Ramesh Vemulapalli, B.V.Sc.&A.H., M.V.Sc., Ph.D.
Executive Associate Dean
College of Veterinary Medicine & Biomedical Sciences
Texas A&M University, College Station

Education

Doctor of Philosophy
University of Maryland, College Park, Maryland. 1991-1996.
Dissertation Title: Molecular analysis of differences between two strains of Ehrlichia risticii *and identification of protective antigen*

Master of Veterinary Science
Indian Veterinary Research Institute, India. 1987-1989.
Thesis Title: Biochemical studies on trypsin inhibitors from buffalo seminal plasma

Bachelor of Veterinary Science & Animal Husbandry
Andhra Pradesh Agricultural University, India. 1981-1986.

Administrative Leadership Positions

Executive Associate Dean, College of Veterinary Medicine & Biomedical Sciences, Texas A&M University. October 2022-present

Administrative Responsibilities:
My administrative portfolio includes a range of responsibilities to support the academic functions of the college. These include managing faculty recruitment & retention; faculty evaluation, promotion & tenure processes; mentoring unit heads/leaders; promoting faculty internal & external recognition; managing & resolving faculty conflicts; supervising the Associate Dean for Undergraduate programs; assisting with oversight of over $80M budget management and resource utilization; the COE accreditation of the DVM program; space management; administrative policy development; strategic planning; building partnerships with other colleges/units and external agencies; program expansion at McAllen in South Texas; and representing the Dean at meetings and events as necessary.

Interim Co-Director, Veterinary Medical Teaching Hospital, College of Veterinary Medicine & Biomedical Sciences, Texas A&M University. April 2019 - January 2021

Administrative Responsibilities:
I along with the Department Heads of Small Animal Clinical Sciences (Dr. J. Levine) and Large Animal Clinical Sciences (Dr. S. Eades) oversaw the operation of the teaching hospital during the period when the Hospital Director position was vacant. Responsibilities included reviewing finances and organizational structure, revising fee structure, developing funding plans for hospital equipment, creating plans for better communication, and addressing staffing issues. We strategically enhanced the role of the hospital board and made it an acting governing body for collective review of day-to-day operations and taking key decisions and actions. A notable accomplishment during this period was our success in keeping the

hospital services open during the COVID-19 pandemic lockdowns, which required a massive coordination effort to develop and implement new SOPs and staffing plans to protect the health of animal patients and hospital staff.

Department Head, Department of Veterinary Pathobiology, College of Veterinary Medicine & Biomedical Sciences, Texas A&M University. September 2016 – September 2022

Administrative Responsibilities:
I served as the chief academic and administrative officer of the department with responsibility for all academic, financial (>$10M budget), and diagnostic service activities. With over 50 faculty members, 25-30 support staff, and 15 veterinary residents, the department made critical contributions to support the college's teaching (DVM program, a large Biomedical Sciences undergraduate program, and graduate program), research, and veterinary patient care missions. During my tenure, the department contributed to the implementation of the revised DVM curriculum, reinvigorated the Laboratory Animal Medicine residency program, streamlined the diagnostic services to the Veterinary Medical Teaching Hospital, elevated the Research Histology services to the campus, supported the 2+2 DVM program at the VERO campus in Canyon, Texas, and opened the BIMS undergraduate program at the Higher Education Center at McAllen in South Texas. I led the development and implementation of a faculty mentoring program and a strategic plan based on the SOAR (Strengths, Opportunities, Aspirations, and Results) framework. The department strategically recruited 19 new faculty to areas of teaching needs and research strengths (infectious diseases, pathogenesis, and genetics) during my tenure. The department's scholarly output in terms of the number of journal articles published and extramural grant applications and funding increased significantly.

Department Head, Department of Comparative Pathobiology, College of Veterinary Medicine, Purdue University. July 2011 – August 2016

Administrative Responsibilities:
I served as the chief academic and administrative officer of the department with responsibility for all academic, financial, and diagnostic service activities. The department consisted of 38 faculty, including 16 of them with diagnostic service commitment through joint appointments in the Veterinary Teaching Hospital and Indiana Animal Disease Diagnostic Laboratory. I also served as Head of the CPB graduate program. Major accomplishments included the recruitment of 11 new faculty and the establishment of a Center for Animal Welfare Science in partnership with the College of Agriculture.

Faculty and Academic Positions

Professor, Department of Veterinary Pathobiology, College of Veterinary Medicine & Biomedical Sciences, Texas A&M University. September 2016 - present

Professor of Veterinary Immunology/Microbiology, Department of Comparative Pathobiology, College of Veterinary Medicine, Purdue University. July 2011 – August

2016

Adjunct Professor, Department of Biomedical Sciences and Pathobiology, VA-MD Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, Virginia. June 2010 -December 2012

Associate Professor (tenured) of Veterinary Immunology/Microbiology, Department of Comparative Pathobiology, College of Veterinary Medicine, Purdue University. July 2005 – June 2011

Section Head, Molecular Diagnostics, Animal Disease Diagnostic Laboratory, Purdue University. July 2001 – June 2011

Assistant Professor of Veterinary Immunology/Microbiology, Department of Veterinary Pathobiology, School of Veterinary Medicine, Purdue University. July 2001 – June 2005

Research Scientist, Department of Biomedical Sciences and Pathobiology, VA-MD Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, Virginia. December 2000 – June 2001

Postdoctoral Research Associate, Center for Molecular Medicine and Infectious Diseases VA-MD Regional College of Veterinary Medicine, Virginia Tech Blacksburg, Virginia. August 1996 – April 2000

Graduate Assistant, Department of Veterinary Medicine, University of Maryland, College Park, Maryland. August 1991 – July 1996

Research Associate, Department of Microbiology, College of Veterinary Science, Tirupati, India. January 1990 – May 1991

Private Sector Positions

Director of Research & Chief Scientist, Veterinary Technologies Corporation, Blacksburg, Virginia. May 2000 – November 2000

Laboratory Scientist & Veterinary Advisor, Srinivasa Hatcheries, Vijayawada, India. July 1986 – June 1987

Honors and Awards

- National Merit Scholarship, 1979-1986, Board of Higher Education, India.
- Junior Research Fellowship, 1987-1989, Indian Veterinary Research Institute, India.
- Seeds of Success Award, 2008, Purdue University.
- Pfizer Award for Research Excellence, 2010, Purdue University School of Veterinary Medicine.

- Seeds of Success Award, 2012, Purdue University.
- CVM Excellence in Diversity Award, 2019, College of Veterinary Medicine & Biomedical Sciences, Texas A&M University.
- Visiting Professor, March 2020, Federal University of Lavras, Lavras, Brazil
- Bridges Teaching & Service Award, 2022, College of Veterinary Medicine & Biomedical Sciences, Texas A&M University.

Professional Memberships

- International Brucellosis Society
- American Society for Microbiology
- American Association of Veterinary Laboratory Diagnosticians
- American Association for the Advancement of Science
- American Veterinary Medical Association
- Phi Zeta Honor Society
- Sigma Xi Honor Society
- Texas Veterinary Medical Association

Leadership Development Programs

- Chairs and Academic Administrators Management Program, Academy for Academic Leadership, July 2011
- Department Head Leadership Program, Purdue University Provost's Office, 2011-2016
- Department Executive Officer Program, Committee on Institutional Cooperation, Big Ten Conference universities, 2012
- AAVMC Leadership Academy, Class of 2013-2014
- Member, AAVMC Leadership Committee, 2015-2018
- Penn Executive Veterinary Leadership Program: Making an Impact as a Global Health Leader, June 2017
- Department Head Development Fellow, Dean of Faculties, Texas A&M University, 2019-2021
- SEC Academic Leadership Development Fellow, 2024-2025.

Conflict Management and Professional Development Programs

- Basic Mediation Training Certificate, Texas A&M University, May 2017.
- Third-Party Resolution Facilitation, Mediation Training Institute, January 2025.

TEACHING

Courses Taught

Purdue University:

1. VPB 553/CPB 85300 - Principles of Veterinary Immunology. Spring 2002-2014. 13 lectures to approximately 65-84 students in the first-year DVM program and 2-5 graduate students. Spring 2015-2016: Instructor-of-record. 21 lectures.
2. CPB 680I/CPB 69400 Special Topics in Immunology. Fall 2006-2015. Instructor of record and course coordinator. Fourteen 1-hour seminar presentations and discussions by 5-13 graduate students.
3. VPB 620/CPB 62000 Advanced Immunology. Fall 2003, 2005, 2007, 2009, 2011, 2013, 2015. Two 2-hour lecture & discussion classes to graduate students on immunity to viruses and vaccines.
4. VPB 697/ CPB 69700 Research Seminar. Fall 2003, Fall and Spring 2004-2016. 12-14 weekly 1-hour seminar presentations and discussions with 35-52 CPB graduate students. Instructor of record and course coordinator.
5. CPB 85600 Veterinary Bacteriology & Mycology. Fall 2007-2010. Four lectures to approximately 65 students in the second year DVM program and 2-5 graduate students.
6. VPB 680 Infectious Disease Epidemiology. Spring 2002. A 2-hour lecture on molecular techniques in epidemiology research to 8 graduate students.
7. VPB 622 Microbial Pathogenesis. Spring 2003. A 2-hour lecture on pathogenic mechanisms of *Brucella* species to 6 graduate students.
8. CPB 585 Clerkship. Summer and Fall 2008 – Didactic and case discussions on molecular diagnostics with senior DVM students – 22 sessions of 2 hours each.
9. ANSC 230 Physiology of Domestic Animals (instructor-in-charge: Dr. Scott Mills), Spring 2005 – 1 hour lecture on "Why some microorganisms are pathogenic and others are not?"

Texas A&M University:

1. VTPB 910 Veterinary Immunology. Instructor of record. 2 credit hours. Fall 2018-present. 29 lectures to 152-180 students in the first-year DVM program.
2. VTPB 221 Great Diseases of the World. Spring 2020-present. Instructor of record and course coordinator of a team-taught 3-credit-hour course from Spring 2020-2022: 24

hours of lectures to 90-200 freshmen and sophomore undergraduate students. Co-instructor from Spring 2023 to present: 10 hours of lectures.

3. VTPB 221 Great Diseases of the World. Fall 2020-present. Ten hours of lectures to 90-200 freshmen and sophomore undergraduate students.

4. VTPB 421 Infectious Diseases. Spring 2020. Instructor of record. 21 hours of Zoom lectures to senior USVM students.

Involvement in Graduate Research and Training Program

Committee Chair – Graduate Student Committees

1. Jatinder Gulani – PhD (Comparative Pathobiology, Purdue University); 2007 – Immunological characterization of potential protective proteins of *Mycobacterium avium* subspecies *paratuberculosis*. Current position: Attending Veterinarian, Frederick National Laboratory for Cancer Research, Maryland.

2. Boris Gavrilov – MS (Comparative Pathobiology, Purdue University); 2007 – A preliminary evaluation of immunogenic potential of protein 2b of porcine reproductive and respiratory syndrome virus. Current position: Senior Scientist, Huvepharma, Sofia, Bulgaria.

3. Dina Moustafa – PhD (Comparative Pathobiology, Purdue University); 2010 – *Brucella neotomae* as a vector for developing brucellosis vaccine. Current position: Assistant Professor, Emory University, Atlanta, Georgia.

4. Virendra Garg – PhD (Comparative Pathobiology, Purdue University); 2012 – Non-replicative vaccines for human brucellosis. Current position: Veterinarian, Urban Pet Hospital, San Francisco, California.

