

CURRICULUM-VITAE

Dr. Nasib Singh

Associate Professor
Department of Microbiology
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39	1170	>76	>71	21	27
Articles	Citations	Impact Factor	CiteScore	h-index	i10-index





PhD thesis guided (as Major Advisor)	:	01
MSc project guided (as Major Advisor)	:	09
Reviewer for Indexed Research Journals	:	14
Editorial Board Membership	:	02
Books co-edited	:	01
Refresher Course	:	01
Conference/workshop/CMEs	:	22
Visits abroad	:	01
Membership of Scientific Societies	:	02

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 **Publons**
publons.com/a/1170625

Web of Science ResearcherID
H-2072-2011

ACADEMIC QUALIFICATIONS

2008	Ph.D. Life Sciences	 JNU	 CDRI	Awarded
2001	M.Sc. Microbiology		Kurukshetra University INDIA	75.5% Gold Medal
1999	B.Sc. Medical		Kurukshetra University INDIA	67.6% First Division

ACADEMIC & RESEARCH RECORD

Associate Professor	Eternal University, Baru Sahib, Himachal Pradesh (INDIA)	01/07/2019 - continue
Assistant Professor	Eternal University, Baru Sahib, Himachal Pradesh (INDIA)	19/12/2015 – 30/06/2019
Assistant Professor & Assistant Registrar	NIMS University Jaipur, Rajasthan (INDIA)	07/11/2015- 16/12/2015
Assistant Registrar	NIILM University Kaithal- 136027, Haryana (INDIA)	28/08/2015- 03/11/2015
Assistant Professor	Lovely Professional University Phagwara, Punjab (INDIA)	01/08/2013 – 29/04/2015
Research Associate	National Dairy Research Institute Karnal, Haryana (INDIA)	30/11/2011 – 31/07/2013
Postdoctoral Fellow	University of Texas Medical Branch Galveston-77555, Texas (USA)	25/07/2008 – 02/06/2010
CSIR-UGC JRF & SRF	Central Drug Research Institute, Lucknow, Uttar Pradesh (INDIA)	13/05/2003 – 12/05/2008

RESEARCH PROJECTS/GRANTS

Sanction Date	Details of project/program	Duration	Sanctioned Amount
August 2019	“Student Skill Training Program & Technician Skill Training Program” under DBT-Skill Vigyan Program in coordination with HIMCOSTE, Shimla	3 Years	27,30,000

TEACHING SUMMARY

General Microbiology	Medical Microbiology
Parasitology	Systemic Bacteriology
Molecular Microbiology	Histopathology & Cytology
Mycology	Immunology
Stem cells in Healthcare	Pharmaceutical Biotechnology
Bioethics, Biosafety and IPR	Environmental Biotechnology
Food Microbiology	Industrial Microbiology
Food Biotechnology	Protein Engineering & Enzyme Technology
Microbial Genetics	Molecular Biology & Genetic Engineering
Plant Pathology	Advanced Medical Microbiology and Immunology

MAJOR ACHIEVEMENTS AND EXPERTISE

- Development of HTS & flow cytometry based assay for antileishmanial screening.
- New drug discovery from natural bioactives (plant and marine resources).
- *In vivo* immunological studies in mouse model of *Leishmania* and *Francisella tularensis*.
- *In vivo* drug screening in golden hamster model of Visceral Leishmaniasis.
- Experience of working in BSL2 and BSL3 laboratory set up.
- Molecular and nutrition studies on ruminal bacteria, methanogens and anaerobic fungi.

