Cittarium pica*) in Grenada. *WMC Microbiology* 2011;2(5):WMC001943:1-11.
40. Sabarinath A, Tiwari KP, DeAllie C, Belot G, Vanpee G, Matthew R, Sharma R, **Hariharan H**. 2011. Antimicrobial resistance and phylogenetic groups of commensal *Escherichia coli* isolates from healthy pigs in Grenada. *WMC Vet Medicine* 2011;2(5)WMC001942:1-10.
41. **Hariharan H**, Matthew V, Fountain J, Snell A, Doherty D, King B, Shemer E, Oliveira, S, Sharma RN. 2011. Aerobic bacteria from mucous membranes, ear canals, and skin wounds of feral cats in Grenada, and the antimicrobial drug susceptibility of major isolates. *Comp Immunol Microbiol Infect Dis.* 34:129-134.
42. Miller RS, Behringer M, **Hariharan H**, Matthew V, Oyarzabal OA. 2010. DNA identification and characterization of *Campylobacter jejuni* and *Campylobacter coli* strains isolated from chickens in Grenada. *J Appl Microbiol.* 108: 1041-1049.
43. **Hariharan H**, Sharma S, Chikweto, A, Matthew V, DeAllie C. 2009. Antimicrobial drug resistance as determined by the E-test in *Campylobacter jejuni*, *C. coli*, and *C. lari* isolates from the ceca of broiler and layer chickens in Grenada. *Comp Immunol Microbiol Infect Dis.* 32:21-28.
44. **Hariharan H**, Brathwaite-Sylvester E, Matthew V. 2009. Clinical isolates of bacteria from domestic cats in Grenada. *West Ind Vet J.* 9:14-16.
45. **Hariharan H**, Brathwaite-Sylvester E, Matthew V. 2009. Antimicrobial susceptibility of clinical isolates of *Pseudomonas aeruginosa* from dogs in Grenada. *West Ind Vet J.* 9:1-3.
46. **Hariharan H**, Brathwaite-Sylvester E, Matthew V. 2012. Bacterial isolates from urinary tract infections in dogs in Grenada, and their antibiotic susceptibility. *West Ind Vet J.* (submitted after revision).
47. Bhaiyat MI, **Hariharan H**, Chikweto A, Brathwaite e, Matthew V, Burnette J, Oliveira S. 2009. Isolation of *Salmonella enteritidis* from thoracic fluid and abdominal mass of a cat with lymphosarcoma. *Vet Med* 54:451-454.
48. **Hariharan H**, Oliveira S, Sharma S, Matthew V. 2008. Antimicrobial drug resistance and genetic diversity of commensal *Escherichia coli* from ceca of chickens in Grenada. *West Ind Vet J.* 8:3-10.
49. **Hariharan H**, Chikweto A, Bhaiyat MI, Brathwaite E, Sharma RN. 2008. Isolation of *Aerococcus viridans* from a hepatitis outbreak in a broiler flock in Grenada. *West Ind Vet J.* 8:72-76.
50. **Hariharan H**, Brathwaite E, Sivanandan V, Matthew V. 2008. Antibiotic susceptibility of clinical isolates of *Staphylococcus intermedius* and *S. aureus* from dogs in Grenada. *West Ind Vet J.* 8:62-66.