5. Jamie Fink – MS (Comparative Pathobiology, Purdue University); 2012 – Assessment of two assays for diagnosis of leptospirosis in clinical veterinary samples. Current position: Senior Scientist, Eli Lilly & Co., Indianapolis, Indiana.

6. Neha Dabral – PhD (Comparative Pathobiology, Purdue University); 2014 – Recombinant methods to enhance vaccine efficacy of *Brucella abortus* vaccine strain RB51. Current position: Clinical Assistant Professor, Texas A&M University, College Station, Texas.

7. Marie Laoye – MS (Comparative Pathobiology, Purdue University): 2014 – Immunogenic potential of the E protein of porcine reproductive and respiratory syndrome virus (PRRSV). Current position: Client Relationship Associate at Vanguard, Phoenix, Arizona.

8. Shu Tang – PhD (BIMS, Texas A&M University): Non-coding long RNA; *Cryptosporidium* – 2017-2024. Current position: Postdoctoral fellow, Baylor College of Medicine, Houston, Texas.

Committee Co-Chair – Graduate Student Committee

1. Hailan Liu (VA-MD Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, VA) – MS; 2003 – Expression and localization of green fluorescent protein in *Brucella abortus* strain RB51.

2. Amanda Storm (Comparative Pathobiology, Purdue University) – MS; 2014 – Survival of *Mycobacterium paratuberculosis* in the agroecosystem.

Committee Member – Graduate Student Committees

1. Loren Noblitt (Comparative Pathobiology, Purdue University) – MS; 2003 – Tumorigenic potential of breast cancer cells following activation of EphA2 using replication-defective adenoviral vectors expressing ligand, EphrinA1.

2. Andrea Contreras (VA-MD Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, VA) – PhD; 2004 – *Brucella abortus* RB51 vaccine: Testing its spectrum of protective and curative characteristics.

3. Kwang-pyo Kim (Food Science, Purdue University) – PhD; 2004 – Genetic identification and characterization of *Listeria* adhesion protein, an alcohol acetaldehyde dehydrogenase homologue in *Listeria monocytogenes*.

4. Jason Hodde (Comparative Pathobiology, Purdue University) – 2004-2007; Withdrew from PhD program.

5. Anna Sokolovska (Comparative Pathobiology, Purdue University) – PhD; 2005 – The effect of aluminum adjuvants on dendritic cells.

6. Amanda Lathrop (Food Science, Purdue University) – PhD; 2005 – Development of *Listeria monocytogenes* specific antibodies using a proteomics/genomics approach and expression of antibody-specific antigens InlB and ActA under different environments.

7. Mustafa Ababneh (Comparative Pathobiology, Purdue University) – PhD; 2005 – Immune responses to nucleocapsid protein of turkey coronavirus and its protective efficacy in turkeys.

8. Sonia Soto (Veterinary Clinical Sciences, Purdue University) – MS; 2005 – Evaluation of *Bartonella henselae* isolates for antigenic variation and genomic differences.

9. Bindu Varghese (Chemistry, Purdue University) – PhD; 2006 – Selective targeting of folate conjugates to activated macrophages in inflammatory diseases.

10. Hyungwook Lim (BMB program, Purdue University) – PhD; 2007 – Suppression of humoral immune responses by $FoxP3^+$ regulatory T cells and regulation of trafficking receptor expression in $FoxP3^+$ T cells.

11. Balamurugan Jagadeesan (Food Science, Purdue University) – PhD; 2009 – Molecular characterization of *Listeria* adhesion protein (LAP), an alcohol acetaldehyde dehydrogenase homologue involved in the adhesion of *Listeria monocytogenes* to intestinal epithelial cells.

12. Noor Hussain (Comparative Pathobiology, Purdue University) – Non-thesis MS; 2009.

13. Sriveny Dangoudoubiyam (Comparative Pathobiology, Purdue University) – PhD; 2009 - Molecular detection and development of better serological assays for the diagnosis of *Baylisascaris* larva migrans.

14. Aseem Pandey (Comparative Pathobiology, Purdue University) – PhD; 2010 – Immunomodulation as a means to enhance vaccine efficacy in elderly.

15. Neetu Singh (Comparative Pathobiology, Purdue University) – PhD; 2010 – Development of adenovirus vector based H5N1 influenza vaccine.

16. Kristin Burkholder (Food Science, Purdue University) – PhD; 2010 – The role of *Listeria* adhesion protein during the intestinal phase of *Listeria monocytogenes* pathogenesis.

17. Ok Kyung Koo (Food Science, Purdue University) – PhD; 2010 – *Listeria* adhesion protein and heat shock protein 60: Application in pathogenic *Listeria* detection and implication in listeriosis prevention.

18. Lisa Keefe (Comparative Pathobiology, Purdue University) – 2009-2010; Withdrew from PhD program.

19. Edgar Barajas (Biological Sciences, Purdue University) – 2009-2010; transferred to Wake Forest University.

20. Ning Xu (PULSe, Purdue University) – MS; 2010 – Impact of inflammation on gene expression in a prostate cancer model.

21. Chuanwu Wang (Comparative Pathobiology, Purdue University) – PhD; 2011– Migration and function of Th17 cells and PD-1+ T cells.

22. Hyochin Kim (Food Science, Purdue University) – PhD; 2011 – *Listeria* adhesion protein mediated *Listeria monocytogenes* translocation and infection in cell culture model.

23. Fangjia Lu (Comparative Pathobiology, Purdue University) – MS; 2013 – Kinetics of inflammatory response following intramuscular injection of aluminum adjuvant.

24. Zhe Wang (Comparative Pathobiology, Purdue University) – PhD; 2013 – Pivotal role of linear ubiquitin mediator SHARPIN in dendritic cell homeostasis and function in mice.

25. Ana Guimaraes (Comparative Pathobiology, Purdue University) – PhD; 2013 – The genome of *Mycoplasma suis* and its metabolism, pathogenesis and evolution.

26. Yadvinder Ahi (Comparative Pathobiology, Purdue University) – PhD; 2012 – Study of adenovirus DNA packaging.

27. Sai Vemula (Comparative Pathobiology, Purdue University) – PhD; 2013 – Pre-pandemic vaccines against highly pathogenic avian influenza viruses for pandemic preparedness.

28. Titiksha Dikshit (Food Science, Purdue University) – MS; 2013 – An anti-pyruvate kinase monoclonal and translocated intimin receptor (tir) for specific detection of *Listeria* species and shiga-toxigenic *Escherichia coli*.

29. Laura Baseler (Comparative Pathobiology, Purdue University) – PhD; 2015 – Comparative respiratory tract pathology of emerging viral infections.

30. Myunghoo Kim (Comparative Pathobiology, Purdue University) – PhD; 2015 – The role of gut metabolites on regulation of intestinal immunity.

31. Abagail Durkes (Comparative Pathobiology, Purdue University) – PhD; 2016 – The effects of acidified pepsin on porcine vocal fold tissue: developing a porcine model of laryngopharyngeal reflux disease.

32. Greg Cresswell (PULSe program, Purdue University) – PhD;2010-2015 -

33. Li Menghan (Biological Sciences, Purdue University) – PhD; 2011-2017 – Study of a novel secreted effector in *Salmonella enterica* serovar *Typhimurium* that triggers cell death.

34. Shankar Thangamani (Comparative Pathobiology, Purdue University) – PhD; 2016 – Repurposing non-antimicrobial drugs to treat multi-drug resistant bacterial and fungal infections.

35. Fangjia Lu (Comparative Pathobiology, Purdue University) – PhD; 2016 – Evaluation of alpha-d-glucan nanoparticles as a vaccine adjuvant.

36. Haroon Mohammad (Comparative Pathobiology, Purdue University) – PhD; 2016 - Antimicrobial characterization and therapeutic applications of novel synthetic thiazole compounds against multidrug-resistant staphylococci and enterococci.

37. Mohamed Mohamed (Comparative Pathobiology, Purdue University) – PhD; 2018 – Targeting multi-drug resistant pathogens with novel antimicrobial peptides.

38. Yi Niu (Food Science, Purdue University) – MS; 2013-2016

39. Ahmed Omar Hassan (Comparative Pathobiology, Purdue University) – PhD; 2017 – Recombinant adenovirus vector-based vaccines for emerging influenza viruses.

40. Ekramy Sayedahmed (Comparative Pathobiology) – PhD; 2018 – Adenovirus vector-based vaccine approach for emerging influenza viruses.

41. Rishi Drolia (Food Science, Purdue University, Purdue University) – PhD; 2018 – Cellular and molecular mechanism of Listeria adhesion protein (LAP) mediated epithelial translocation of *Listeria monocytogenes*.

42. Anita Richert (BIMS, Texas A&M University) – MS; 2016-2020

43. Nicholas Gallina (Food Science, Purdue University) – PhD; 2020-ongoing.

44. Brooke Ellis (BIMS, NTO, Texas A&M University) – MS; 2021

45. Riley Buhrow (MBIO, Texas A&M University) – PhD; 2022-ongoing.

46. Braden Hanson (BIMS, Texas A&M University) – PhD; 2021-ongoing.

Advisor to postdoctoral fellows

1. Neelima Sanakkayala – 2002-2005. Current position: Study Director, Covance, Madison, Wisconsin.

2. Neha Dabral – 2015- 2016. Current position: Clinical Assistant Professor, Texas A&M University, College Station, Texas.

Other Teaching and Research Training Activities.

<u>Purdue University</u>:

1. USDA Borlaug Fellowship program – Intensive training for 3 Moroccan veterinarians in principles and practices of molecular diagnostics, Sept. 6-9, 2005.

2. PVM Summer Research Program 2009. Mentor to Emma Fortenberry, a second DVM student. Research project: Development of a multiplex real-time PCR assay for simultaneous detection of four abortifacient zoonotic pathogens in sheep and goats.

3. PVM Summer Research Program 2009. Seminar Series. Presented a seminar on "Grant Writing" on July 24, 2009.

4. PVM Summer Research Program 2010. Seminar Series. Presented a seminar on "Scientific Writing" on June 23, 2010.

5. Faculty collaborator and member of an advisory committee of an NIH-funded T32 institutional training grant titled "Research Training in Comparative Pathobiology". PI: H. HogenEsch (Comparative Pathobiology).

6. Comparative Pathobiology Research Seminar Series. Presented a seminar titled "Scientific Fraud: Scientists Behaving Badly" on September 17, 2015.

Texas A&M University:

1. Veterinary Medical Scientist Research Training Program. An introductory talk on "Ethics & integrity in the conduct of research" to DVM students in the summer research program. 2018, 2019, 2021, 2022, 2023, 2024.

RESEARCH

Refereed Journal Articles

1. Ahmed, N., and **R. Vemulapalli** (1992). Trypsin inhibitors of buffalo seminal plasma. Biochemistry International **26** (3):427-444.

2. Ahmed, N., and **R. Vemulapalli** (1993). Trypsin inhibitor activity of buffalo seminal plasma. Medical Science Research **21** (2): 103-106.

3. Biswas, B., **R. Vemulapalli**, and S. K. Dutta (1994). Detection of *Ehrlichia risticii* from feces of infected horses by immunomagnetic separation and PCR. Journal of Clinical Microbiology **32** (9):2147-2151.

4. **Vemulapalli**, **R**., B. Biswas, and S. K. Dutta (1995). Pathogenic, immunologic, and molecular differences between two *Ehrlichia risticii* strains. Journal of Clinical Microbiology **33** (11):2987-2993.