REFRESHER COURSE / FDP / TRAINING / CERTIFICATE COURSE

Course title	Year	University/Institution/Agency
Refresher course on leadership and governance in higher education	2019	Annual Refresher Programme in Teaching (ARPIT) through SWAYAM offered by Univ. of Pune. Exam: held online on 30/03/2019 Result: PASS & qualified the refresher course
Nutrition, Therapeutics and Health	2016	AgMOOCs (NPTEL, IIT-Kanpur, COL)
Bioinformatics Methods- I	2016	University of Toronto, Canada
Good Clinical Practice	2015	London School of Tropical Med & Hygiene, UK
Clinical Research Training	2015	National Institute of Health, USA
Human Resources Managers Capacity Development	2015	United Nations Public Administration Network
Safety of Women and Gender Sensitization on Campuses	2015	In-service training at Lovely Professional University
Academic and Examination Rules	2014	In-service training at Lovely Professional University
Towards Research Excellence	2014	In-service training at Lovely Professional University
Trainings on Environmental Health, Biosafety, Radiation Safety and Occupational Hazard Management	2008	University of Texas Medical Branch, Texas (USA)

AWARDS & DISTINCTIONS

Nominated for SIP	2019	Nominated by Eternal University to act as trainer for Students Induction Programme (SIP)
Resource Person	2018	DST-INSPIRE Internship Science Camp January 03-09, 2018. Delivered a talk on "Microbiology in Everyday life: benefits unlimited"
International Travel Grant for attending SAADC-2013, Lanzhou, China	July, 2013	Department of Science and Technology, Government of India
Junior & Senior Research Fellowship	2003-2008	CSIR-CDRI, Lucknow
Shyama Prasad Mukherjee Fellowship Invitation	2003	Invited for SPM Fellowship by securing a position among top 20% CSIR-UGC NET candidates
JRF-NET	2002	Joint CSIR-UGC National Eligibility Test
University Gold Medal	2001	First Rank in the order of merit in MSc exam of Kurukshetra University, Kurukshetra, Haryana
State Merit Scholarship	1999-2001	Government of Haryana

ADMINISTRATIVE RESPONSIBILITIES / CONTRIBUTIONS

- Member, Board of Studies, Akal College of Basic Sciences, Eternal University
- Chairman, Academic Committee, Department of Microbiology, Eternal University
- Coordinator, BSc, MSc & PhD Microbiology Curriculum Development Committee, 2016 & 2019
- Curriculum development for MHRD/UGC- ePG Pathshala for Environmental Microbiology
- Co-coordinator, 4th Annual Kisan Mela (13-14 April, 2019)
- Chairman, Finance Committee, NIBES (24-25 May, 2019)
- Chairman, Boarding and Lodging Committee (Students), 6th Convocation (24 Nov. 2018)
- Chairman, Finance Committee, INSPIRE Camp, Eternal University (Jan 3-9, 2018)
- Expert, Environmental Microbiology curriculum development for MSc Environmental Science
- Member, University Level Academic Journal Expert Committee, 2017
- Member, Academic Committee, Department of Biochemistry, Eternal University
- Project Evaluator, SERB, DST, Govt. of India
- Coordinator, Registration Committee, IPR Workshop, Eternal University (March 14, 2017)
- Deputy Centre Superintendent: Annual Examinations of Nursing (July, 2017)
- Chairman, Accommodation and Meals Committee, Kisan Mela (12-13 April, 2017)
- Member, Invitation & Stall Committee, Kisan Mela (13-14 April, 2018)
- Member, Discipline Committee, 4th Convocation, Eternal University (Oct. 14, 2016)
- Member, Discipline Committee, 5th Convocation, Eternal University (Dec. 2, 2017)
- Member, Organizing & Press Committee, AFST-2017, Eternal University (Mar. 24-25, 2017)
- Member, Technical Committee, ICEIM-2016, Malaysia (Sept. 10-12, 2016)
- Member, Research Advisory Committee: 8 M.Sc. students
- Member, Research Advisory Committee: 2 Ph.D. students

MEMBERSHIP- SCIENTIFIC SOCIETIES/BOARDS

- Editorial Board Member, Parasitology Research (**Springer Nature; IF: 2.027**)
- Review Editor, Frontiers in Microbiology (**Frontiers Media; IF: 4.16**)
- Member, Swiss Society for Microbiology (**Switzerland**)
- Member, International Society of Protistologists (**USA**)