51. Sivanandan V, Dragon L, **Hariharan H**, Chikweto A, Matthew V, Sharma RN. 2008. Phaeohyphomycosis of skin caused by *Curvularia* species fungus in a dog in Grenada. *West Ind Vet J.* 8:81-83.
52. Mofya S, Sharma RN, Stone D, **Hariharan H**, Pensick A, Baffa A, Shakai J, Doherty D. 2008. Seroepidemiological study of feline and leukaemia virus and feline immunodeficiency virus infections in domestic and feral cats in Grenada. *West Ind Vet J.* 8:18-22.
53. **Hariharan H**, Sharma S, Chikweto A, Matthew V. 2007. *Enterobacteriaceae* from chicken ceca in Grenada and susceptibility of *Escherichia coli* isolates to fluoroquinolones. *West Ind Vet J.* 7:8-11.
54. Rodriguez A, **Hariharan H**. 2009. Occurrence and antimicrobial drug resistance of potential bacterial pathogens from shellfish in Grenada. National Shellfisheries Association (US) Annual Conference Abstracts. *J Shellfish Res.* 28:661.
55. **Hariharan H**, Lopez A, Conboy G, Coles M, Muirhead T. 2007. Isolation of *Escherichia fergusonii* from the feces and internal organs of a goat with diarrhea. *Can Vet J.* 48:630-631.
56. **Hariharan H**, Coles M, Poole D, Lund L, Page R. 2006. Update on antimicrobial susceptibilities of bacterial isolates from canine and feline otitis externa cases. *Can Vet J.* 47: 253-255.
57. **Hariharan H**, Murphy GA, Kempf I . 2004. *Campylobacter jejuni*: Public health hazards and potential control methods in poultry. *Veterinary Medicine.* 49:441-6
58. Dobbin G, **Hariharan H**, Daoust P-Y, Hariharan S, Heaney S, Coles M, Price L, Muckle A. 2005. Bacterial flora of free-living double-crested cormorant (*Phalacrocorax auritus*) chicks on Prince Edward Island, Canada, with reference to enteric bacteria and antibiotic resistance. *Comp Immunol Microbiol Infect Dis.* 28:71-82.
59. **Hariharan H**, Donachie W, Macaldowie C, Keefe G. 2004. Bacteriology and somatic cell counts in milk samples from ewes in a Scottish farm. *Can J Vet Res.* 68: 188-192.
60. **Hariharan H**, Coles M, Poole D, Page R. 2004. Antibiotic resistance among enterotoxigenic *Escherichia coli* from piglets and calves with diarrhea. *Can Vet J.* 45: 605-606.
61. Udayamputhoor RS, **Hariharan H**, Van Lunen TA, Lewis PJ, Price L, Woodward D. 2003. Effects of diet formulations containing proteins from different sources on colonization of *Campylobacter jejuni* in broiler chickens. *Can J Vet Res.* 67: 204-212.
62. Whitman K, **Hariharan H**, Coles M, Johnson G. 2001. Modified "Nurse" culture technique for accelerating the growth of atypical *Aeromonas salmonicida* on blood agar. *Bull Aquacul Assoc. Canada.* Spec. Publ. No. 5: 50-52.
63. Abouzeed YM, **Hariharan H**, Poppe C, Kibenge FS. 2000. Characterization of *salmonella* isolated from beef cattle, broiler chickens and humans. *Comp Immun Microbiol Infect Dis* ((Elsevier, UK): 23: 253-266.
64. **Hariharan H**, Cepica A, Qian B, Heaney S. 2000 Toxigenic and drug resistance properties of porcine *Pasteurella multocida* isolates from Prince Edward Island *Can Vet J.* 41: 798.
65. Schurman RD, **Hariharan H**, Heaney S, Rahn K. 1999. Prevalence of Shiga Toxin- producing *Escherichia coli* in beef cattle slaughtered on Prince Edward Island. *J Food Protection.* 63: 1583-1586.