5. **Vemulapalli, R**., B. Biswas, and S. K. Dutta (1998). Cloning and molecular analysis of genes of two immunodominant antigens of *Ehrlichia risticii*. Microbial Pathogenesis **24** (6):361-372.

6. **Vemulapalli, R**., B. Biswas, and S. K. Dutta (1998). Protection studies in mice with recombinant proteins of *Ehrlichia risticii*: identification of strain-specific antigen as a protective antigen. Veterinary Parasitology **76** (3):189-202.

7. Dutta, S. K., **R. Vemulapalli**, and B. Biswas (1998). Association of deficiency in antibody response to vaccine and heterogeneity of *Ehrlichia risticii* strains with Potomac horse fever vaccine failure in horses. Journal of Clinical Microbiology **36** (2):506-512.

8. Biswas, B., **R. Vemulapalli**, and S. K. Dutta (1998). Molecular basis for antigenic variation of a protective strain-specific antigen of *Ehrlichia risticii*. Infection and Immunity **66** (8):3682-3688.

9. **Vemulapalli, R**., A. Jane Duncan, S. M. Boyle, N. Sriranganathan, T. E. Toth, and G. G. Schurig. (1998). Cloning and sequencing of *yajC* and *secD* homologs of *Brucella abortus* and demonstration of immune responses to YajC in mice vaccinated with *B. abortus* RB51. Infection and Immunity **66** (12):5684-5691.

10. Oñate, A. A., **R. Vemulapalli,** E. Andrews, G. G. Schurig, S. M. Boyle, and H. Folch.

(1999). Vaccination with Live *E. coli* expressing *Brucella abortus* Cu/Zn superoxide dismutase protects mice against virulent *B. abortus*. Infection and Immunity **67** (2):986-988.

11. McQuiston, J. R., **R. Vemulapalli,** T.J. Inzana, G.G. Schurig, N. Sriranganathan, D. Fritzinger, T.L. Hadfield, R.A. Warren, N. Snellings, D. Hoover, S.M. Halling, and S.M. Boyle. (1999). Genetic characterization of a Tn5-disrupted glycosyltransferase gene homolog in *Brucella abortus* and its effect on lipopolysaccharide composition and virulence. Infection and Immunity **67** (8): 3830-3935.

12. **Vemulapalli, R**., McQuiston, J. R., G. G. Schurig, N. Sriranganathan, S. M. Halling, and S. M. Boyle. (1999). Identification of an IS*711* element interrupting the *wboA* gene of *Brucella abortus* vaccine strain RB51 and a PCR assay to distinguish strain RB51 from other *Brucella* species and strains. Clinical and Diagnostic Laboratory Immunology **6** (5):760-764.

13. **Vemulapalli, R**., S. Cravero, C. L. Calvert, T. E. Toth, S. M. Boyle, N. Sriranganathan, and G. G. Schurig. (2000). Characterization of specific immune responses of mice inoculated with recombinant vaccinia virus expressing an 18-kDa outer membrane protein of *Brucella abortus*. Clinical and Diagnostic Laboratory Immunology **7** (1): 114-118.

14. **Vemulapalli, R**., Y. He, S. Cravero, N. Sriranganathan, S. M. Boyle, and G. G. Schurig. (2000). Overexpression of protective antigen as a novel approach to enhance vaccine efficacy of *Brucella abortus* strain RB51. Infection and Immunity **68** (6): 3286-3289.

15. **Vemulapalli, R**., Y. He, S. M. Boyle, N. Sriranganathan, and G. G. Schurig (2000). *Brucella abortus* RB51 as a vector for heterologous protein expression and induction of specific Th-1 type immune responses. Infection and Immunity **68** (6): 3290-3296.

16. **Vemulapalli, R**., Y. He, L. S. Buccolo, S. M. Boyle, N. Sriranganathan, and G. G. Schurig. (2000). Complementation of *Brucella abortus* RB51 with a functional *wboA* gene results in O antigen synthesis and enhanced vaccine efficacy but no change in rough phenotype and attenuation. Infection and Immunity **68** (7):3927-3932.

17. Walsh, C. P., **R. Vemulapalli**, N. Sriranganathan, A. M. Zajac, M. Jenkins, and D. S. Lindsay (2001). Molecular comparison of the dense granule proteins GRA6 and GRA7 of *Neospora hughesi* and *Neospora caninum*. International Journal of Parasitiology **31** (3):253-258.

18. Fernandez-Prada, C. M., M. Nikolich, **R. Vemulapalli**, N. Sriranganathan, S. M. Boyle, G. G. Schurig, T. L. Hadfield, and D. L. Hoover (2001). Deletion of *wboA* enhances activation of the lectin pathway of complement in *Brucella abortus* and *Brucella melitensis*. Infection and Immunity **69** (7):4407-4416.

19. He, Y., **R. Vemulapalli**, A. Zeytun, and G. G. Schurig (2001). Mice vaccinated with *Brucella abortus* RB51 develop specific cytotoxic lymphocytes. Infection and Immunity **69** (9):5502-5508.

20. He, Y., **R. Vemulapalli**, and G. G. Schurig (2002). Recombinant *Ochrobactrum anthropi*

expressing *Brucella abortus* Cu/Zn superoxide dismutase protects mice against *B. abortus* infection only after switching of immune responses to Th1 type. Infection and Immunity **70** (5):2535-2543.

21. **Vemulapalli, R.**, Y. He, N. Sriranganathan, S. M. Boyle, and G. G. Schurig (2002). *Brucella abortus* RB51: Enhancing vaccine efficacy and developing multivalent vaccines. Veterinary Microbiology **90** (1-4):521-532.

22. Pasnik, D. J., **R. Vemulapalli**, S. A. Smith, and G. G. Schurig (2003). A recombinant vaccine expressing a mammalian *Mycobacterium* sp. antigen is immunostimulatory but not protective in striped bass. Veterinary Immunology and Immunopathology **95** (1-2): 43-52.

23. **Vemulapalli, R.**, A. Contreras, N. Sanakkayala, N. Sriranganathan, S.M. Boyle, and G.G. Schurig. (2004). Enhanced efficacy of recombinant *Brucella abortus* RB51 vaccines against *B. melitensis* infection in mice. Veterinary Microbiology **102** (3-4): 237-245.

24. Seleem, M.N., **R. Vemulapalli**, S.M. Boyle, G. G. Schurig, and N. Sriranganathan. (2004). Improved expression vector for *Brucella* species. Biotechniques **37** (5):740-744.

25. **Vemulapalli, R.,** I.M. Langohr, A. Sanchez, M. Kiupel, C.A. Bolin, C.C. Wu, and T.L. Lin. (2005). Molecular detection of *Leptospira kirschneri* in tissues of a prematurely born foal. Journal Veterinary Diagnostic Investigation **17** (1):65-69.

26. Baloglu, S., S.M. Boyle, **R. Vemulapalli**, N. Sriranganathan, G.G. Schurig, and T.E. Toth. (2005). Mice immune responses to vaccinia virus recombinants expressing *Listeria Monocytogenes* partial listeriolysin and *Brucella abortus* ribosomal L7/L12 protein. Veterinary Microbiology **109** (1-2):11-7.

27. Sanakkayala, N., A. Sokolovska, J. Gulani, H. HogenEsch, N. Sriranganathan, S.M. Boyle, G.G. Schurig, and **R. Vemulapalli**. (2005). Induction of antigen-specific Th1-type immune responses by gamma-irradiated recombinant *Brucella abortus* RB51. Clinical and Diagnostic Laboratory Immunology **12** (12):1429-1436.

28. Vemulapalli, T.H., **R. Vemulapalli**, G.G. Schurig, S.M. Boyle, and N. Sriranganathan. (2006). Role in virulence of a *Brucella abortus* protein exhibiting lectin-like activity. Infection and Immunity **74** (1):183-191.

29. González-Smith, A., **R. Vemulapalli**, E. Andrews, and A. Oñate. (2006). Evaluation of *Brucella abortus* DNA vaccine by expression of Cu-Zn superoxide dismutase antigen fused to IL-2. Immunobiology **211** (1-2):65-74.

30. Ramamoorthy, S., D.S. Lindsay, G.G. Schurig, S.M. Boyle, R. Duncan, **R. Vemulapalli**, and N. Sriranganathan. (2006). Vaccination with gamma irradiated *Neospora caninum* tachyzoites protects mice against acute challenge with *N. caninum*. Journal of Eukaryotic Microbiology **53** (2):151–156.

31. Lekcharoensuk, P., K.M. Lager, **R. Vemulapalli**, M. Woodruff, A. L. Vincent, and J. A. Richt. (2006). Novel Swine Influenza Virus Subtype H3N1, United States.

Emerging Infectious Diseases **12** (5):787-794.

32. **Vemulapalli, R**., N. Sanakkayala, J. Gulani, G. G. Schurig, S. M. Boyle, D. S. Lindsay, and N. Sriranganathan. (2007). Reduced cerebral infection of *Neospora caninum* in BALB/c mice vaccinated with recombinant *Brucella abortus* RB51 strains expressing *N. caninum* SRS2 and GRA7 proteins. Veterinary Parasitology **148** (3-4):219-230.

33. Ramamoorthy, S., N. Sanakkayala, **R. Vemulapalli**, N. Jain, D. S. Lindsay, G. G. Schurig, S. M. Boyle, and N. Sriranganathan. (2007). Prevention of vertical transmission of *Neospora caninum* in C57BL/6 mice vaccinated with *Brucella abortus* strain RB51 expressing *N. caninum* protective antigens. International Journal for Parasitology **37** (13):1521-1529.

34. Ramamoorthy, S., N. Sanakkayala, **R. Vemulapalli**, R. B. Duncan, D. S. Lindsay, G. G. Schurig, S. M. Boyle, R. Kasimanickam, and N. Sriranganathan. (2007). Prevention of lethal experimental infection of C57BL/6 mice by vaccination with *Brucella abortus* strain RB51 expressing *Neospora caninum* antigens. International Journal for Parasitology **37** (13):1531-1538.

35. Bangari, D. S., P. Mouser, M. A. Miller, G. W. Stevenson, **R. Vemulapalli**, and H. L. Thacker. (2007). Toxoplasmosis in a woodchuck (*Marmota monax*) and two American red squirrels (*Tamiasciurus hudsonicus*). Journal of Veterinary Diagnostic Investigation **19** (6):705-709.

36. Webster, J. D., M. A. Miller, and **R. Vemulapalli**. (2008). *Encephalitozoon cuniculi*-associated placentitis and perinatal death in an alpaca (*Lama pacos*). Veterinary Pathology **45** (2):255-258.

37. Seleem, M. N., N. Jain, H. Alqublan, **R. Vemulapalli**, S. M. Boyle, and N. Sriranganathan. (2008). Activity of native vs. synthetic promoters in *Brucella*. FEMS Microbiology Letters **288** (2):211-215.

38. Johnson, R. L., J. A. Ramos-Vara, and **R. Vemulapalli**. (2009). Identification of *Bartonella henselae* in an aborted equine fetus. Veterinary Pathology **46** (2):277-281.

39. McPherson, L., S. J. Newman, N. McLean, S. McCain, **R. Vemulapalli**, S. Kania, and R. R. Dubielzig. (2009). Intraocular sarcomas in two rabbits. Journal of Veterinary Diagnostic Investigation **21** (4): 547-551.