RESEARCH GUIDANCE

Ph.D. students guided : 01

M.Sc. students guided : 08

RESEARCH PUBLICATIONS

1. Sharma P, **Singh N**, Garg N, Haq W and Dube A (2004). Efficacy of human beta-casein fragment (54-59) and its synthetic analogue compound 89/215 against *Leishmania donovani* in hamsters. Peptides 25:1873-1881. doi:10.1016/j.peptides.2004.06.011 **[IF: 2.85]**
2. Mishra PK, **Singh N**, Ahmad G, Dube A and Maurya R (2005). Glycolipids and other constituents from *Desmodium gangeticum* with antileishmanial and immunomodulatory activity. Bioorg Med Chem Lett 15: 4543-4546. doi:10.1016/j.bmcl.2005.07.020 **[IF: 2.442]**
3. **Singh N**, Mishra PK, Kapil A, Arya KA, Maurya R and Dube A (2005). Efficacy of *Desmodium gangeticum* extract and its fractions against experimental visceral leishmaniasis. Journal of Ethnopharmacology 98: 83-88. doi:10.1016/j.jep.2004.12.032 **(IF: 3.115)**
4. Dube A, **Singh N**, Sundar S and Singh N (2005). Refractoriness to the treatment of sodium stibogluconate in Indian kala-azar field isolates persists in in vitro and in vivo experimental models. Parasitology Research 96: 216-223. doi: 10.1007/s00436-005-1339-1 **(IF: 2.558)**
5. Tripathi S, **Singh N**, Shakya S, Dangi A, Misra-Bhattacharya S, Dube A and Kumar N (2006). Landrace/gender-based differences in phenol and thiocyanate contents and biological activity in *Piper betle* L. Current Science 91: 746-749 **(IF: 0.926)**
6. Lakshmi V, Pandey K, Kapil A, **Singh N**, Samant M and Dube A (2007). In vitro and in vivo leishmanicidal activity of *Dysoxylum binectariferum* and its fractions against *Leishmania donovani*. Phytomedicine 14: 36-42. doi:10.1016/j.phymed.2005.10.002 **(IF: 3.61)**
7. Samant M, Sahasrabuddhe A, **Singh N**, Gupta SK, Sundar S and Dube A (2007). Proteophosphoglycan is differentially expressed in sodium stibogluconate sensitive and resistant Indian clinical isolates of *Leishmania donovani*. Parasitology 134: 1175-84. doi: 10.1017/S0031182007002569 **(IF: 2.511)**
8. Dube A, **Singh N**, Saxena A and Lakshmi V (2007). Antileishmanial potential of a marine sponge, *Haliclona exigua* (Krikpatrick) against experimental visceral leishmaniasis. Parasitology Research 101: 317-324. doi: 10.1007/s00436-007-0469-z **(IF: 2.558)**
9. **Singh N**, Samant M, Gupta SK, Kumar A and Dube A (2007). Age-influenced population kinetics and immunological responses of *Leishmania donovani* in hamsters. Parasitology Research 101: 919-924. doi: 10.1007/s00436-007-0562-3 **(IF: 2.558)**
10. **Singh N**, Kumar A, Gupta P, Chand K, Samant M, Maurya R and Dube A (2007). Evaluation of antileishmanial potential of *Tinospora sinensis* against experimental visceral leishmaniasis. Parasitology Research 102: 561-565. doi: 10.1007/s00436-007-0822-2 **(IF: 2.558)**
11. Kumar P, Kumar A, Sundar S, Dwivedi N, **Singh N**, Siddiqi MI, Tripathi RP, Dube A and Singh N (2008). *Leishmania donovani* pteridine reductase 1: Biochemical properties and structure-