66. **Hariharan H**, Murphy G, Shanmugam J. 1999. Natural and experimental animal models of Guillain-Barre syndrome, and *Campylobacter jejuni* animal models. *Biomedicine* 19: 87-97.
67. Gibson K, Donald AW, **Hariharan H**, McCarville C. 1997. Comparison of two pre-surgical skin preparation techniques. *Can J Vet Res.* 61: 154-156.
68. Hawkins L, **Hariharan H**, Whitman K, Johnson G. 1997. Drug resistance of atypical *Aeromonas salmonicida* from Atlantic salmon and rainbow trout in Newfoundland. *Bull Aquacul Assoc Canada* 97-2: 39-41.
69. **Hariharan H**, Naseema K, Kumaran C, Shanmugam J, Nair MD, Radhakrishnan K. 1996. Detection of *Campylobacter jejuni/coli* infection in patients with Guillain- Barré Syndrome by serology and culture. *Microbiologica* 19:267-271.
70. **Hariharan H**, Giles J, Heaney S, Arsenault G, Rainnie D. 1995 Bacteriological studies on mussels and oysters from six river system in Prince Edward Island. *J. Shellfish Research* 14:527-532.
71. **Hariharan H**, Kumaran C, Shanmugam J, Naseema K, Nair MD, Radhakrishnan K, Sabarinathan K. 1995. Occurrence of *Campylobacter jejuni/coli* in cases of pediatric diarrhea and Guillain Barré Syndrome. *Ind. J. Med. Microbiol* 13:125-129.
72. **Hariharan H**, McPhee L, Heaney S, Bryenton J. 1995. Antimicrobial drug susceptibility of clinical isolates of *Pseudomonas aeruginosa*. *Can Vet J* 36:166-168.
73. Giles JS, **Hariharan H**. 1995. The plasmid profiles of fish pathogenic isolates of *Aeromonas salmonicida*, *Vibrio anguillarum* and *V. ordalii* from Atlantic and Pacific coasts. *Can J. Microbiol* 41:209-216.
74. **Hariharan H**, Giles JS, Heaney S, Leclerc S, Schurman D. 1995. Isolation, serotypes and virulence-associated properties of *Yersinia enterocolitica* from the tonsils of slaughter hogs. *Can J Vet Res* 59:161-166.
75. **Hariharan H**, Singer JT, Heaney S. 1995. Toxigenicity of culture filtrates of *Salmonella enteritidis* isolates on three mammalian cell lines. *Microbiologica.* 18:261-266.
76. **Hariharan H**, Lamey K, Heaney S. 1995. Isolation of obligate anaerobic bacteria from clinical specimens. *Can Vet J* 36:173.
77. **Hariharan H**, Qian B, Depres B, Kibenge F, Heaney SB, Rainnie DJ. 1995. Development of a specific biotinylated DNA probe for the detection of *Renibacterium salmoninarum*. *Can J Vet Res* 59:306-310.
78. Giles JS, **Hariharan H**, Heaney S. 1994. A microbiological assay for determining sarafloxacin and oxolinic acid concentrations in Atlantic salmon plasma. *Microbiologica* 17:155-158.
79. **Hariharan H**, Richardson G, Horney B, Heaney S. 1994. Isolation of *Bacteroides ureolyticus* from the equine endometrium. *J Vet Diagn Invest* 6:127-130.
80. **Hariharan H**, Croft E, Heaney S, Bryenton J. 1993. Drug resistance patterns among *Salmonella* isolates. *Can Vet J* 34:757.