40. Mouser, P., J. A. Romos-Vara, **R. Vemulapalli**, and J. C. Scott-Moncrieff. (2009). Pathology in Practice. Inflammatory changes in the cerebrum, cerebellum, and brainstem in a dog. Journal of American Veterinary Medical Association 235(10):1153-1155.

41. Dangoudoubiyam, S., **R. Vemulapalli**, and K. R. Kazacos. (2009). PCR assays for detection of *Baylisascaris procyonis* eggs and larvae. Journal of Parasitology **95** (3): 571-577.

42. **Vemulapalli, R.**, J. Gulani, and C. Santrich. (2009). A real-time TaqMan® RT-PCR

assay with an internal amplification control for rapid detection of transmissible gastroenteritis virus in swine fecal samples. Journal of Virological Methods **162** (1-2):231-235.

43. Coster, M. E., J. A. Ramos-Vara, **R. Vemulapalli**, J. Stiles, and S. G. Krohne. (2010). *Coccidioides posadasii* keratouveitis in a llama (*Lama glama*). Veterinary Ophthalmology **13** (1):53-57.

44. Sharma, A., M. Tandon, Y. S., Ahi, D. S. Bangari, **R. Vemulapalli**, and S. K. Mittal. (2010). Evaluation of cross-reactive humoral and cell-mediated immune responses among human, bovine and porcine adenoviruses. Gene Therapy **17** (5):634-642.

45. Burcham, G. N., J. A. Ramos-Vara, and **R. Vemulapalli**. (2010). Systemic sarcocytosis in a striped skunk (*Mephitis mephitis*). Veterinary Pathology **47** (3):560-564.

46. Dangoudoubiyam, S., **R. Vemulapalli**, K. Hancock, and K. R. Kazacos. (2010). Molecular cloning and expression in *Escherichia coli* of an immunogenic protein of *Baylisascaris procyonis* for use in developing improved serodiagnostic assays. Clinical and Vaccine Immunology **17**(12):1933-1939.

47. Moustafa, D. A., N. Jain, N. Sriranganathan, and **R. Vemulapalli**. (2010). Identification of a single-nucleotide insertion in the promoter region affecting the *sodC* promoter activity in *Brucella neotomae*. PLoS One **5**(11):e14112.

48. Moustafa, D., V. K. Garg, N. Jain, N. Sriranganathan, and **R. Vemulapalli**. (2011). Immunization of mice with gamma-irradiated *Brucella neotomae* and its recombinant strains induces protection against virulent *B. abortus*, *B. melitensis*, and *B. suis* challenge. Vaccine **29**(4):784-794.

49. Frank, C., **R. Vemulapalli**, and T. L. Lin. (2011). Cerebral phaeohyphomycosis due to *Cladophialophora bantiana* in a huacaya alpaca (*vicugna pacos*). Journal of Comparative Pathology **145**(4):410-413.

50. Guimaraes, A.M.S., R. Vieira, R. Poletto, **R. Vemulapalli**, A. Santos, W. de Moraes, Z.S. Cubas, L.C. Santos, J.N. Marchant-Forde, A.W. Biondo, and J.B. Messick. (2011). A quantitative TaqMan® PCR assay for the detection of *Mycoplasma suis.* Journal of Applied Microbiology **111**(2):417-425.

51. Dangoudoubiyam, S., **R. Vemulapalli**, M. Ndao, and K. R. Kazacos. (2011). A recombinant antigen-based enzyme-linked immunosorbent assay for specific diagnosis of *Baylisascaris procyonis* larva migrans. Clinical and Vaccine Immunology **18**(10):1650-1655.

52. Zhu, J., C.B. Larson, M.A. Ramaker, K. Quandt, J.M. Wendte, K.P. Ku, F. Chen, G.W. Jourdian, **R. Vemulapalli**, G.G. Schurig, and Y. He. (2011). Characterization of recombinant *B. abortus* strain RB51SOD toward understanding the uncorrelated innate and adaptive immune responses induced by RB51SOD compared to its parent vaccine strain RB51. Frontiers in Cellular and Infection Microbiology **1**:10.

53. Boes, K.M., K.O.Goncarovs, C.A. Thompson, L.A. Halik, A.P. Santos, A.M.S. Guimaraes, M.S. Miskovic, P. Holman, **R. Vemulapalli**, and J.B. Messick. (2012). Identification of a *Mycoplasma ovis*-like organism in farmed white-tailed deer (*Odocoileus virginianus*). Veterinary Clinical Pathology **41**(1):77-83.

54. Shebish, E., **R. Vemulapalli**, and C. Oseto. (2012). Prevalence and molecular detection of *Anaplasma marginale, Babesia bovis* and *Babesia bigemina* in cattle from Puntarenas Province, Costa Rica. Veterinary Parasitology **188**(1-2):164-167.

55. Jain-Gupta, N., A. Contreras-Rodriguez, **R. Vemulapalli**, S. Witonsky, S. Boyle, and N. Sriranganathan. (2012). Pluronic P85 enhances the efficacy of outer membrane vesicles as a subunit vaccine against *Brucella melitensis* challenge in mice. FEMS Immunology & Medical Microbiology **66**(3):436-444.

56. Jain-Gupta, N., A. Contreras-Rodriguez, G.P. Smith, V.K. Garg, S.G. Witonsky, S. Isloor, **R. Vemulapalli**, S.M. Boyle, and N. Sriranganathan. (2014). Immunotherapeutics to prevent the replication of *Brucella* in a treatment failure mouse model. Vaccine **32**(8):918-923.

57. Dabral, N., M. Moreno-Lafont, N. Sriranganathan, and **R. Vemulapalli**. (2014). Oral Immunization of mice with gamma-irradiated *Brucella neotomae* induces protection against intraperitoneal and intranasal challenge with virulent *B. abortus* 2308. PLoS One **9**(9):e107180.

58. Fink, J.M., G.E. Moore, R. Landau, and **R. Vemulapalli**. (2015). Evaluation of three 5' exonuclease-based real-time polymerase chain reaction assays for detection of pathogenic *Leptospira* species in canine urine. Journal of Veterinary Diagnostic Investigation **27**(2):159-166.

59. Dabral, N., N. Jain-Gupta, M.N. Seleem, N. Sriranganathan, and **R. Vemulapalli**. (2015). Overexpression of *Brucella* putative glycosyltransferase WbkA in *B. abortus* RB51 leads to production of exopolysaccharide. Frontiers in Cellular and Infection Microbiology **5**:54.

60. Dabral, N., G. N. Burcham, N. Jain-Gupta, N. Sriranganathan, and **R. Vemulapalli.** (2019**).** Overexpression of *wbkF* gene in *Brucella abortus* RB51WboA leads to increased O-polysaccharide expression and enhanced vaccine efficacy against *B. abortus* 2308, *B. melitensis* 16M, and *B. suis* 1330 in a murine brucellosis model. PLoS One **14**(3):e0213587.

61. Sánchez-Jiménez, M. M., J. J. de la Cuesta-Zuluaga, G. M. Garcia-Montoya, N. Dabral, J. F. Alzate, **R. Vemulapalli**, M. Olivera-Angel. (2020). Diagnosis of human and canine *Brucella canis* infection: development and evaluation of indirect enzyme-linked immunosorbent assays using recombinant *Brucella* proteins. Heliyon 6 (7):e04393.

62. Drolia, R., M.A.R. Amalaradjou, V. Ryan, S. Tenguria, D. Liu, X. Bai, A.K. Singh, A.D. Cox, V-Bernal. Crespo, A.S. Schaber, B.M. Applegate, **R. Vemulapalli**, A.K. Bhunia. (2020). Receptor-targeted engineered probiotics mitigate lethal Listeria infection. Nature Communications **11**, 6344.

Book Chapters

1. Mittal S.K., H. HogenEsch, **R. Vemulapalli**, and K. Park. 2013. Vaccines and other immunological products. In: Encyclopedia of Pharmaceutical Technology. 4th Edition. Editor: Swarbrick J. CRC Press - Taylor & Francis Group. Boca Raton, FL. pp. 3727-3747.
2. **R. Vemulapalli.** 2016. Real-time reverse transcription polymerase chain reaction for rapid detection of transmissible gastroenteritis virus. In: Animal Coronaviruses. Editor: Leyi Wang. Humana Press, New York, NY. pp. 115-119.

Oral Presentations, Posters, and Abstracts

1. **Vemulapalli, R.,** B. Biswas, and S. K. Dutta. (1994). Biological and molecular differences between two *Ehrlichia risticii* strains. 11th sesqui-annual meeting of American Society for Rickettsiology and Rickettsial Diseases, September 17-20, St. Simons Island, Georgia.

2. Biswas, B., **R. Vemulapalli,** and S. K. Dutta. (1994). Cloning and analysis of tandemly repeated sequences of the genes for a cross-reacting major antigen with different molecular weights from two strains of *Ehrlichia risticii*. 11th sesqui-annual meeting of American Society for Rickettsiology and Rickettsial Diseases, September 17-20, St. Simons Island, Georgia.

3. Dutta, S. K., **R. Vemulapalli,** and B. Biswas. (1996). Heterogeneity among *Ehrlichia risticii* isolates obtained from vaccinated horses. 12th sesqui-annual meeting of American Society for Rickettsiology and Rickettsial Diseases, March 10-13, Pacific Grove, California.

4. **Vemulapalli, R**., A. J. Duncan, S. M. Boyle, T. E. Toth, N. Sriranganathan, and G. G. Schurig. (1997). Isolation and expressional cloning of *secD* and *yajC* genes of *Brucella abortus*. 97th General meeting of American Society for Microbiology, May 3-8, Miami Beach, Florida.

5. Silvio, C., **R. Vemulapalli**, T. E. Toth, C. L. Calvert, S. M. Boyle, N. Sriranganathan, O. Rossetti, and G. G. Schurig. (1997). Specific immune responses of BALB/c mice infected with recombinant vaccinia virus expressing an 18 kDa outer membrane protein of *B. abortus*. 97th General meeting of American Society for Microbiology, May 3-8, Miami Beach, Florida.

6. **Vemulapalli, R.,** R. Lopez-Santiago, A. Zeytun, M.C. Moreno-Lafont, and G.G. Schurig. (1997). Induction of cytotoxic lymphocytes in *Brucella abortus* strain RB51 vaccinated mice. 50th Annual Meeting of the Brucellosis Research Conference, December 6-7, Chicago, Illinois.

7. **Vemulapalli, R.,** M.C. Moreno-Lafont, R. Lopez-Santiago, T. E. Toth, N. Sriranganathan, S. M. Boyle, and G.G. Schurig. (1997). Characterization of immune responses of mice vaccinated with recombinant vaccinia virus expressing an 18 kDa

antigen of *Brucella abortus*. 50th Annual Meeting of the Brucellosis Research Conference, December 6-7, Chicago, Illinois.

8. Biswas, B., **R. Vemulapalli**, and S. K. Dutta. (1998). Differentiation of *Ehrlichia risticii* strains by DNA-amplification fingerprinting. 8th International Conference on Equine Infectious Diseases, March 23-26, Dubai, UAE.

9. **Vemulapalli**, **R.,** S. Cravero, S. M. Boyle, N. Sriranganathan, and G. Schurig. (1998). Overexpression of self antigen as a novel approach to enhance the vaccine efficacy of *Brucella abortus* strain RB51. 10th Annual Research Symposium, VA-MD Regional College of Veterinary Medicine, June 18-19, Blacksburg, Virginia.

