

Dr. Shalini Sharma

Assistant Professor



Department of Veterinary Physiology and Biochemistry
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Educational Qualifications

2011 Ph.D. College of veterinary medicine
The University of Tennessee, Knoxville, TN, USA

2004 M.V.Sc., Vety. Biochemistry, Rajasthan Agricultural
University, Bikaner

2002 B.V.Sc. & A.H., COVS, Rajasthan Agricultural University,
Bikaner

Employment Details

Feb 2014-Continuing Assistant Professor, LUVAS, Hisar

Dec 2011- Feb 2014 Post-doctoral Research Fellow, St. Jude
Children's Research Hospital, Memphis, TN, USA

Feb 2008-May 2008 Research assistant, College of veterinary
medicine, The University of Tennessee, Knoxville, TN, USA

Feb 2004- Feb 2005 Veterinary Officer, Department of Animal
Husbandry, Rajasthan, INDIA

Research Interests

Immuno-Biochemical aspects of infectious diseases.

Membership of scientific societies

- American association of Immunologists (AAI)
- American society for Virology (ASV): lifetime member
- Veterinary council of India
- Keystone symposia-Member

Selected Publications

- **Sharma S**, Sundararajan A, Suryawanshi A, Kumar N, Veiga-Parga T, Kuchroo VK, Thomas PG, Sangster MY, and Rouse BT (2011). "T cell immunoglobulin and mucin protein-3 (Tim-

3)/Galectin-9 interaction regulates influenza A virus specific humoral and CD8 T cell responses". *Proc. Natl. Acad. Sci. USA*, 108, 19001-19006. **IMPACT FACTOR 9.5** (NAAS rating 15.67).

- **Sharma S**, Mulik S, Kumar N, Suryawanshi A and Rouse BT (2011). "An Anti-inflammatory role of VEGFR2/src kinase inhibitor in HSV-1 induced immunopathology". *Journal of Virology*, 85(12): 5995-6007. **IMPACT FACTOR 5.0** (NAAS rating 10.44)
- Furman D*, Jojic V*, **Sharma S***, Shen-Orr SS, L Angel CJ, Onengut-Gumuscu S, Kidd BA, Maecker HT, Concannon P, Dekker CL, Thomas PG and Davis MM. "Cytomegalovirus infection enhances the immune response to influenza". *Sci. Transl Med* 2015 Apr 1; 7(281):281ra43. doi: 10.1126/scitranslmed.aaa2293. **IMPACT FACTOR 15.8**. Comment in *Nature Reviews Immunology*, volume 15, May 2015. "Virus boosts protection". * Equal contribution
- Rutigliano JA*, **Sharma S***, Melissa Y. Morris, Thomas H. Oguin III, Jennifer L. McClaren, Peter C. Doherty, and Paul G. Thomas (2014) " Highly pathogenic influenza A virus infection is associated with augmented expression of PD-1 by functionally-compromised virus-specific CD8+ T cells". *Journal of Virology*, 2014 Feb; 88(3): 1636-51. doi: 10.1128/JVI.02851-13. * Equal contribution. **IMPACT FACTOR 5.0** (NAAS rating 10.44)
- Dash P, Fiore-Gartland AJ, Hertz T, Wang GC, **Sharma S**, Souquette A, Crawford JC, Clemens EB, Nguyen THO, Kedzierska K, La Gruta NL, Bradley P, Thomas PG (2017). Quantifiable predictive features define epitope-specific T cell receptor repertoires. *NATURE* 2017 Jul 6; 547(7661):89-93 **IMPACT FACTOR 40.13** (NAAS rating 20.0)

Awards/ Fellowships/Recognition received

- Award of EFIS (European federation of immunological societies) fellowship to attend 5th international conference on CMV and immunosenescence, Nov 20-21st, 2014 at Amsterdam, the Netherlands
- Keystone Symposia Future of Science Fund scholarship in tissue resident memory T cells meeting, Jan 12- Jan 16, 2014, at snowbird Utah, USA
- American Association of Immunologists (AAI) trainee member award for oral presentation at 100th AAI Annual Meeting (May 3-7) – IMMUNOLOGY 2013TM at Honolulu, Hawaii, USA
- Gamma Sigma Delta award of excellence for oral presentation in CEM symposium 20-21st June 2011 at The University of Tennessee, Knoxville, TN, USA.
- American Association of Immunologists (AAI) trainee member award for oral presentation at 98th AAI Annual Meeting (May 13-17) – IMMUNOLOGY 2011TM at San Francisco, California, USA.