81. **Hariharan H**, MacDonald J, Carnat B, Bryenton J, Heaney S. 1992. An Investigation of Bacterial causes of arthritis in slaughter hogs. *J Vet Diagn Invest* 4:28-30.
82. **Hariharan H**, Bryenton J, St. Onge J. 1992. Blood cultures from calves and foals. *Can Vet J* 33:56-57.
83. **Hariharan H**, Heaney S, Bryenton J, Daley J. 1992. Observations on production of hemolysin, LT and drug resistance among enterotoxigenic *Echerichia coli* from piglets. *Comp Imm Microbiol Infec Dis* 15:229-234.
84. Davidson JT, Dohoo IR, Donald AW, **Hariharan H**, Collins K. 1992. A cohort study of coagulase negative staphylococcal mastitis in selected dairy herds in Prince Edward Island. *Can J Vet Res* 56:275-280.
85. Giles JS, **Hariharan H**, Heaney SB. 1991. Evaluation of six antimicrobial agents against fish pathogenic isolates of *Vibrio anguillarum*, *V. ordalii* and *Aeromonas salmonicida*. *Bull Aquacul Assoc Canada*, 91-3:53-55.
86. **Hariharan H**, Bryenton J. 1990. Isolation of *Yersinia spp.* from cases of diarrhea. *Can Vet J* 31:779.
87. **Hariharan H**, Wright T, Long JR. 1990. Isolation and antimicrobial susceptibility of *Campylobacter coli* and *Campylobacter jejuni* from slaughter hogs. *Microbiologica* 13: 1-6.
88. **Hariharan H**, Panigrahi D. 1990. Cholera-like enterotoxin in certain *Campylobacter jejuni* strains: some observations. *Microbiologica* 13: 7-9.
89. **Hariharan H**, McNair N, Bryenton J, St. Onge J, Ojo M, Long JR. 1989. Serotypes of *Pseudomonas aeruginosa* from human and animal sources. *Zbl Bakt-Int J Med Microbiol* 272: 248-251.
90. **Hariharan H**. 1989. Enterotoxin of Public Health Significance in *Campylobacter jejuni* from a monkey. *Ind Vet J* 66: 887.(Brief Report)
91. **Hariharan H**, Bryenton J, St. Onge J, Long JR. 1989. Resistance to trimethoprim-sulfamethoxazole in *Escherichia coli* isolated from pigs and calves with diarrhea. *Can Vet J* 30: 348-349.
92. **Hariharan H**, Bryenton J, St. Onge J, McNair N, Long JR. 1989. Antimicrobial drug susceptibility of *Streptococcus suis* type 2. *Irish Vet J* 42: 113-114.
93. **Hariharan H**. 1988. Isolation of *Mycobacterium bovis* from monkeys. *Irish Vet J* 42:5.
94. Panigrahi D, Burks M, **Hariharan H**, Finkelstein RA. 1987. Evaluation of immuno-dot-blot assay for detection of cholera-related enterotoxin antigen in *Salmonella typhimurium*. *J Clin Microbiol.* 25: 702-705.
95. **Hariharan H**, Booth BA, Brickman TJ, Katt WC, Boesman-Finkelstein M, Finkelstein RA. 1986. Competitive enzyme-linked immunosorbent assay for cholera-related enterotoxins in *Salmonella typhimurium*. *J Clin Microbiol.* 24: 298-300.
96. **Hariharan H**, Mitchell WR. 1977. Type C Botulism: The agent, host spectrum and environment. *Vet Bull (London)* 47: 95-103.

97. **Hariharan H**, Mitchell WR. 1976. Observations on bacteriophages of *Clostridium botulinum* type C isolates from different sources and the role of certain phages in toxigenicity. *Appl Environ Microbiol.* 32: 145-158.
98. **Hariharan H**, Barnum DA, Mitchell WR. 1974. Drug resistance among pathogenic bacteria from animals in Ontario. *Can J Comp Med.* 38: 213-221.
99. **Hariharan H**, Barnum DA. 1974. Minimal inhibitory concentrations of twenty antimicrobial agents to animal pathogens. *Can J Comp Med.* 38: 437-442.
100. **Hariharan H**, Barnum DA. 1974. Antimicrobial drug susceptibility of certain bacterial pathogens from dogs and cats. *Can Vet J.* 15: 108-113.
101. **Hariharan H**, Barnum DA. 1973. Drug resistance among pathogenic *Enterobacteriaceae* from animals in Ontario. *Can J Publ Hlth.* 64: 69.
102. **Hariharan H**, Karrani A. 1972. Incidents of pasteurellosis among cattle in Somalia. *Bull Epiz Dis Afr.* 20: 205-209.