10. Poff, S., **R. Vemulapalli**, N. Sriranganathan, G. G. Schurig, and S. M. Boyle. (1998). Expression of the protective antigen of *Bacillus anthracis* in *E. coli*. American Society for Microbiology-VA Branch annual meeting, November 6-7, Lexington, Virginia.

11. **Vemulapalli, R.,** S. Cravero, Y. He, S. M. Boyle, N. Sriranganathan, and G. G. Schurig. (1998). Overexpression of Cu/Zn SOD in *Brucella abortus* strain RB51 enhances its protective ability in mice. 51st Annual meeting of the Brucellosis Research Conference, November 7-8, Chicago, Illinois.

12. **Vemulapalli, R.,** J. R. McQuiston, Y. He, L. S. Buccolo, S. M. Halling, S. M. Boyle, N. Sriranganathan, and G. G. Schurig. (1998). Interruption of *rfbU* gene by an IS*711* element in *Brucella abortus* strain RB51 and dramatic enhancement of vaccine efficacy by complementation with a functional *rfbU* gene. 51st Annual meeting of the Brucellosis Research Conference, November 7-8, Chicago, Illinois.

13. Vemulapalli, T., **R. Vemulapalli,** G. G. Schurig, S. M. Boyle, and N. Sriranganathan. (1998). Overexpression of an immunoreactive protein of *Brucella abortus* in strain RB51. 51st Annual meeting of the Brucellosis Research Conference, November 7-8, Chicago, Illinois.

14. He, Y., **R. Vemulapalli,** S. M. Boyle, and G. G. Schurig. (1998). Antibody responses to *Brucella abortus* strains overexpressing homologous antigens. 51st Annual meeting of the Brucellosis Research Conference, November 7-8, Chicago, Illinois.

15. Baloglu, S., **R. Vemulapalli,** S. M. Boyle, N. Sriranganathan, T. E. Toth, and G. G. Schurig. (1998). Vaccinia virus as a vector for delivery of *Brucella* antigens: Recent observations. 51st Annual meeting of the Brucellosis Research Conference, November 7-8, Chicago, Illinois.

16. Contreras, A., **R. Vemulapalli,** Y. He, P. H. Elzer, S. D. Hagius, M. D. Edmonds, J. V. Walker, and G. G. Schurig. (1998). Serological response of vaccinated/infected goats to *Brucella* Cu/Zn Cu/ZnSOD and selected antigens. 51st Annual meeting of the Brucellosis Research Conference, November 7-8, Chicago, Illinois.

17. **Vemulapalli, R.,** Y. He, S. M. Boyle, N. Sriranganathan, and G. G. Schurig. (1999). Expression of heterologous proteins in *Brucella abortus* RB51 and induction of specific immune responses in vaccinated mice. 52nd Annual meeting of the Brucellosis Research

Conference, Novebmer 6-7, Chicago, Illinois.

18. Vemulapalli, T., **R. Vemulapalli,** G. G. Schurig, S. M. Boyle, T. E. Toth, and N. Sriranganathan. (1999). A *Brucella abortus* protein shows lectin-like properties. 52nd Annual meeting of the Brucellosis Research Conference, November 6-7, Chicago, Illinois.

19. He, Y., **R. Vemulapalli,** and G. G. Schurig. (1999). Development of cytotoxic lymphocytes able to destroy *Brucella*-infected macrophages after vaccination with strain RB51. 52nd Annual meeting of the Brucellosis Research Conference, November 6-7, Chicago, Illinois.

20. Baloglu, S., **R. Vemulapalli,** S. M. Boyle, N. Sriranganathan, T. E. Toth, and G. G. Schurig. (1999). Vaccinia virus as a vector for delivery of *Brucella abortus* and *Listeria monocytogenes* antigens. 52nd Annual meeting of the Brucellosis Research Conference, November 6-7, Chicago, Illinois.

21. Wu, Y., **R. Vemulapalli**, Y. He, T. Toth, S. M. Boyle, N. Sriranganathan, and G. G. Schurig. (1999). Early response of mice to recombinant vaccinia virus expressing murine IL12/B7.1 and *Brucella* SOD-L7/L12 fusion protein. 52nd Annual meeting of the Brucellosis Research Conference, November 6-7, Chicago, Illinois.

22. Poff, S., **R. Vemulapalli**, N. Sriranganathan, G. G. Schurig, and S. M. Boyle. (1999). Expression of *Bacillus anthracis* protective antigen by SOD and GroE promoters in *Brucella abortus* RB51. 52nd Annual meeting of the Brucellosis Research Conference, November 6-7, Chicago, Illinois.

23. Contreras, A., J. Blake, P. Elzer, J. Duce, **R. Vemulapalli**, and G. Schurig. (1999). Serological response of pregnant reindeer to strain RB51 vaccination. 52nd Annual meeting of the Brucellosis Research Conference, November 6-7, Chicago, Illinois.

24. Fernandez-Prada, C. M., M. Nikolich, **R. Vemulapalli**, N. Sriranganathan, S. Boyle, G. Schurig, and D. L. Hoover (1999). Comparative complement-mediated killing and complement deposition between smooth and rough mutant *Brucella abortus* and *Brucella melitensis* strains. 52nd Annual meeting of the Brucellosis Research Conference, November 6-7, Chicago, Illinois.

25. Lindsay, D. S., N. Sriranganathan, T. H. Vemulapalli, **R. Vemulapalli**, and G. G. Schurig. (2000). Vaccination with a DNA vaccine to *Neospora caninum* dense granule GRA7 partially protects Balb/c mice against encephalitis. 17th Annual meeting Southern Conference on Animal Parasites, April 2-4, Pine Mountain, Georgia.

26. **Vemulapalli, R**., T. H. Vemulapalli, K. Carlson, N. C. Arriojas, S. M. Boyle, G. G. Schurig, and N. Sriranganathan. (2000). An assessment of *Brucella* antigens using DNA-vaccine: challenge studies. 53rd Annual meeting of the Brucellosis Research Conference, September 6-9, Nimes, France.

27. He, Y., **R. Vemulapalli**, N. Sriranganathan, S. M. Boyle, and G. G. Schurig. (2000).

Immune responses and protection studies with *Brucella abortus* RB51 overexpressing Cu/Zn SOD and expressing the 85A antigen of *Mycobacterium bovis*. 53rd Annual meeting of the Brucellosis Research Conference, September 6-9, Nimes, France.

28. Poff, S., **R. Vemulapalli**, N. Sriranganathan, G. G. Schurig, and S. M. Boyle. (2000). Can strain RB51 protect against anthrax and brucellosis? 53rd Annual meeting of the Brucellosis Research Conference, September 6-9, Nimes, France.

29. **Vemulapalli, R.**, N. Sriranganathan, G. G. Schurig, and D. S. Lindsay. (2001). Expression of *Neospora caninum* proteins in *Brucella abortus* vaccine strain RB51. Southern Conference on Animal Parasites, February 11, Gainesville, Florida.

30. Pasnik, D., S. Smith, G. Schurig, and **R. Vemulapalli**. (2001). A novel vaccine for aquatic mycobacteriosis. 26th Annual Eastern Fish Health Workshop, April 23-26, Shepherdstown, WV, and at 32nd Annual Conference of International Association for Aquatic Animal Medicine, April 28-May 2, Tampa, Florida.

31. **R. Vemulapalli**, N. Sriranganathan, S. M. Boyle, and G. G. Schurig. (2001). Protective potential of recombinant *B. abortus* RB51 vaccines against *B. melitensis* 16M challenge in mice. 54th Annual Brucellosis Research Conference, November 10-11, St. Louis, Mississippi.

32. **Vemulapalli, R.**, N. Sanakkayala, A. Sokolovska, H. HogenEsch, and G. Schurig. (2003). Immune response induction by a nonviable recombinant *B. abortus* RB51 strain exposed to a minimum dose of gamma-irradiation. Brucellosis 2003 International Research Conference, September 15-17, University of Navarra, Pamplona, Spain.

33. Ophir, Y., G. Schurig, **R. Vemulapalli**, G. N. Pavlakis, B. Felber, A.T.M.S. Hoque, W. Wang, H. Golding, and B. Golding. (2003). Development of *Brucella abortus* strain RB51 as an expression vector for heterologous eukaryotic and viral proteins and as a carrier for AIDS vaccine. Brucellosis 2003 International Research Conference, September 15-17, University of Navarra, Pamplona, Spain.

34. Ramamoorthy, S., G. Schurig, D. Lindsay, **R. Vemulapalli**, S. M. Boyle, and N. Sriranganathan. (2003). Protection against *Neospora caninum* in a gerbil model using *Brucella abortus* strain RB51 expressing *N. caninum* proteins. Brucellosis 2003 International Research Conference, September 15-17, University of Navarra, Pamplona, Spain.

35. Langohr, I.M., **R. Vemulapalli**, A. Sanchez, C. A. Bolin, M. Kiupel, C. C. Wu, and T. L. Lin. (2003). *Leptospira kirschneri* in a prematurely born foal. 46th Annual conference of American Association of Veterinary Laboratory Diagnosticians, October 11-13, San Diego, California.

36. Gulani, J. and **R. Vemulapalli**. (2004). Expression of potential protective proteins of *Mycobacterium avium* subsp. *paratuberculosis* in *Brucella abortus* RB51 – a new approach to vaccine development against Johne's disease. 104th General Meeting of American Society for Microbiology, Ernest N. Morial Convention Center, May 23-27, New Orleans, Louisiana.

37. Ramamoorthy, S., G. Schurig, D. Lindsay, **R. Vemulapalli**, S. M. Boyle, and N. Sriranganathan. (2004). Assessment of the protective potential of putative virulence factors of *Neospora caninum* over-expressed in *Brucella abortus* strain RB51. 104th General Meeting of American Society for Microbiology, Ernest N. Morial Convention Center, May 23-27, New Orleans, Louisiana.

38. Schurig, G.G., **R. Vemulapalli**, A. Bandara, N. M. Seleem, S. Ramamoorthy, Poff-Reichow, S., Boyle, S.M., and Sriranganathan, N. (2004). Development of Multivalent Vaccines Utilizing *Brucella abo*rtus RB51 as a Vector. International Symposium on Multilateral Cooperation in Agricultural Biotechnology Exchange in Pan- Pacific Area. 80th Anniversary Series Conference. National Pingtung University of Science and Technology, November 8 -9, Pingtung, Taiwan.

39. Sanakkayala, N., J. Gulani, and **R. Vemulapalli**. (2004). Induction of specific mucosal and systemic immune responses by intranasal inoculation of mice with live and gamma-irradiated recombinant *Brucella abortus* RB51. 57th Brucellosis Research Conference. November 13-14, Chicago, Illinois.

40. Seleem, M., N. Sanakkayala, **R. Vemulapalli**, S. M. Boyle, G. G. Schurig, and N. Sriranganathan. (2004). Improved expression vector for *Brucella* species. 57th Brucellosis Research Conference. November 13-14, Chicago, Illinois.

41. Contreras, A. S. M. Boyle, N. Sriranganathan, **R. Vemulapalli**, and G. G. Schurig. (2004). Non-replicative, gamma-irradiated *B. abortus* vaccine strain RB51 is protective against virulent *Brucella* challenge in mice. 57th Brucellosis Research Conference. November 13-14, Chicago, Illinois.