- American Association of Immunologists (AAI) trainee member award for oral presentation at 97th AAI Annual Meeting (May 7-11) - IMMUNOLOGY 2010™ at Baltimore, Maryland, USA
- Gold Medal, Rajasthan Agricultural University, India for first in M.V.Sc in Veterinary Biochemistry.
- University merit scholarship from Rajasthan Agricultural University for M.V.Sc program
- Certificate of Merit from Rajasthan Agricultural University for achieving overall IInd Position in University during graduation (BVSc & AH).
- Acting as Reviewer for Plos One and Plos Pathogens

Detailed List of Publications

Research Papers

International Journals

1. **Sharma S**, Sundararajan A, Suryawanshi A, Kumar N, Veiga-Parga T, Kuchroo VK, Thomas PG, Sangster MY, and Rouse BT (2011). "T cell immunoglobulin and mucin protein-3 (Tim-3)/Galectin-9 interaction regulates influenza A virus specific humoral and CD8 T cell responses". *Proc. Natl. Acad. Sci. USA*, 108, 19001-19006. **IMPACT FACTOR 9.5** (NAAS rating 15.67).
2. **Sharma S**, Mulik S, Kumar N, Suryawanshi A and Rouse BT (2011). "An Anti-inflammatory role of VEGFR2/src kinase inhibitor in HSV-1 induced immunopathology". *Journal of Virology*, 85(12): 5995-6007. **IMPACT FACTOR 5.0** (NAAS rating 10.44)
3. Suryawanshi A, Mulik S, **Sharma S**, Reddy PBJ, Sehrawat S and Rouse BT. (2011). "Ocular Neovascularization Caused by Herpes Simplex Virus Type 1 Infection Results from Breakdown of Binding between Vascular Endothelial Growth Factor A and its Soluble Receptor". *Journal of Immunology*, 186 (6): 3653-3665. **IMPACT FACTOR 5.0** (NAAS rating 10.92)
4. Mulik S, **Sharma S**, Suryawanshi A, Veiga-Parga T, Reddy PBJ, Rajasagi NK, and Rouse BT (2011). "Activation of endothelial roundabout receptor 4 (Robo4) reduces the severity of virus induced keratitis". *Journal of Immunology*, 186 (12):7 195-204. **IMPACT FACTOR 5.0** (NAAS rating 10.92)
5. Suryawanshi A, Veiga-Parga T, Rajasagi N, Reddy PBJ, Sehrawat S, **Sharma S** and Rouse BT (2011). "Role of IL-17 and Th17 Cells in HSV Induced Corneal Immunopathology" *Journal of Immunology*, 187(4): 1919-30. **IMPACT FACTOR 5.0** (NAAS rating 10.92)
6. Mulik S, John Xu Reddy PBJ, Rajasagi, NK, Gimenez, F, **Sharma S**, Lu, PY and Rouse BT (2012). "Critical role of microRNA-132 during virus induced immuno---inflammatory lesion". *Am. J. Pathol.*, 181(2):525-534. **IMPACT FACTOR 4.5** (NAAS rating 10.59)
7. Veiga-Parga T, Suryawanshi A, Mulik S, Gimenez F, **Sharma S**, Sparwasser T and Rouse BT (2012). "On the role of regulatory T cells during viral-induced inflammatory lesions ". *Journal of Immunology*, 189(12):5924-33. **IMPACT FACTOR 5.0** (NAAS rating 10.92)
8. Kumar N, Chaubey KK, Chaudhary K, Singh SV, Sharma DK and **Sharma S** (2012). "Isolation, identification and characterization of a Peste des Petits Ruminants virus from an outbreak in

Nanakpur, India". *J.Virol. Methods*, 2013 May; 189(2):388-92. **IMPACT FACTOR 1.78 (NAAS rating 7.78)**