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104. **Hariharan H. 1995.** “*Escherichia coli* Domestic Animals and Humans”. Ed. CL. Gyles”. *JAVMA (Journal of American Veterinary Medical Association).* 207: 451.
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106. Hariharan H and Udayamputhoor R T. 2002. “Immunity to Bacterial and fungal Diseases”. In: Modern Concepts of Immunology in Veterinary Medicine with particular reference to Poultry Immunology. Thajema Publ.Ltd., Vineland, NJ, USA. Pp.123-166.
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110. Amadi V, Peterson R, Matthew-Belmar V, Sharma R, **Hariharan H**. 2015. Grenada blue land crabs harbour zoonotic pathogens and antimicrobial resistant bacteria in their intestine and hepatopancreas. SFAM Summer Conference, Dublin, June/July 2015.
111. Amadi V, Sylvester W, Hegamin-Younger C, Pinckney R, Macpherson C, McKibben J, Bruhl-Day R, John-Sylvester K, **Hariharan H**. 2014. Occurrence of antibiotic resistant *Escherichia coli* in green iguanas (*Iguana iguana*) in Grenada, West Indies. SFAM-MVNA Summer Conference, Brighton, UK, June/July 2014.
112. Sylvester WRB, Amadi V, Pinckney R, Macpherson CNL, BcKibben JS, Bruhl-Day R. Johnson R, **Hariharan H**. 2014. Wild and domestic green iguanas (*Iguana iguana*) from Grenada are reservoirs for *Salmonella* spp: Prevalence, serovars and antimicrobial susceptibility. XIV<sup>th</sup> International Congress of Bacteriology and Applied Microbiology, Montreal, Quebec, Canada, July/August 2014.
113. Amadi V, **Hariharan H**, Werners V,. 2013. Effect of prolonged administration of a low dose of doxycycline on the development of resistance in bacterial indicator in the intestinal flora of healthy dogs in Grenada. SFAM Summer Conference, Cardiff, Wales, UK, July 2013.
114. Drake M, Amadi V, Zieger U, Johnson R, **Hariharan H**. 2012. Isolation of *Salmonella enterica* serovars Javiana, Rubislaw and Montevideo from Cane Toads (*Bufo marinus*) from Grenada, and their susceptibility to antimicrobial drugs. Association of Reptile and Amphibian Veterinarians Annual Conference, Oakland, CA, Oct. 2012.
115. Chikweto A, **Hariharan H**, Bhaiyat M, Tiwari K, Kumthekar S, Sharma R. 2012. *Klesiella pneumoniae* infection in a Squirrel Monkey. Ann. Mtg Am College Vet Pathologists, December 2012, Seattle, USA.
116. Rodriguez A, **Hariharan H**. 2009. Occurrence and antimicrobial drug resistance of Potential bacterial pathogens from shellfish in Grenada. National Shellfisheries Association (US) Annual Meeting, March 2009.
117. **Hariharan H**, Sharma S, Chikweto A, Matthew V, DeAllie C. 2008 Antimicrobial drug resistance as determined by the E-test in *Campylobacter jejuni*, *C. coli*, and *C. lari* isolates from the ceca of broiler and layer chickens in Grenada. World Veterinary Congress, Vancouver, Canada, July 2008.
118. Mateo D, **Hariharan H**, Johnson G. 2004. Antibiotic resistance in marine environments in eastern Canada. 12<sup>th</sup> Annual Grad Stud Res Days. May 17-18, AVC/UPEI.
119. Dobbin G, **Hariharan H**, Daoust P-Y *et. al.* 2003. Salmonella in double- crested cormorants on PEI, Canada. Ann. Mtg of Wildlife Diseases Assn, Saskatoon August 2003.
120. Whitman K, **Hariharan H**, Coles M, Johnson G. 2001. Modified nurse culture technique for accelerating the growth of atypical *Aeromonas salmonicida* on blood agar. Aquacult Assoc Canada Annual Mtg, Halifax, May 2001.
121. Fuentealba C, **Hariharan H**. 2000. Atypical mycobacteriosis in African hedgehog. Presentation: Western Conf. of Veterinary Pathologists, Banff, Alta. 28 Sep.00.
122. Murphy G, **Hariharan H**, Markham RJF, Saleh T, Montgomery M, Benstead T, MacCormick J. 1999. The association between *Campylobacter jejuni* and the development of Guillain-Barre syndrome. 7<sup>th</sup> Annual Grad Stud Res Days May 17-18, AVC/UPEI.