42. Soto, S., S. Amass, A. Dunham, L. Guptill, and **R. Vemulapalli**. (2004). Evaluation of *Bartonella henselae* outer membrane proteins for possible antigenic variation and comparison of immunogenic surface antigens for type I and II feline infections. CRWAD, November 15-17, Chicago, Illinois.

43. Gulani, J., D. S. Bangari, N. Sanakkayala, S. K. Mittal, C. C. Wu, and **R. Vemulapalli**. (2006). Protective role of immune responses specific to antigen 85B of *Mycobacterium avium ssp paratuberculosis* against *Mycobacterium avium ssp avium* challenge in a mouse model. 106th General Meeting of American Society for Microbiology, Orange County Convention Center, May 21-25, Orlando, Florida.

44. Sanakkayala, N., J. Gulani, D. Bangari, S. Mittal, and **R. Vemulapalli.** (2006). Expression of Synthetic Fusion Proteins of Ebola and Lassa Viruses in *Brucella abortus* Vaccine Strain RB51 and Replication-Defective Human Adenovirus Serotype 5. 106th General Meeting of American Society for Microbiology, Orange County Convention Center, May 21-25, Orlando, Florida.

45. Moustafa, D., and **R. Vemulapalli** (2006). Determination of the genetic basis for the lack of expression of Cu/Zn superoxide dismutase in *Brucella neotomae*. 59th Annual Brucellosis Research Conference. December 2-3, Chicago, Illinois.

46. Gulani, J., D. S. Bangari, S. K. Mittal, and **R. Vemulapalli** (2007). Recombinant *Brucella abortus* RB51 and human adenovirus 5 expressing superoxide dismutase of *Mycobacterium avium* subsp. *paratuberculosis* induce antigen-specific Th1 type immune responses but not protection against *M. avium* subsp. *avium* challenge in mice. 107th General Meeting of American Society for Microbiology, Metro Toronto Convention Center, May 21-25, Toronto, Canada.

47. Johnson, R., J. Ramos-Vara, and **R. Vemulapalli** (2007)**.** Genomic identification of *Bartonella henselae* in an aborted equine fetus. 58th Annual Meeting, The American College of Veterinary Pathologists, November 10-14, Savannah, Georgia.

48. **Vemulapalli, R.**, D. Moustafa, J. Gulani, and N. Sriranganathan (2008). Deletion of *asd* gene in *Brucella abortus* strain RB51 for generation of antibiotic resistance marker-free plasmid expression system and non-replicative, recombinant vaccines. Brucellosis 2008 International Research Conference, September 10-13, Royal Holloway College, Engham, UK.

49. **Vemulapalli, R.**, J. Gulani, and C. Santrich (2008). Development of a real-time TaqMan RT-PCR assay with an internal amplification control for rapid detection of transmissible gastroenteritis virus in swine fecal samples. 51st Annual conference of American Association of Veterinary Laboratory Diagnosticians, October 22-27, Greensboro, North Carolina.

50. Dangoudoubiyam, S., **R. Vemulapalli**, and K. Kazacos (2008). PCR assays for detection of Baylisascaris procyonis eggs and larvae. The 83rd Annual Meeting of the American Society of Parasitologists, June 27-30, Arlington, Texas.

51. Dangoudoubiyam, S., **R. Vemulapalli**, and K. Kazacos (2009). Immunoscreening of *Baylisascaris procyonis* L3 cDNA expression library for identification of potential diagnostic antigens. The Annual Midwestern Conference of Parasitologists, AMCOP 61, June 4-6, 2009, Delaware, Ohio.

52. Sharma, A., M. Tandon, Y. Singh, D. S. Bangari, **R. Vemulapalli**, and S. K. Mittal (2009). Evaluation of cross-reactive humoral and cell-mediated immune responses among human, bovine and porcine adenoviral vectors. 12th Annual Meeting of the American Society of Gene Therapy, May 27-30, San Diego, California.

53. Moustafa, D., V. K. Garg, N. Jain, N. Sriranganathan, and **R. Vemulapalli** (2009). Vaccination of mice with gamma-irradiated *Brucella neotomae* and its recombinant strains induces protection against virulent *B. abortus*, *B. melitensis*, and *B. suis* challenge. 62nd Annual Brucellosis Research Conference, December 5-6, Chicago, Illinois.

54. Dabral, N., V. K. Garg, D. Moustafa, N. Jain, C. B. Carlson, N. Sriranganathan, and **R. Vemulapalli** (2009). Immunogenicity of a putative outer membrane peptidyl-prolyl cis-trans isomerase of *Brucella*. 62nd Annual Brucellosis Research Conference, December 5-6, Chicago, Illinois.

55. Garg, V. K., D. Moustafa, N. Jain, C. B. Carlson, N. Sriranganathan, and **R. Vemulapalli** (2009). Evaluation of enhanced immunogenicity and protective potential of recombinant

Brucella abortus RB51 strains overexpressing *Brucella* L7/L12 ribosomal protein and the 26 kDa periplasmic protein. 62nd Annual Brucellosis Research Conference, December 5-6, Chicago, Illinois.

56. Frank, C. B., T. Lin, and **R. Vemulapalli** (2010). Cerebral phaeohyphomycosis in a huacaya alpaca (*Vicugna pacos*) due to *Cladophialophora bantiana*. 29th Annual Meeting of the Midwest Association of Veterinary Pathologists, August 12-13, Mattawan, Michigan.

57. Guimaraes, A. M. S., R. F. C. Vieira, R. Poletto, **R. Vemulapalli**, A. Santos, W. Roaes, Z. S. Cubas, L. C. Santos, J. N. Marchant-Forde, A. W. Biondo, and J. B. Messick (2010). Quantitative PCR assay based on the 16S ribosomal RNA gene for the detection of *Mycoplasma suis* in pigs. 45th American Society for Veterinary Clinical Pathology Annual Meeting, October 30-November 3, Baltimore, Maryland.

58. Garg, V. K., T. H. Vemulapalli, N. Jain, C. B. Carlson, N. Sriranganathan, and **R. Vemulapalli** (2010). Overexpression of a putative trimeric autotransporter adhesion of *Brucella* in *B. abortus* RB51 significantly enhances its vaccine efficacy against *B. abortus*, *B. melitensis* and *B. suis* challenge. 63rd Annual Brucellosis Research Conference, December 4-5, Chicago, Illinois.

59. Garg, V. K., N. Jain, C. B. Carlson, N. Sriranganathan, and **R. Vemulapalli** (2010). Expressing *Brucella melitensis* outer membrane protein Omp31 in *B. abortus* vaccine strain RB51 does not enhance its protective efficacy against *B. melitensis* challenge. 63rd Annual Brucellosis Research Conference, December 4-5, Chicago, Illinois.

60. Zhu, J., M. Ramaker, C. B. Larson, K. Qundt, J. Wendte, K. P. Ku, F. Chen, G. W. Jourdian, **R. Vemulapalli**, G. G. Schurig, and Y. He (2010). Comparative analyses of protein secretion, macrophage response, and CTL induction by *B. abortus* strains RB51 and RB51SOD. 63rd Annual Brucellosis Research Conference, December 4-5, Chicago, Illinois.

61. Laoye, M., **R. Vemulapalli**, R. Pogranichniy, S. Lenz, and D. Ragland (2010). Antibody response of pigs to the E protein of Porcine Reproductive and Respiratory Syndrome virus. 91st Conference of Research Workers in Animal Diseases, December 5-7, Chicago, Illinois.

62. Fink, J., **R. Vemulapalli**, C. Santrich, R. Landau, and G. Moore (2010). Evaluation of three real-time PCR assays for detection of pathogenic *Leptospira* species in canine urine samples. 91st Conference of Research Workers in Animal Diseases, December 5-7, Chicago, Illinois.

63. Dabral, N., and **R. Vemulapalli** (2011). Overexpression of a putative glycosyltransferase WbkA of *Brucella* in *B. abortus* RB51 leads to production of exopolysaccharide. Brucellosis 2011-International Research Conference, September 21-23, Buenois Aires, Argentina.

64. Johnson, A., J. Mungin, R. Pogranichniy, K. Thakur, C. Miller, and **R. Vemulapalli** (2011). Q-fever in small ruminants in Indiana. 92st Conference of Research Workers in

Animal Diseases, December 4-6, Chicago, Illinois.

65. Dabral, N., M. Moreno-Lafont, and **R. Vemulapalli** (2012). Antigen-specific immune responses of mice to oral prime-boost immunization with gamma-irradiated *Brucella neotomae* and *B. abortus* RB51. 65th Annual Brucellosis Research Conference, December 1-2, Chicago, Illinois.

66. Garg, V.K., N. Jain, C. B. Carlson, N. Sriranganathan, and **R. Vemulapalli** (2012). Evaluation of immunogenicity and protective potential of recombinant strain RB51/BrAd as an oral vaccine for brucellosis. 65th Annual Brucellosis Research Conference, December 1-2, Chicago, Illinois.

67. Dabral, N., N. Sriranganathan, and **R. Vemulapalli** (2013). Overexpression of *wbkF* gene in *Brucella abortus* RB51 leads to increased O-polysaccharide expression. 66th Annual Brucellosis Research Conference, December 7-8, Chicago, Illinois.

68. Laoye, M., **R. Vemulapalli**, R.M. Pogranichniy, S.D. Lenz, and D. Ragland (2013). Immunogenic potential of the E protein of porcine reproductive and respiratory syndrome virus. North American PRRS Symposium 2013, December 7-8, Chicago, Illinois.

69. Dabral, N., G. Kimsawatde, N. Sriranganathan, and **R. Vemulapalli** (2014). Vaccination with recombinant *Brucella abortus* RB51 strain engineered to express increased levels of O-polysaccharide provides enhanced protection in murine brucellosis model. Brucellosis 2014 International Research Conference, September 9-12, Berlin, Germany.

70. Sanchez-Jimenez, M.M., G.M. Garcia, N. Dabral, J.F. Alzate, **R. Vemulapalli**, and M. Olivera-Angel (2014). Evaluation of indirect enzyme-linked immunosorbent assays using recombinant proteins to diagnose *Brucella canis* infection in humans. Brucellosis 2014 International Research Conference, September 9-12, Berlin, Germany.

71. Niu, Y., **R. Vemulapalli**, and A. Bhunia (2014). Immunological detection of *Brucella* species. Annual meeting of International Association for Food Protection (IAFP) 2014, August 3-6, Indianapolis, Indiana.

72. Gallina, N. L.F., V. Nathan, D. Liu, R. Drolia, Y. Fu, M. Samadar, A. Cai, A. Cox, L. Reddivari, B. Applegate, X. Bai, D. Tanjore, **R. Vemulapalli**, and A. Bhunia. (2023). Next-Generation Bioengineered Probiotic Ameliorates Inflammatory Bowel Disease Pathology in a Mouse Model. ASM Microbe, Houston, TX. June 16-18, 2023.

    The ASM Microbe 2023 Outstanding Student Poster Award

73. Gallina, N.L.F., V. Nathan, A. Krishnakumar, D. Liu, R. Drolia, N. I.Tardi, Y. Fu, M. Samadar, S. Tenguria, A. Cai, R. E. Centeno-Martinez, T. A. Johnson, A. Cox, L. Reddivari, B. Applegate, X. Bai, L. Xu, D. Tanjore, **R. Vemulapalli**, R. Rahimi, A.K. Bhunia (2024). Receptor-targeted next-generation probiotics ameliorate mammalian colitis. The 5th International Electronic Conference on Foods. October 28-20, 2024.