9. Rutigliano JA*, **Sharma S***, Melissa Y. Morris, Thomas H. Oguin III, Jennifer L. McClaren, Peter C. Doherty, and Paul G. Thomas (2014) " Highly pathogenic influenza A virus infection is associated with augmented expression of PD-1 by functionally-compromised virus-specific CD8+ T cells". *Journal of Virology*, 2014 Feb; 88(3): 1636-51. doi: 10.1128/JVI.02851-13.
* Equal contribution. **IMPACT FACTOR 5.0 (NAAS rating 10.44)**
10. Sharma S and Thomas PG (2013). "The two faces of heterologous immunity: protection or immunopathology". Review article *J Leukoc Biol*, 2013 Nov 8. **IMPACT FACTOR 4.2**
11. Kumar N, Wadhwa A, Chaubey KK, Singh SV, Gupta S, **Sharma S**, Sharma DK, Singh MK, Mishra AK (2013). "Isolation and phylogenetic analysis of an orf virus from sheep in Makhdoom, India". *Virus Genes*, 2014 Apr; 48(2):312-9. doi: 10.1007/s11262-013-1025-9. **IMPACT FACTOR 1.28 (NAAS rating 7.58)**
12. Kumar N, Maherchandani S, Kashyap SK, Singh SV, **Sharma S**, Chaubey KK, Ly H. "Peste des petits ruminants virus infection of small ruminants: a comprehensive review". *Viruses*. 2014 Jun 6; 6(6):2287-327. doi: 10.3390/v6062287. **IMPACT FACTOR 3.0 (NAAS rating 9.35)**
13. **Sharma S**, Rajasagi NK and Rouse BT (2014). "Herpes virus entry mediator (HVEM) modulates proliferation and activation of regulatory T cells following HSV-1 infection". *Microbes Infect*, 2014 Aug; 16(8):648-60. doi: 10.1016/j.micinf.2014.06.005. Epub 2014 Jun 21. **IMPACT FACTOR 2.73 (NAAS rating 8.86)**
14. Khandelwal N, Kaur G, Chaubey KK, Singh P, **Sharma S**, Tiwari A, Singh SV, Kumar N. "Silver nanoparticles impair Peste des petits ruminants virus replication". *Virus Res*. Jun 28. pii: S0168-1702(14)00259-7. doi: 10.1016/j.virus.res.2014.06.011. **IMPACT FACTOR 2.32 (NAAS rating 8.32)**
15. Oguin TH 3rd, **Sharma S**, Stuart AD, Duan S, Scott SA, Jones CK, Daniels JS, Lindsley CW, Thomas PG, Brown HA. Phospholipase d facilitates efficient entry of influenza virus, allowing escape from innate immune inhibition. *J Biol Chem*. 2014 Sep 12; 289(37):25405-17. doi: 10.1074/jbc.M114.558817. Epub 2014 Jul 27 **IMPACT FACTOR 4.57 (NAAS rating 10.57)**
16. **Sharma S** and Naveen Kumar (2015). "Emerging Role of Regulatory T Cells in Heterologous Infections" DOI | <http://dx.doi.org/10.14737/journal>. *Advances in Animal and Veterinary Sciences* /2015/3.2s.25.31: ISSN (Online) | 2307-8316; ISSN (Print) | 2309-3331
17. Furman D*, Jovic V*, **Sharma S***, Shen-Orr SS, L Angel CJ, Onengut-Gumuscu S, Kidd BA, Maecker HT, Concannon P, Dekker CL, Thomas PG and Davis MM. "Cytomegalovirus infection enhances the immune response to influenza". *Sci. Transl Med* 2015 Apr 1; 7(281):281ra43. doi: 10.1126/scitranslmed.aaa2293. **IMPACT FACTOR 15.8.** Comment in *Nature Reviews Immunology*, volume 15, May 2015. "Virus boosts protection".* Equal contribution
18. Kumar N, Barua S, Riyesh T, Chaubey KK, Rawat KD, Khandelwal N, Mishra AK, Sharma N, Chandel SS, **Sharma S**, Singh MK, Sharma DK, Singh SV, Tripathi BN. "Complexities in isolation and purification of multiple viruses from mixed viral infections: Viral interference, Persistence and exclusion".(2016). *Plos One* .2016 May 26; 11(5):e0156110.doi:10.1371/journal.pone.0156110.eCollection 2016. **IMPACT FACTOR 3.23 (NAAS rating 9.23)**
19. Nogusa S, Thapa RJ, Dillon CP, Liedmann S, Oguin TH 3rd, Ingram JP, Rodriguez DA, Kosoff R, **Sharma S**, Sturm O, Verbist K, Gough PJ, Bertin J, Hartmann BM, Sealson SC, Kaiser WJ, Mocarski ES, Lopez CB, Thomas PG, Oberst A, Green DR, Balachandran S. "RIPK3 activates parallel pathways of MLKL-Driven Necroptosis and FADD-mediated Apoptosis to protect