123. Abouzeed Y, **Hariharan H**, Heaney S, Poppe C. 1998. Serotyping, phage typing and antimicrobial drug resistance of *Salmonella* isolates from beef cattle, broiler chickens and humans in Prince Edward Island, Canada. Second Pan Common-wealth Conference, Bangalore. February 1998. Proceedings pp. 211-213.
124. Schurman RD, **Hariharan H**, Heaney S. 1998. Prevalence of Shiga like toxin producing *Escherichia coli* on Prince Edward Island. Second Pan Commonwealth Conference, Bangalore. February 1998. Proceedings pp. 205-209.
125. Schurman RD, **Hariharan H**, Heaney S. 1997. Shiga toxin producing *Escherichia coli* in beef cattle at a slaughter house on Prince Edward Island. Conference: *E. coli*: by the Association of American Veterinary Medical Colleges and the Georgetown Center for Food & Nutrition Policy, Washington, DC. September 1997.
126. Schurman RD, **Hariharan H**, Heaney S. 1996. prevalence of verocytotoxic *Escherichia coli* in Prince Edward Island CVMA Convention, Charlottetown. July 96.
127. **Hariharan H**, Kumaran C, Shanmugam J, Nasunak, Nair MD, Radhakrishnan K, Sabarinathan K. 1995. Occurrence of *Campylobacter jejuni/coli* in cases of pediatric diarrhea and Guillain-Barré Syndrome. Louis Pasteur Centenary Symposium, Trivandrum, India. Nov. 20, 1995. Abstr. No. OM-4.
128. **Hariharan H**. 1995. *Campylobacter jejuni/coli* and Guillain-Barré Syndrome. The Sixth Annual Atlantic Conference of Veterinary Diagnosticians, Charlottetown, Sep. 95.
129. **Hariharan H**, Giles J, Heaney S, Leclerc S, Schurman D, Bryenton J. 1994. Virulence-related characteristics of *Yersinia enterocolitica* isolates. International Conf. on Virulence Mechanisms of Bacterial Pathogens. Ames, Iowa, June 94. Abstr No. 43.
130. Lofstedt J, **Hariharan H**, Duizer J. 1994. Campylobacter bacteremia in diarrheic neonatal calves. Have Meyer 2nd Equine Neonatal Workshop, Tufts University, MA. Oct 2, 1994.
131. **Hariharan H**, Leclerc S, Schurman D, Giles J, Heaney S, Bryenton J. 1993. Carriage of *Yersinia enterocolitica* in porcine tonsils. Can. Asso. Clin. Micro Infec. Dis. 61st Ann. Mtg. (Vancouver) Abstract No. 13.
132. Giles JS, **Hariharan H**, Heaney S. 1992. In vitro efficacy of six antibiotics against *Vibrio* and *Aeromonas* and the plasmid profiles of resistant strains. 2<sup>nd</sup> Annual Atlantic Universities Graduate Biology Conference, May 92 (Charlottetown).
133. **Hariharan H**, Richardson G, Heaney S, Bryenton J, Gregan B, Moore I. 1992. Aerobic and anaerobic bacteria in equine endometrium. 44<sup>th</sup> CVMA/ACV Convention, July 92 (St. John's, N.B.)
134. Ahmed HN, **Hariharan H**, Yason C. 1992. Drug resistance and toxigenic properties of *Campylobacter jejuni* from broiler chicken. 44<sup>th</sup> CVMA/ACV Convention, July 92. Research Rostrum.
135. Giles JS, **Hariharan H**. 1991. Evaluation of six antimicrobial agents against fish pathogenic isolates of *Vibrio anguillarum*, *Vibrio ordalii* and *Aeromonas salmonicida*. Aquaculture Association of Canada 8th Annual Meeting. Abstract # 35. (St. Andrews, N.B.)
136. **Hariharan H**, MacDonald J, Carnat B, Bryenton J. 1991. Bacterial causes of arthritis in pigs. 43rd CVMA Convention Research Rostrum Abstr. (Winnipeg)