- modeling studies. *Experimental Parasitology* 120: 73-79. doi:10.1016/j.exppara.2008.05.005 (IF: 1.821)
12. **Singh N**, Kumar R, Gupta S, Dube A and Lakshmi V (2008). Antileishmanial activity in vitro and in vivo of constituents of sea cucumber *Actinopyga lecanora*. *Parasitology Research* 103: 351-354. doi: 10.1007/s00436-008-0979-3 (IF: 2.558)
 13. Dube A, Gupta R and **Singh N** (2009). Reporter genes facilitating discovery of drugs targeting protozoan parasites. *Trends Parasitol* 25: 432-439. doi: 10.1016/j.pt.2009.06.006 (IF: 11.77)
 14. Singh N, Kaur J, Kumar P, Gupta S, **Singh N** et al. (2009). An orally effective dihydropyrimidone (DHPM) analogue induces apoptosis-like cell death in clinical isolates of *Leishmania donovani* overexpressing pteridine reductase 1. *Parasitology Research* 105:1317-1325. doi: 10.1007/s00436-009-1557-z (IF: 2.558)
 15. Maurya R, Gupta P, Chand K, Kumar M, Dixit P, **Singh N** and Dube A (2009). Constituents of *Tinospora sinensis* and their antileishmanial activity against *Leishmania donovani*. *Natural Product Research* 23: 1134-1143. doi: 10.1080/14786410802682239 (IF: 1.928)
 16. **Singh N**, Gupta R, Jaiswal AK, Sundar S and Dube A (2009). Transgenic *Leishmania donovani* clinical isolates expressing green fluorescent protein constitutively for rapid and reliable ex vivo drug screening. *Journal of Antimicrobial Chemotherapy* 64: 370-374. doi:10.1093/jac/dkp206 [IF: 5.217]
 17. Kaur J, **Singh N** et al. (2010). *Leishmania donovani*: Oral therapy with glycosyl 1,4-dihydropyridine analogue showing apoptosis like phenotypes targeting pteridine reductase 1 in intracellular amastigotes. *Experimental Parasitology* 125: 310-314. doi:10.1016/j.exppara.2010.02.011 (IF: 1.821)
 18. Sirohi SK, **Singh N**, Dagar SS and Puniya AK (2012). Molecular tools for deciphering the microbial community structure and diversity in rumen ecosystem. *Applied Microbiology and Biotechnology* 95: 1135-1154. doi: 10.1007/s00253-012-4262-2 (IF: 3.34)
 19. Sirohi SK, Choudhury PK, Puniya AK, Singh D, Dagar SS and **Singh N** (2013). Ribosomal ITS1 sequence based diversity analysis of anaerobic rumen fungi in cattle fed on high fiber diet. *Annals of Microbiology* 63: 1571-1577. doi: 10.1007/s13213-013-0620-2 (IF: 1.407)
 20. Sirohi SK, Chaudhary PP, Dagar SS, **Singh N**, Puniya AK and Singh D (2013). Differential rumen microbial dynamics and fermentation parameters in cattle fed high fibre and high concentrate diet. *Indian Journal of Animal Nutrition* 30: 60-66 (NAAS: 4.5)
 21. Sirohi SK, Chaudhary PP, **Singh N**, Singh D and Puniya AK (2013). The 16S rRNA and *mcrA* gene based comparative diversity of methanogens in cattle fed on high fibre based diet. *Gene* 523: 161-166. doi: 10.1016/j.gene.2013.04.002 (IF: 2.498)
 22. Sirohi SK, Goel N and **Singh N** (2014). Utilization of saponins, a plant secondary metabolite in enteric methane mitigation and rumen modulation. *Annual Research and Reviews in Biology* 4: 1-19. doi: 10.9734/ARRB/2014/5323 (NAAS: 3.68)
 23. Sirohi SK, Goel N and **Singh N** (2014). Influence of *Albizia lebbbeck* saponin and its fractions on *in vitro* gas production kinetics, rumen methanogenesis and rumen fermentation characteristics. *ISRN Vet Sci* 2014: 498218. doi: 10.1155/2014/498218