Invited Presentations

1. **R. Vemulapalli.** (2001). Recombinant strategies to improve the vaccine efficacy of *Brucella abortus* vaccine strain RB51 and generate multivalent vaccines. XXIII Chilean Microbiology Conference, November 28-30, Tomé, Chile.

2. **R. Vemulapalli.** (2006). A series of 5 seminars on Recombinant Vaccine Development and Molecular Diagnostics at the National Center for Biotechnology of the Republic of Kazakhstan, November 13-17, Astana, Kazakhstan.

3. **R. Vemulapalli**. (2007). Rational Design of Vaccines for Brucellosis, Department of Basic Medical Sciences, Purdue University, September 10, West Lafayette, Indiana.

4. **R. Vemulapalli.** (2010). Strategies for developing human brucellosis vaccines. VA-MD Regional College of Veterinary Medicine, Virginia Tech, July 15, Blacksburg, Virginia.

5. **R. Vemulapalli.** (2011). Development of non-replicative vaccines for human brucellosis. NIAID/NIH Conference on "Bacterial Waterborne and Emerging Infectious Diseases: Collaborative Research Opportunities in North Africa and the Middle East". January 31-February 3, Nicosia, Cyprus.
6. **R. Vemulapalli.** (2011). Current and future vaccines for brucellosis. Workshop on development of brucellosis translational research program, Department of Biotechnology, Government of India. August 26-27, New Delhi, India.

7. **R. Vemulapalli.** (2014). Gamma-irradiation for developing safer vaccines for brucellosis: current status and future prospect. International Atomic Energy Agency, United Nations. June 25-26, Vienna, Austria.

8. **R. Vemulapalli** (2016). Brucellosis and other neglected zoonotic diseases in MENA region. Second Annual Global Pandemic Policy Summit. Scowcroft Institute of International Affairs and Bush School of Government and Public Service, Texas A&M University, October 24, College Station, Texas.

9. **R. Vemulapalli.** (2017). Research integrity & ethics: skills you need to do research. A keynote talk, CVM Graduate Student Oath Ceremony, College of Veterinary Medicine & Biomedical Sciences, Texas A&M University, May 14, College Station, Texas.

10. **R. Vemulapalli.** (2019). Brucellosis: New vaccines to control a neglected zoonotic disease. South Texas Center for Emerging Infectious Diseases, The University of Texas at San Antonio. April 26, San Antonio, Texas.

11. **R. Vemulapalli.** (2020). Brucellosis: Need for New Vaccines and Strategies to Control a Neglected Zoonotic Disease", at Brucellosis: One Health – Challenges and Opportunities, International Event, Federal University of Lavras. March 13-14, Lavras, Brazil.

12. **R. Vemulapalli.** (2021). Challenges and strategies for developing improved vaccines for animal brucellosis. 73rd Annual Brucellosis Research Conference. December 4-5, Chicago, Illinois.

Research Grants and Awards Funded at Purdue University

External Awards Funded:

1. Agency: Veterinary Technologies Corp., Blacksburg, VA.
   Title of Grant: An efficient bacterial vector based vaccine for tuberculosis.
   Duration of Funding: June, 2001-Dec. 2001.
   Total amount of award: $ 12, 000.
   Role: PI.

2. Agency: LSU AgCenter Experiment Station (Subcontract; funding agency: USDA/APHIS)
   Title of Grant: Development of *Brucella abortus* RB51-based recombinant vaccine against pseudorabies: construction of recombinant expression plasmids.
   Duration of Funding: Sep. 2001- Aug. 2002.
   Total amount of award: $ 14, 000.
   Role: PI.

3. Agency: USDA/NRI
   Title of Grant: *Brucella abortus* RB51-based live recombinant vaccine against Neosporosis.
   Duration of Funding: Sep. 2002 – Aug. 2005.
   Total amount of award: $ 180,000.
   Role: Co-PI/subcontractor for $62,497.

4. Agency: The National Pork Board
   Title of Grant: A novel PRRS vaccine in a bacterial vector known to stimulate strong cell-mediated and humoral immunity.
   Duration of Funding: May 2003– November 2004.
   Total amount of award: $ 25,000.
   Role: PI.

5. Agency: NIH/NIAID
   Title of grant: *B. abortus*-based vaccine against viral hemorrhagic fevers.
   Duration of funding: July 2003-June 2005.
   Total amount of award: $ 532,000.
   Role: PI.

6. Agency: NIH/NIAID
   Title of grant: Non-replicative vaccine for human brucellosis.
   Duration of funding: Dec. 2007-Nov. 2011.
   Total amount of award: $1,215,245.
   Role: PI.

7. Agency: Morris Animal Foundation
   Title of grant: Epidemiological and molecular patterns of leptospirosis in dogs in the US.
   Duration of funding: Oct. 2009-Sept. 2011.
   Total amount of award: $171,144.
   Role: Co-PI.

8. Agency: NIH/NIAID/NICHD
   Title of grant: Brucellosis Research Conference.
   Duration of funding: July 1. 2009-June 2010.
   Total amount of award: $15,000.
   Role: PI.

9. Agency: USDA-PRRSV CAP/Kansas State University
   Title of grant: Training of minority students in virology laboratory and development of PRRSV vaccine.
   Duration of funding: June 2009-May 2012.
   Total amount of award: $75,000.
   Role: Co-investigator; major advisor for the minority student.

10. Agency: USDA/NIFA/University of Notre Dame
    Title of grant: A rapid and high-throughput pathogen RNA detection system for dairy products.
    Duration of funding: July 1, 2012 – June 30, 2015
    Total amount of award: $500,000
    Role: Co-investigator

11. Agency: NIH/NIAID
    Title of grant: Occidiofungin as a new lead against the enteric AIDS-OI cryptosporidium.
    Duration of funding: April 1, 2021-March 31, 2024 (NCE)
    Total amount of award: $409,327.
    Role: PI.

Internal Awards Funded:

1. Agency: Hatch, USDA
   Title of Grant: *Ochrobactrum anthropi* as a vector for immune response induction.
   Duration of Funding: Oct. 1999 – Sep. 2000.
   Total amount of award: $ 11, 500.
   Role: Co-PI.
   Funding responsible: $ 8,000.

2. Agency: American Cancer Society Institutional Grants for Junior Faculty, Purdue Cancer Center.
   Title of Grant: *Brucella* as an effective delivery vector for inducing anti-tumor immunity.
   Duration of Funding: Jan. 2002 - Jan. 2003.
   Total amount of award: $ 20, 000.
   Role: PI.

3. Agency: Agricultural Research Program – Graduate student assistantship
   Title of Grant: Developing a recombinant vaccine against paratuberculosis: Immunological characterization of potential protective proteins of *Mycobacterium paratuberculosis.*
   Duration of Funding: Aug. 2002-July 2004.
   Total amount of award: $ 15,000/year.
   Role: PI.

4. Agency: Purdue Research Foundation
   Title of Grant: International Travel Grant – Brucellosis 2003 – International Research Conference, Pamplona, Spain.
   Duration of Funding: September 15-17, 2003.
   Total amount of award: $ 936
   Role: PI.

5. Agency: School of Veterinary Medicine-Major Research Equipment Grant
   Title of Grant: Real-time PCR machine.
   Duration of Funding: 2004.
   Total amount of award: $ 32,000
   Role: PI.

6. Agency: School of Veterinary Medicine-Major Research Equipment Grant
   Title of Grant: Real-time PCR machine.
   Duration of Funding: 2006.
   Total amount of award: $ 30,000
   Role: PI.
7. Agency: School of Veterinary Medicine-Agricultural and Small Animal Disease Research
   Title of Grant: Recombinant vaccines for porcine reproductive and respiratory syndrome.
   Duration of Funding: 2007-2010.
   Total amount of award: $ 15,000
   Role: PI.

8. Agency: Purdue Research Foundation
   Title of Grant: International Travel Grant – Brucellosis 2008 – International Research Conference, London, England.
   Duration of Funding: September 10-13, 2008.
   Total amount of award: $ 1000
   Role: PI.

9. Agency: School of Veterinary Medicine- Agricultural and Small Animal Disease Research Funds
   Title of Grant: Development of a replication-defective mutant strain of *Bartonella henselae*.
   Duration of Funding: March 2009-Feb. 2011.
   Total amount of award: $ 5,000
   Role: Co-PI.

Patents and Disclosures

1. An over-expressing homologous antigen vaccine and a method of making the same. US patent numbers 6,149,920 and 6,811,787; World patent WO/1999/029340. Inventors: S. M. Boyle, S. Cravero, L. Corbeil, G. G. Schurig, N. Sriranganathan, and **R. Vemulapalli**.

2. A size-variable strain-specific protective antigen for Potomac horse fever. US patent number 6,375,954. Inventors: S. K. Dutta, B. Biswas, and **R. Vemulapalli**.

3. *Ochrobactrum anthropi* as a vector for expression of heterologous proteins. Virginia Tech Intellectual Properties, Inc. Disclosure # 00-018; Inventors: Y. He, G. G. Schurig, and **R. Vemulapalli**.

4. Development of a recombinant, bi-valent vaccine for anthrax and brucellosis. Virginia Tech Intellectual Properties, Inc. Disclosure # 03-136; Inventors: S.M. Boyle, N. Sriranganathan, G. Schurig, A.B. Bandara, **R. Vemulapalli**, M.P. Nikolich, and D.L. Hoover.

5. Replication-defective mutant of *Brucella abortus* vaccine strain RB51 and uses thereof. Purdue Research Foundation. Disclosure # 65160; Inventors: **R. Vemulapalli** and N. Sriranganathan.

6. Recombinant antigen for serological diagnosis of *Baylisascaris procyonis* larva migrans. Purdue Research Foundation. Disclosure # 65429; Inventors: S. Dangoudoubiyam, **R. Vemulapalli** and K. Kazacos.

7. A broadly protective protein of *Brucella* and its use in brucellosis vaccine preparation. World patent WO2012037546A3; Inventors: **R. Vemulapalli**, V. K. Garg, T. H. Vemulapalli, and N. Sriranganathan.

Reviewer of Grant Proposals:

1. United States-Israel Bi-national Agricultural Research and Development Fund, 2001, 2002, 2003, and 2009.

2. The Welcome Trust, 2002.

3. United States Department of Defense, SBIR research proposals, 2003 and 2004.

4. Member, NIH/CSR, Vaccines against Microbial Diseases (VMD) study section June 24-25, 2004; Oct. 28-29, 2004; Feb. 24-25, 2005; June 16-17, 2005; Feb. 5-6, 2009.

5. Member, NIH/NIAID, Special Emphasis Panel, Cooperative Research for the Development of Vaccines, Adjuvants, Therapeutics and Diagnostics for Biodefense (VATID) and SARS, Feb. 3-5, 2004.

6. Member, NIH/NIAID, Special Emphasis Panel, Immune Mechanisms of Viral Control, June 25-27, 2007.

7. Member, NIH/CSR, Stage 1 Review Panel, Challenge Grants in Health and Science Research, June 12, 2009.

8. Member, NIH/NIAID, Special Emphasis Panel, Animal Models for Infectious Diseases II, July 29-31, 2009.

9. Member, NIH/CSR, Special Emphasis Panel, SBIR/STTR phase I applications, Sep. 8, 2009.

10. Member, NIH/NIAID, Special Emphasis Panel, Partnerships for Biodefense, Oct. 8, 2010.

11. Member, NIH/CSR, Study Section IDM-B(50), Dual Purpose with Dual Benefit: Research in Biomedicine and Agriculture Using Agriculturally Important Domestic Species, March 21, 2011; Feb. 24, 2012.