137. **Hariharan H**, Heaney S, St. Onge J. 1990. In vitro activities of quinolone drugs and other antimicrobial agents against *Campylobacter jejuni* and *C. coli* of animal origin. Conjoint Meeting on Infectious Diseases, Canadian Association for Clinical Microbiology & Infectious Diseases. Abstr #10. (Halifax)
138. **Hariharan H**, McNair N, Kuzdas K, McNichols L, Lofstedt J, Ogilvie T, Long JR. 1989. Isolation of certain obligate anaerobes from two cases of equine pleuritis. Can. Soc. Microbiol. Ann. Mtg. 89. VM. 2P. (Halifax)
139. **Hariharan H**, McNair N, Long JR. 1989. Antimicrobial drug resistance among *Campylobacter* isolates of animal origin. 5th Internat. Symp. of World Assn Vet. Lab. Diagnosticians. (Guelph, Ont)
140. **Hariharan H**, Ojo MO, Bryenton J, Long JR, McNair N. 1988. Observations on serotypes and antibiotic susceptibility of clinical isolates of *Pseudomonas aeruginosa*. Can Assn Clin Micro Inf Dis. 56th Annual Meeting. (Calgary)
141. **Hariharan H**, Bryenton J, St. Onge J, Long JR. 1988. Antimicrobial drug susceptibility of *Streptococcus suis* type 2. Amer Assn Vet Lab Diagn Ann Mtg. (Little Rock, Arkansas)
142. **Hariharan H**, Booth BA, Brickman TJ, Katt WC, Finkelstein RA. 1985. Competitive ELISA for cholera-related enterotoxins in *Salmonella typhimurium* and *Escherichia coli*. 25th Int Sc Conf on Antimicrob Agents Chemother (ASM). (Minneapolis, Minn)
143. **Hariharan H**. 1976. Type C avian botulism with reference to the role of bacteriophages. Vet Bulletin 47:351 (No.2477).
144. **Hariharan H**, Mitchell WR, Barnum DA. 1975. Toxigenic variation of certain *Clostridium botulinum* type C isolates. Abstr #2. Lab Div Can Publ Hlth Assn. 43rd Annual Meeting. (Toronto)
145. **Hariharan H**, Mitchell WR, Barnum DA. 1975. A study on the role of phages in toxigenicity of some *Clostridium botulinum* type C isolates. Abstr #325. Proc Can Fed Biol Soc. 18th Annual Meeting. (Winnipeg)
146. **Hariharan H**, Barnum DA. 1973. Drug resistance among pathogenic *Enterobacteriaceae* from animals in Ontario. Canadian Public Health Association Annual Meeting, Nov 1972. (Montreal, Que). Published in Can J Publ Hlth 64:69.

### **THESES**

147. Type C Avian Botulism with reference to the role of Bacteriophages. **PhD thesis**. University of Guelph, Ontario. 1976.
148. Studies on Drug Resistance among Pathogenic Bacteria of Animal Origin in Ontario. **MSc thesis**. University of Guelph, Ontario. 1972.

### **TECHNICAL REPORTS**

149. The Use of Lactoferrin hydrolysate as a preventive and/or treatment in an experimental model of enterotoxigenic colibacillosis in neonatal swine: a pilot study (Lofstedt L, Miller L, Montgomery D, Rozee D, **Hariharan H**, Hurnik D, Carmody J, Ogilvie T. 1993), 53 pages. Submitted to Morinaga Milk Industry Co., Higashihara, Zama-City, Japan.
150. Review of protocols and test methods for infectivity testing of genetically engineered

microorganisms. **Report submitted to Health and Welfare Canada Health Protection Branch, Ottawa. 1989. (281 pages).**

151. Bacterial diseases of animals and zoonoses in Sulawesi Island, Indonesia. 1980-81. **Report submitted to the UNDP/FAO Rome, Italy. 1981.**
152. **Final report of 12th conference of Office International des Epizootics.** Jakarta, Indonesia. 1980.
153. Immunostimulants with particular reference to infectious conditions. A review submitted for internal circulation to Ciba-Geigy, Basel, Switzerland. 1979.

#### **RESEARCH: PROJECTS AND FUNDING AT University of PEI, Canada**

External grants received: ~ \$400,000

#### **PROFESSIONAL MEMBERSHIPS AND ACTIVITIES (Present and Past)**

1. Member of the American Society for Microbiology.
2. **Member of the Veterinary Medical Association of Prince Edward Island/CVMA** 3.
- Member of the Canadian Association for Clinical Microbiology and Infectious
4. Member of the American Association of Veterinary Laboratory Diagnosticians.
5. Member of the World Veterinary Association.
6. Member of the Society for Tropical Veterinary Medicine
7. Member of the International Society for Veterinary Epidemiology
8. Fellow of the Royal Society of Health, London, U.K.
9. Member of the Society for Teaching and Learning in Higher Education
  