24. Ahmed HA, Sirohi SK, Dagar SS, Puniya AK, **Singh N** (2014) Effect of supplementation of *Selenomonas ruminantium* NDRI-PAPB 4 as direct fed microbial on rumen microbial population in Karan Fries male calves. Indian Journal of Animal Nutrition 31:20-26 (**NAAS:4.5**)
25. Dagar SS, **Singh N**, Goel N, Kumar S and Puniya AK (2015) Role of anaerobic fungi in wheat straw degradation and effects of plant feed additives on rumen fermentation parameters *in vitro*. Beneficial Microbes 6: 353-360. doi: 10.3920/BM2014.0071 (**IF: 2.31**)
26. Mishra V, Gupta A, Kaur P, Singh S, **Singh N**, Gehlot P, Singh J (2016) Synergistic effects of arbuscular mycorrhizal fungi and plant growth promoting rhizobacteria in bioremediation of iron contaminated soils. International Journal of Phytoremediation 18: 697-703. doi: 10.1080/15226514.2015.1131231 (**IF: 2.237**)
27. Singh S, **Singh N**, Kumar V, Datta S, Wani AB, Singh D, Singh K, Singh J (2016) Toxicity, monitoring and biodegradation of the fungicide carbendazim. Environmental Chemistry Letters 14: 317-329. doi: 10.1007/s10311-016-0566-2 (**IF: 4.617**)
28. Chaudhary PP, Goel N, Baker G, Saxena J, **Singh N**, Chaturvedi I, Sharma A, Sirohi SK (2016) Influence of essential oils supplementation on rumen fermentation profile and ruminal microbial population *in vitro*. Journal of Science 1: 25-39.
29. Trojan R, Razdan L, **Singh N** (2016) Antibiotic susceptibility patterns of bacterial isolates from pus samples in a tertiary care hospital of Punjab, India. International Journal of Microbiology 2016: 9302692. doi: 10.1155/2016/9302692 [**CiteScore: 2.63**].
30. **Singh N**, Mishra T, Singh K, Singh J (2017) Microbial and non-microbial pyrogens in healthcare products: risks, quality control and regulatory aspects. Applied Clinical Research, Clinical Trials and Regulatory Affairs 4: 4-15. doi: 10.2174/2213476X03666160530151854.
31. Sood S, Bala R, Kumar V, **Singh N**, Singh K (2018) Iodine mediated synthesis of thiabendazole derivatives and their antimicrobial evaluation. Current Bioactive Compounds 14: 273-277. doi: 10.2174/1573407213666170407160418 [**CiteScore: 0.63**].
32. Kaur P, Singh S, Kumar V, **Singh N**, Singh J (2018). Effect of rhizobacteria on arsenic uptake by macrophyte *Eichhornia crassipes* (Mart.) Solms. International Journal of Phytoremediation 20: 114-120. doi: 10.1080/15226514.2017.1337071 [**IF: 2.237**].
33. Vyas P, Singh D, **Singh N**, Dhaliwal HS, Kumar V (2018) Nutrigenomics: Advances, Opportunities and Challenges in Understanding the Nutrient-Gene Interactions. Current Nutrition & Food Science 14: 104-115. doi: 10.2174/1573401313666170614094410 [**CiteScore: 0.56**].
34. Arora R, Bala R, Kumari P, Sood S, Sangwan V, **Singh N**, Singh K (2018) Synthesis of some bicyclic lactams via Beckmann rearrangement and their antimicrobial evaluation. Current Bioactive Compounds 14:428-433. doi:10.2174/1573407213666170703145729 [**CiteScore: 0.63**].
35. Arora R, Bala R, Kumari P, Sood S, Yadav AN, Singh N, Singh K (2018) Schmidt Reaction on Substituted 1-Indanones / N-Alkylation: Synthesis of Benzofused Six-membered Ring Lactams and their Evaluation as Antimicrobial Agents. Letters in Organic Chemistry 15: 606-613. doi: 10.2174/1570178614666171129163540 [**IF: 0.539**].
36. Singh S, Kumar V, Chauhan A, Datta S, Wani AB, **Singh N**, Singh J (2018) Toxicity, degradation and analysis of the herbicide atrazine. Environmental Chemistry Letters 16: 211-237 [**IF: 4.617**].