12. Member, NIH/CSR, DP5 (NIH Director's Early Independence Awards) Study Section, Phase I review. April 10, 2013.

13. Member, NIH/CSR, ZRG1 IDM-V-02 Study Section, May 22, 2013.

14. Member, NIH/CSR, Study Section ZRG1 IDM-R, March 21, 2014

Ad Hoc Reviewer of Manuscripts for Peer-Reviewed Journals:

1. CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources
2. Clinical and Vaccine Immunology
3. Comparative Immunology, Microbiology & Infectious Diseases
4. European Journal of Clinical Microbiology and Infectious Diseases
5. Frontiers in Cellular and Infection Microbiology
6. Frontiers in Microbiology
7. Frontiers in Immunology
8. Journal of Wildlife Diseases
9. Immunology & Cell Biology
10. Infection and Immunity
11. Journal of Clinical Microbiology
12. Journal of Veterinary Diagnostic Investigation
13. Journal of Veterinary Internal Medicine
14. Journal of Veterinary Medicine
15. mSphere
16. Pathogens
17. PLoS One
18. PLoS Neglected Tropical Diseases
19. Transboundary and Emerging Diseases
20. Vaccine
21. Veterinary Microbiology
22. Veterinary Pathology
23. Veterinary Research
24. Virulence

Expert Panel Membership

- Invited panel member of "Working Symposium on Brucellosis Vaccines and Diagnostics" United States Animal Health Association (USAHA) and the University of Wyoming, Aug. 16-18, 2005, Laramie, Wyoming.

- Invited expert member for "Development of Irradiated Vaccines: Current Status and Future Prospective", Joint FAO/IAEA Animal Health Division, June 25-26, 2014, Vienna, Austria.

- External advisor for "Department of Biotechnology Network Project on Brucellosis", Government of India, 2011-2016.

- Expert consultant for IAEA on "Development of a plan for a vaccination trial for brucellosis using irradiated Rev-1 vaccine in sheep and goats", March 16-20, 2015, Amman, Jordan.

External Examiner for PhD Defenses

- Dr. Sheela Ramamoorthy, 2006. Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, VA.

- Dr. Naveen Sundaran, 2010. Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, VA.

- Dr. Soumya Paul, 2020. Bharathiar University, India.

DIAGNOSTIC SERVICE/OUTREACH

Diagnostic Service (50% FTE) – Section Head, Molecular Diagnostics, Animal Disease Diagnostic Laboratory, 2001-2011.

1. As inaugural Section Head, set up laboratory facilities and quality control programs for PCR-based diagnostic testing. Expansion of the molecular diagnostic section through laboratory renovation, acquisition of equipment, and establishment of new assays.

2. Training and supervision of technical staff in molecular diagnostic assays.

3. Directing the optimization, validation, and introduction of several conventional and real-time PCR-based tests for the detection of pathogens. Standard operating procedures for over 45 different assays were developed.

4. Consulting with veterinarians regarding sample submission and analysis of results.

5. Collaborating with pathologists and clinicians in disease investigations of specific cases for molecular characterization of the pathogens.

6. Overseeing the testing of samples received daily and reporting of results within 8-48 hours from the time of receipt.

7. Participation in the National Animal Health Laboratory Network, a USDA agency, for testing of samples for high-consequence pathogens, such as classical swine fever virus, foot and mouth disease virus, H5 and H7 types of avian influenza virus, pandemic H1N1 virus, and exotic Newcastle disease virus.

Other Activities Related to Diagnostic Service/Outreach

Invited presentations

- **R. Vemulapalli.** (2005). PRRS Virus – Biology and Current and Future Vaccinology. 93rd Annual Fall Conference for Veterinarians and Veterinary Technicians, Sep. 28-30, West Lafayette, Indiana.

- **R. Vemulapalli.** (2005). PRRS Virus – Molecular Diagnostics and Immunology. Annual Meeting of Indiana Swine Veterinary Practitioners Association, Dec. 6, Indianapolis, Indiana.

Emergency Preparedness

- Team member of the NAHLN-sponsored, multi-agency tabletop exercise on avian influenza outbreak preparedness in Indiana, May 16, 2008.

- College Representative, Texas A&M University Emergency Preparedness Tabletop Exercise – Active Shooter Incident, October 20, 2023

ACADEMIC AND PROFESSIONAL SERVICE

Leadership in Professional Organizations

- International Brucellosis Society
    - Vice President-Elect, 2009-2010
    - Vice President, 2010-2011
    - President, 2011-2012
    - Vice President-Elect, 2014-2015
    - Vice President, 2015-2016
    - President, 2016-2017
- Omicron Chapter of Phi Zeta
    - Vice President, 2009-2010
    - President, 2010-2011

International Research Conference Organizing Committees

- Co-Chair, Scientific Committee, Brucellosis 2016, International Research Conference, November 17-19, 2016, New Delhi, India.
- Member, Scientific Committee, Brucellosis 2022, International Research Conference, September 16-19, 2022, Teramo, Italy.

Editorial Board membership

Advances in Preventive Medicine, 2012-2014
Frontiers in Cellular and Infection Microbiology, 2012-present
Pathogens, 2022-present

University/School/Department Committees

Purdue University

1. Member, Graduate Studies Committee, Department of Comparative Pathobiology (CPB), 2001-2011.
2. Alternate, Grade Appeals Committee, School of Veterinary Medicine, 2002-2003.
3. Leader, Peer-teaching evaluation, Group 14, 2002-2004.
4. Member, International Educational Programs Committee, Purdue University, 2002-2005.
5. Member, Grade Appeals Committee, School of Veterinary Medicine, 2003-2005.
6. Judge, Phi-Zeta student poster presentations, 2003 and 2004.
7. Member, SVM Research Advisory Board, 2003-2016.
8. Member, CPB Primary Promotions & Tenure Committee, 2005-2016.
9. Member, Veterinary Microbiology Faculty Search Committee, CPB, 2006.
10. Member, Bio-Safety Level-3 Laboratory Design Committee, 2007-2009.
11. Member, Diagnostic Veterinary Pathologist Search Committee, ADDL/CPB, 2008.
12. Section Head, Microbiology and Immunology Section, CPB, 2008-2011.
13. Member, SVM Research Task Force, 2008.
14. Member, CPB Strategic Plan Committee, 2008-2009.
15. Chair, Veterinary Microbiology Faculty Search Committee, CPB, 2009-2010.
16. Member, Pre-vet and Veterinary Curriculum Revision Task Force, School of Veterinary Medicine, 2010-2011.
17. Faculty Representative, Omicron Chapter of Phi Zeta Officers, 2011-2016.
18. Member, University Research Faculty Working Group, 2010.
19. Member, Senior Leadership Team, Purdue University College of Veterinary Medicine, 2011-2016.
20. Member, Research Space Committee, Purdue University College of Veterinary Medicine, 2011-2016.
21. Member, Administrative Council, Purdue University College of Veterinary Medicine,

2011-2016.

22. Member, Area Promotion & Tenure Committee, Purdue University College of Veterinary Medicine, 2011-2015.

23. Chair, Molecular Diagnostics Faculty Search Committee, CPB, 2015.

24. Chair, Committee to Conduct Administrative Review of Associate Dean for Research, Purdue University College of Veterinary Medicine, 2015.

Texas A&M University

1. Member, Department Head Steering Committee, Texas A&M University, 2017-2022

2. Member, Executive Committee, College of Veterinary Medicine & Biomedical Sciences, 2016-present

3. Member, Veterinary Medical Teaching Hospital Board, College of Veterinary Medicine & Biomedical Sciences, 2016-2022

4. Member, Council of Diversity & Professions, College of Veterinary Medicine & Biomedical Sciences, 2017-2020

5. Member, Biomedical Sciences (BIMS) Undergraduate Program Executive Committee, College of Veterinary Medicine & Biomedical Sciences, 2016-2022.

6. Chair, Schubot Endowed Professorship Search Committee, College of Veterinary Medicine & Biomedical Sciences, 2017

7. Member, 1VM Student Progress Review Committee, College of Veterinary Medicine & Biomedical Sciences 2018-present

8. Member, CVM Dean Search Advisory Committee, 2019-2020

9. Fellow, Department Head Development Fellows, 2019-2020

10. Member, NIH T32 Program Advisory Committee, 2019-present

11. Member, VMTH Director Search Advisory Committee, 2019-2020

12. Member, BIMS Graduate Program Curriculum Revision Taskforce, 2019-2020

13. Member, 2+2 Program Working Group, 2019-present

14. Member, Texas A&M Emergency Management Advisory Group, 2020-2021

15. Co-Chair, Code of Professional Conduct Committee, College of Veterinary Medicine & Biomedical Sciences, 2021

16. Member, Faculty Affairs Council, Texas A&M University, 2022-present

17. Member, Texas A&M Path Forward, Working Group #13 – Transition of BIMS Program to College of Arts & Sciences, 2021-2022

18. Member, Future Aggie Veterinary Experience (FAVE) program development committee, 2021-2022

19. Member, Border Health Summit Planning Committee, and Panelist at the Summit, The Scowcroft Institute of International Affairs, Texas A&M University, 2022-2023

20. Chair, Ruminant Health Research Faculty Search Committee, 2023

21. Panelist, The Deans CARE Summit, Texas A&M University, April 17, 2023

22. Member, New Small Animal Hospital Construction Planning Committee, 2023-present

23. Member, Planning Committee, Transferring BIMS program back to Veterinary Medicine & Biomedical Sciences, 2023-2024

24. Chair, Endowed Chair Review Committee, College of Veterinary Medicine & Biomedical Sciences, 2024

25. Chair, College Space Committee, 2024-present

26. Member, Texas A&M Higher Education Center at McAllen Quick Assessment Taskforce, 20024

External Grant Funding:

K-12 Engagement Activities

Agency: NIH/NCRR
Title of grant: Fat Dogs and Coughing Horses: Animal Contributions toward a Healthier Citizenry
Duration of funding: Dec. 2009-Nov. 2014.
Total amount of award: $1,300,000.
Role: Faculty consultant; Co-PIs: Drs. T. Ratliff and S. Amass

Major contributions:

- Consultations with local high school biology teachers on teaching immunology concepts

- Featured in the following books for elementary school children (http://vet.purdue.edu/engagement/p12/books.php):

  - "Fat Dogs and Coughing Horses: Be the Vet! Solve the Case!"

- "How I Became a Scientist"
- "How I Became a Veterinarian"

International Engagement Activities

Agency: USDA/FAS
Title of grant: Afghanistan Agricultural Sanitary and Phytosanitary (SPS) Project
Duration of funding: Sep. 2011-Aug. 2014.
Total amount of award: $2,175,242.
Role: Co-project director – Animal Health part of the project, which involved training of Afghanistan personnel in animal health diagnostics; Co-PDs: Drs. K. McNamara (Agricultural Economics), B. A. Bugusu (Food Science), R. E. Foster (Entomology) and H. Oliver (Food Science).

Major accomplishments:

- Conducted three week-long workshops at the Central Veterinary Diagnostic and Research Laboratory, Kabul, Afghanistan, on real-time PCR detection of various pathogens

- Developed standard operating procedures for 10 different diagnostic PCR assays

- Hosted a veterinarian from Kabul University, Afghanistan, at Purdue University for 1 semester (Fall 2013) and trained him in animal disease diagnostics, with a focus on poultry diseases