10. **Chair, Graduate Affairs Committee, St. George's University School of Vet Med. (2010-2015)**
11. **Chair, Research Committee, SGU School of Veterinary Medicine (2010-2012).**
12. **Member, Promotion Committee, Pathobiology, SGU**
13. **Member, Curriculum Review Committee, SGU-SVM.**
14. **Member, Research Gate (classified as one among top 17% of members)**

#### **EDITORIAL ACTIVITY:**

- **Member, Scientific Board of Reviewers, American Journal of Veterinary Research (AVMA) 2002-2005.**
- **Editor: BIOMEDICINE. 1999-2001.**
- 
- **Editor, *Online Internat J Microbiol Res.* 2012-2013**
- **Editorial Board member, *EC-Veterinary Science.* 2014-**
- **Editorial Board member, *Veterinary Medicine-Open Journal.* 2015-**
  
- **Editorial Board member, *ISRN Bacteriol.* 2013-**
- **Editorial Board member, *WebMed Central.* 2011-2013**
- **Editorial Board member, *J Zoonotic Dis Publ Health* 2017-**

- **Reviewer for the following journals**

- *Zoonoses and Public Health* (July 2017)
- *International Journal of Environmental Research and Public Health* (March 2017, Oct. 2018)
- *Biochemistry and Biotechnology Research* (Apr. 2016)
- *Journal of Pharmacognosy and Phytotherapy* (Jan. 2016)
- *British Microbiology Research Journal* (2015)
- *Journal of Medicinal Plant Research* (2015)
- *Journal of Pharmacognosy and Phytotherapy* (2015)
- *Annual Research & Review in Biology* (2015)
- *African Journal of Microbiology Research* (2015)
- *Journal of Microbiology Research and Reviews* (2014)
- *American Journal of Veterinary Research* (2014)
- *International Journal of Tropical Disease & Health* (2014)
- *ISRN Bacteriology* (2014)
- *Veterinaria Italiana* (2014)
- *Journal of the American Animal Hospital Association* (2013)
- *Journal of Veterinary Medicine* (2013)

- **Reviewer before 2013**

- *Journal of Veterinary Diagnostic Investigation*
- *Journal of the American Veterinary Medical Association*
- *Journal of Applied Research in Veterinary Medicine.*
- *Canadian Journal of Veterinary Research*
- *Canadian Veterinary Journal*
- *American Journal of Veterinary Research*
- *Preventive Veterinary Medicine*
- *Journal of Dairy Research*
- *Veterinari Medicina* (International Journal of Veterinary and Biomedical Sciences)
- *Comparative Biochemistry and Physiology*
- *Small Ruminant Research*
- *Journal of Aquatic Animal Health*
- *Aquaculture*
- *Journal of Veterinary Medicine Series A + B*
- *Cornell Veterinarian*
- *Proceedings of the Society for Experimental Biology and Medicine*
- *Turkish Veterinary Journal*

**PROFESSIONAL CONSULTATION:**

1. Reviewer of research proposal and grant application for the **Beef Cattle Research Council**, Cambridge, Ontario. **(2003)**.
2. Selected as a Member of the Stakeholder Committee of the **Veterinary Drugs Directorate, Health Canada, Ottawa. (2002)**.
3. Visiting Professor for Bacteriology, **School of Veterinary Medicine, St. George's University, Grenada** (2000-2006).
4. Visiting Professor, **Moredun International Research Centre, Edinburgh, UK** (2000).

- 5 Visiting Professor, **Sree Chitra Institute for Medical Sciences, Trivandrum, India** (1995)
6. Reviewer and Liaison Officer for **Natural Sciences and Engineering Research Council (NSERC), Canada** (1995-98).

**DIAGNOSTIC SERVICES:**

Section Head, Bacteriology, Atlantic Veterinary College, University of PEI, December 91 - July, 92 and from July, 95- June 2002.

Held responsibility for veterinary clinical bacteriology (mammalian and avian) at AVC.

Responsible for Diagnostic Bacteriology at **SGU SVM** from January 2008 onward