37. Mishra T, Dhaliwal HS, Singh K, **Singh N** (2019). Current status of biochemical and therapeutic properties of Shilajit. *Current Nutrition & Food Science* 15: 104-120. doi: 10.2174/1573401313666170823160217 [**CiteScore: 0.56**].
38. Mishra T, Sircar D, Dhaliwal HS, **Singh N** (2019) Spectroscopic and chromatographic characterization of crude natural Shilajit from Himachal Pradesh, India. *The Natural Products Journal* 10: 244-256. doi: 10.2174/2210315509666190112111808 [**CiteScore: 0.8; SJR: 0.21**].
39. Kaur T, Yadav AN, Sharma S, **Singh N** (2020) Diversity of fungal isolates associated with early blight disease of tomato from mid Himalayan region of India, *Archives of Phytopathology and Plant Protection* 53: 612-624. doi: 10.1080/03235408.2020.1785098 [**CiteScore: 0.80**].

INVITED ARTICLES

1. **Singh N**, Mishra T, Singh K, Singh J (2016) Microbial and non-microbial pyrogens in healthcare products: risks, quality control and regulatory aspects. *Applied Clinical Research, Clinical Trials and Regulatory Affairs* (Online). doi: 10.2174/2213476X03666160530151854.
2. **Singh N**, Dube A (2015) Reporter genes in parasites. In: Mehlhorn H (ed.), *Encyclopedia of Parasitology*. Springer-Verlag Berlin Heidelberg. Chapter No. 3511-1. doi: 10.1007/978-3-642-27769-6_3511-1.

POPULAR ARTICLES

1. World records holding microorganisms. *EU Voice* Vol. 2, 2016.
2. Probiotics: an ideal choice for your healthy diet. *EU Voice* Vol. 2, 2016.
3. Mission Indradhanush: steps towards healthy and infectious disease-free India, *EU Voice* Vol. 4, 2018.

BOOK PUBLISHED

1. Sunil Kumar Sirohi, T.K. Walli, Bhupinder Singh, **Nasib Singh** (2013) *Livestock Greenhouse Gases: Emission and Options for Mitigation*. Satish Serial Publishing House, Delhi, India (**ISBN: 978-9381226520**).

BOOK CHAPTERS

1. **Singh N**. Singh J (2019) Secretomics of wood-degrading fungi and anaerobic rumen fungi associated with biodegradation of recalcitrant plant biomass. In: Yadav AN, Mishra S, Singh S, Gupta A (Eds.) *Recent Advancement in White Biotechnology through Fungi*, Volume 2, Springer International Publishing (in press).
2. **Singh N**. Gautam PD, Chauhan PK, Kaur T, Singh K, Singh J, Dagar SS (2019) Antiparasitics from microorganisms. In: Arora D., Sharma C., Jaglan S., Lichtfouse E. (Eds.) *Pharmaceuticals from Microbes. Environmental Chemistry for a Sustainable World*, Vol. 28. Springer, doi: 10.1007/978-3-030-04675-0_2.