- against Influenza A Virus” (2016). *Cell Host Microbe* Jul 13; 20(1):13-24.doi: 10.1016/j.chem.2016.05.011.Epub 2016 Jun 16. **IMPACT FACTOR 13.0**
20. Meliopoulos VA, Van de Velde LA, Van de Velde NC, Karlsson EA, Neale G, Vogel P, Guy C, **Sharma S**, Duan S, Surman SL, Jones BG, Johnson MD, Bosio C, Jolly L, Jenkins RG, Hurwitz JL, Rosch JW, Sheppard D, Thomas PG, Murray PJ, Schultz-Cherry S.. An Epithelial Integrin Regulates the Amplitude of Protective Lung Interferon Responses against Multiple Respiratory Pathogens” (2016). *PLoS Pathog.* 2016 Aug 9;12(8):e1005804. doi: 10.1371/journal.ppat.1005804. eCollection 2016 Aug. **IMPACT FACTOR 7.56 (NAAS rating 13.56)**
21. Dash P, Fiore-Gartland AJ, Hertz T, Wang GC, **Sharma S**, Souquette A, Crawford JC, Clemens EB, Nguyen THO, Kedzierska K, La Gruta NL, Bradley P, Thomas PG (2017). Quantifiable predictive features define epitope-specific T cell receptor repertoires. *NATURE* 2017 Jul 6; 547(7661):89-93 **IMPACT FACTOR 40.13 (NAAS rating 20.0)**
22. Nitin Khandelwal, Yogesh Chander, Krishna Rawat, Thachamvally Riyesh, Sanjay Barua, Bhupendra Nath Tripathi, Naresh Jindal, Pratibha Saini, Nishanth C. Honnaiahc, Shalini Sharma. Emetine as an antiviral agent inhibits viral RNA and DNA synthesis with rare possibilities in generating drug resistant viral mutants (2017) *Anti Viral Research*, 2017 Aug;144:196-204. doi: 10.1016/j.antiviral.2017.06.006. Epub 2017 Jun 15 **IMPACT FACTOR 4.2**

National Journals

23. Sharma S and Kataria N (2008).“A note on Thyroid hormonal profile and ageing in Magra sheep”. *Indian J.Anim.Res*, 42, issue:2, ISSN: 0367-6722. (NAAS rating 3.86)
24. Sharma S and Kataria N (2008).“Studies on some nitrogenous metabolites of Magra sheep during famine conditions in Rajasthan”. *Indian J.Anim.Res*, 41, issue:3, ISSN: 0367-6722. (NAAS rating 3.86)
25. Sharma S and Kataria N (2005).“Influence of age and sex on serum electrolytes in Magra sheep”. *Annals of agri-Bio Res.*, 21 (1): 93-98 ISSN: 0367-6722. (NAAS rating 2.91)
26. Kumar N, Kashyap SK, Meherchandani M, Sharma MM and Sharma S (2004). “Preparation and evaluation of inactivated whole cell vaccine against septicemic *Escherichia coli* 078 in sheep”. *Annals of Biology*, 20 (1), 7-12. (NAAS rating 2.98)

Popular Articles

- Shalini Sharma (2015). Aahar ke tatv, Pashudhan 37 (11): 30.
- Popular article: Shalini Sharma and Nirmal Sangwan (2017). “चयापचयन संबंधी समस्याएँ: जैव रासायनिक तथ्य”. Pashudhan Gyan. Accepted
- Popular article: Shalini Sharma and Nirmal Sangwan (2017). “अंग क्रियाशीलता के जैव रासायनिक परिक्षण”. Pashudhan Gyan. Accepted
- Popular article: Shalini Sharma and Nirmal Sangwan (2017). “मूत्र की जैव रासायनिक जांच”. Pashudhan Gyan. Accepted.
- Popular article: Shalini Sharma and Nirmal Sangwan (2017). “पशुओं में जोहन्स रोग (पेराटुबरकुलोसिस): लक्षण एवम रोकथाम”. Pashudhan Gyan. Accepted

Ongoing Projects

Sr. No.	Name of the scheme	Duration of the project	Funding agency
1.	Scheme: 5516-C(b)-VPB-02-ICAR Title of project: "Identification of bio-markers for Early Diagnosis of Mycobacterium avium subspecies <i>paratuberculosis</i> (MAP) Infection and Development of Test to Differentiate between Johne's Disease Infected and Vaccinated Animals (DIVA).	Three years 2017-2020	National Agricultural Science Fund (NASF), ICAR, New Delhi