3. **Singh N**, Singh J, Singh K (2018) Small at size, big at Impact: microorganisms for sustainable development. In: Singh, J., Sharma, D., Kumar, G., Sharma, N.R. (Eds.) Microbial Bioprospecting for Sustainable Development. pp. 3-28, Springer Nature, Singapore. doi: 10.1007/978-981-13-0053-0_1.
4. **Singh N**, Dube A (2015) Reporter genes in parasites. In: Mehlhorn H (Ed.), Encyclopedia of Parasitology. Springer-Verlag Berlin Heidelberg. Chapter No. 3511-1. doi: 10.1007/978-3-642-27769-6_3511-1.
5. Sirohi SK, **Singh N**, Puniya AK (2014) Promising plant secondary metabolites for enteric methane mitigation and rumen modulation. In: Bakshi M.P.S. and Wadhwa M. (Eds.), Recent Advances in Animal Nutrition. Satish Serial Publishing House, pp. 43-77 (ISBN: 978-9381226933).
6. **Singh N**, Sirohi SK (2013) Biochemistry, bioenergetics and genetics of methanogenesis in rumen methanogenic archaea. In: Sirohi SK, Walli TK, Singh B, Singh N (Eds.), Livestock Greenhouse Gases: Emission and Options for Mitigation. Satish Serial Publishing House, Delhi, India. pp 103-120 (ISBN 978-9381226520).
7. Dube A, **Singh N** (2005) Experimental models for Kala azar vaccine and drug development research. In: Raghunath D, Nayak R (Eds.) Trends and Research in Leishmaniasis with particular reference to Kala azar. Tata McGraw-Hill Publishing Company Ltd., New Delhi, pp. 193-214 (ISBN 978-0070599567).

CONFERENCES, WORKSHOPS & CMEs ATTENDED

1. National Conference on 'Healthcare in India- Need for Paradigm Shift' held at Eternal University, Baru Sahib (H.P.) from 31st August – 1st Sept. 2019.
2. National Conference on New Insights in Biological and Environmental Sciences (NIBES-2019) held at Eternal University, Baru Sahib (H.P.) from May 24-25, 2019.
3. 2nd Workshop on 'Intellectual Properties Rights: Issues and Challenges' (IPRIC-2019) held on March 28, 2019 at Eternal University, Baru Sahib, Himachal Pradesh
4. National Conference on Corporate Social Responsibility (CCSR-2018) held at Eternal University, Baru Sahib (H.P.) from 22-23 Sept. 2018.
5. Eternal University- Corporate Interface on Research, Support and Consultancy held at Eternal University, Baru Sahib (H.P.) from April 7-8, 2018.
6. 2nd International Conference on Innovative Research in Engineering, Science and Technology (IREST-2017) held at Eternal University, Baru Sahib, Himachal Pradesh from April 7-8, 2017.
7. Special session on "Intellectual Property Management for Research & Development" during 2nd International Conference on Innovative Research in Engineering, Science and Technology (IREST-2017) held at Eternal University, Baru Sahib, Himachal Pradesh from April 7, 2017.
8. National Conference on Advances in Food Science and Technology (AFST-2017) held at Eternal University, Baru Sahib, Himachal Pradesh from 24 to 25 March, 2017.
9. Workshop on Intellectual Property Rights: Issues & Challenges (IPRIC-2017) at Eternal University, Baru Sahib (H.P.) on March 14, 2017.

10. International Conference on Sarasvati River held at Kurukshetra University, Kurukshetra from 29-30 January, 2017.
11. 6th National Conference on Chemical & Environmental Sciences: Emerging Dimensions & Challenges Ahead (NCCES-2017) held at Arya P.G. College, Panipat (Haryana) on April 1, 2017.
12. Young Scientists Conclave, India International Science Festival (IISF-2016) at CSIR-National Physical Laboratory, New Delhi, Dec. 8-11, 2016.
13. 5th National Conference on Chemical Sciences: Emerging Scenario and Global Challenges (NCCS-2016) held at Arya PG College, Panipat, Haryana on 26 March 2016.
14. Recent Trends in Biomedical Sciences (RTBS-2015) held on 20th March 2015 at School of Physiotherapy & Paramedical Sciences, Lovely Professional University, Phagwara, Punjab.
15. 10th Seminar of All India Medical Laboratory Technologist's Association, State Unit, Chandigarh on 15th April 2014 at PGIMER, Chandigarh.
16. 8th Biennial Animal Nutrition Association Conference (November 28-30, 2012) held at Rajasthan University of Veterinary and Animal Sciences, Bikaner, Rajasthan, India.
17. BSL3 laboratory training, Training in basic radiation safety in the laboratory, Basic mouse handling training, Chemical hazard training, Workshop on Postdoctoral development program at University of Texas Medical Branch, Galveston Texas, USA during my tenure from 2008-2010.
18. Training workshop on Antiprotozoal Drug Screening sponsored by Drugs for Neglected Diseases (DNDi) at Central Drug Research Institute, Lucknow, India, Feb 6-15, 2007.
19. Continuing medical education (CME) at IMMCON-2005, PGIMER, Chandigarh (24th November, 2005).
20. 32nd Annual conference of Indian Immunology Society (IMMCON-2005) held at Department of Immunopathology, PGIMER, Chandigarh (24-27 November, 2005).
21. CME course on "Use of animals and cell cultures in microbiology" organized at Central Drug Research Institute, Lucknow on Nov. 25. 2004.
22. CME course held at IMMCON-2003, Indian Immunology Society Department of Immunology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow. (November, 2003).

REVIEWER FOR PEER-REVIEWED JOURNALS

1. Antimicrobial Agents and Chemotherapy (**Oxford University Press**)
2. Frontiers in Microbiology (**Frontiers Media**)
3. Applied Microbiology and Biotechnology (**Springer**)
4. Parasitology Research (**Springer**)
5. Journal of Ethnopharmacology (**Elsevier**)
6. Beneficial Microbes (**Wageningen Academic Publishers**)
7. Current Microbiology (**Springer**)
8. Brazilian Journal of Microbiology (**Sociedade Brasileira de Microbiologia**)
9. British Microbiology Research Journal (**SCIENCEDOMAIN International**)
10. Annals of Clinical Microbiology and Antimicrobials (**BioMed Central**)
11. Human Parasitic Diseases (**SAGE Journals**)

12. Infectious Diseases: Research and Treatment (**SAGE Journals**)
13. Microbiology Insights (**SAGE Journals**)
14. Science of the Total Environment (**Elsevier**)

LABORATORY TECHNIQUES EXPERTISE

1. **Immunological:** ELISA, flow cytometry, Lymphocyte transformation test (LTT), mixed lymphocyte reaction (MLR), Cytotoxicity assay.
2. **Microbes & cells culture:** Human PBMCs, peritoneal exudates cells, Cell line culture (THP-1, U-937, RAW 264.7, J774, BHK-21, COS-1), macrophage-lung epithelial cells co-culture, *Leishmania* promastigotes, amastigotes, antileishmanial screening in amastigote-macrophage system.
3. **Lab animals handling & BSL-3 lab experience:** Hamster, mouse (BALB/c, C57BL/6), large ruminants (cattle). Working & handling experience with BSL3 pathogen *Francisella tularensis* at UTMB, Galveston, Texas (USA)
4. **Molecular Biology:** Isolation of DNA and RNA, PCR, RT-PCR, RFLP, colony hybridization, Southern blotting, SDS-PAGE, western blotting and other routine molecular techniques, Intracellular Ca⁺⁺ mobilization assay, Electroporation
5. **In vivo techniques:** *In vivo* maintenance of *Leishmania* strains in Syrian golden hamster (*Mesocricetus auratus*), antileishmanial screening, LD₅₀ and ED₅₀ evaluation for herbal and synthetic agents, Bronchoalveolar lavages, breeding and maintenance of knockout mice,
6. **Anaerobic/rumen microbiology techniques:** Isolation and maintenance of anaerobic bacteria & fungi, molecular identification of rumen microbes, phylogentic analysis of rumen microbial diversity, roll tube technique, serum bottle technique for in vitro fermentation, RT-PCR estimation of rumen microbes, most probable number (MPN) method, *in vitro* fibre digestibility assay.

Dated: 24th August 2020
Sirmaur, H.P.