

Curriculum Vitae



- Name Poonam Salotra
- Designation : Deputy Director
- Address : Institute of Pathology (ICMR), Safdarjung Hospital Campus, New Delhi – 110 029, India.

Residential address: C145 Sarvodaya Enclave, New Delhi-110017

- Tel. No: 26198402, 26166124
- Fax No: 26198401
- E. mail: salotra@vsnl.com, salotrap@icmr.org.in

Educational Qualifications

- M.Sc. (Biochemistry) from P.G.I., Chandigarh
- Ph.D. from V.P. Chest Institute, Delhi University.

Date of joining ICMR – Jan 1996

Date of joining present post – Dec 2005

Area of Specialization: Molecular Parasitology, Leishmaniasis

Research Experience:

Molecular basis of pathogenesis of infectious diseases including Kala-azar, Anthrax, Tuberculosis and Cholera. Currently working on basic and clinical aspects of kala-azar (KA), post kala-azar dermal leishmaniasis (PKDL) and cutaneous leishmaniasis (CL), including mechanism of drug resistance in Indian kala-azar, vaccine development, diagnostic tests for KA, PKDL and CL, characterization of immune responses in lesion tissues of KA, PKDL and CL patients.

Membership of professional associations

1. Society for Parasitology, India (Life member)
2. Society of Biological Chemists, India (Life member).
3. Association of Clinical Biochemists of India (Life member)
4. Indian Association of Medical Microbiologists, India (Life member)
5. Indian Immunology Society, India (Life member).

Awards/Honours

1. Basanti Devi Amir Chand Award conferred by ICMR for the year 2006.
2. ICMR International fellowship for Senior Biomedical Scientists for the year 2006.
3. Awarded Courtesy Fellowship by CBER, FDA, USA in Sep 2005.
4. Awarded fellowship by National Foundation of Infectious Diseases, USA in 2005.
5. Prof. BK Aikat Award conferred by Indian Council of Medical Research for 2004.
6. Granted ICMR Award for Excellent Research output in July 2004.
7. Silver Jubilee award by Indian Association of Medical Microbiology in 2003.
8. Awarded Courtesy Fellowship by CBER, FDA, USA in Dec 2003
9. Kshanika Oration Award, a National award for Eminent Woman Scientist, conferred by Indian Council of Medical Research in 2002.
10. National Science Talent Scholarship awarded by N.C.E.R.T. , New Delhi

Patents

1. Awarded US Patent No. 6,855,522 for "Species-specific PCR assay for detection of *Leishmania donovani* in clinical samples of kala-azar and post kala-azar dermal leishmaniasis".
2. US patent no. 20060240046 for "Live attenuated *Leishmania* vaccines"

Conferences / Workshops attended

International (last 7 years)

1. Invited speaker at IFoLeish-2008 (Interdisciplinary Forum on Leishmaniasis) organized by German Society for Hygiene and Microbiology (DGHM) and German Society for Parasitology (DGP) at Heidelberg, Germany in April 08.

2. Invited speaker at a conference on "Integrated functional genomics on the road to Leishmaniasis control", at Dormy House, Cotswolds, UK in Sep 2007. Presented paper entitled "Drug resistance in field isolates of *Leishmania donovani*".
3. Visiting scientist at the lab of Dr Emanuela Handman at The Walter Eliza Hall Institute of Medical Research, Royal Melbourne Hospital, Australia for 2 weeks in Feb 07 under ICMR International fellowship for Senior Indian Biomedical Scientists
4. Participated in Keystone symposium in California, USA in Jan 2007. Presented work entitled "Challenges in the treatment of Visceral Leishmaniasis : Potential of marine natural products as alternative drug candidates".
5. Participated in Scientists forum on "How to enhance Indo German Research Cooperation?" At German House, New Delhi in March 2006.
6. Presented work "Application of Microarray technology for control of Leishmaniasis" in Indo-Swedish Parasitology Meet at Goa in Dec 2005.
7. Participated in The Eighth Annual conference on vaccine research and presented work "Development of attenuated mutants as potential vaccine candidate's for visceral leishmaniasis", at Baltimore, USA (May 2005).
8. Invited speaker for a round table on advances in diagnostics of Leishmaniasis at World Leishmania Congress at Sicily, Italy (April 2005).
9. Presented paper "Microarray based analysis of gene expression in drug resistant *Leishmania donovani* isolated from Indian patients of Kala-azar" in the 15th European Congress of Clinical Microbiology and Infectious Diseases, held at Copenhagen, Denmark (April 2005).
10. Invited speaker at workshop on Intracellular pathogens sponsored by Fogarty International centre of NIH, US at India Habitat Centre, Delhi, in March 2005.
11. Presented work on "Molecular studies in post Kala-azar dermal leishmaniasis" in an Indo-German workshop on Leishmaniasis at Humboldt University, Berlin, Germany in July 2004.
12. Presented work on "Functional genomic approaches for the analysis of Leishmania virulence", in Indo-German Seminar at IICB, Kolkata, Dec 03.
13. Participated in "the Genomic Policy Executive Course" conducted as an Indo-Canadian initiative by ICMR and the Canadian Program on Genomic and Global Health, University of Toronto, Canada, at Kerala, Jan 2003.
14. Participated in International Symposium on Leishmaniasis at All India Institute of Medical sciences, New Delhi, Feb 2002.

15. Presented paper "Development of Molecular and Immunological tests for Diagnosis of Post Kala-azar Dermal Leishmaniasis" in World Leish 2 Congress held at Hellenic Pasteur Institute, Turkish Society of Parasitology, University of Crete, Greece (May 2001).

16. Invited speaker at ACBICON 2008 (Annual meeting of Association of Clinical Biochemists, India) at India Habitat Centre, Delhi, in Dec 07. Presented work on recent advancements in diagnostics of visceral leishmaniasis.

National (last 7 years)

1. Invited speaker at WHO-GTZ sponsored workshop at Taj Ganges, Varanasi in April 2007.
2. Invited speaker in Annual meeting of Biomedical Scientists at Kerala University, Kerala in Nov 2006. Presented work on "Potential of marine natural products as alternative drug candidates".
3. Invited speaker in Medical Development Congress at Assocham House, Delhi in Sep 2006. Presented "Genomic approaches for combating Leishmaniasis".
4. Participated in a Workshop on "Ethical Review for Protection of Human Participants involved in Research" organized by ICMR and sponsored by Fogarty, NIH, USA, held at Assocham House, New Delhi in April 2006.
5. Invited participant in technical consultation on National Vector borne Disease Control program at National Agriculture Science Complex in March 06.
6. Invited speaker at Molecular Immunology Forum organized by Regional medical research centre(ICMR) Bhubaneswar, presented paper entitled "Transcription profiling of *Leishmania* for identification of virulence-related genes" in Jan 2006.
7. Participated in 32nd annual conference of Assoc Clin Biochem India, Patna, in Dec 2005 and presented paper on Genomic microarrays for vaccine development against kala-azar.
8. Invited speaker in 32nd Ann Meet Indian Immunology Society at PGI, Chandigarh, and presented work on "New diagnostics and vaccine targets for Visceral Leishmaniasis" in Nov 2005.
9. Presented work on "The application of Microarray for gene expression studies" at Saha Institute of Nuclear Physics, Kolkata in Jan 2005.

10. Invited speaker at meeting organized by Bill and Melinda Gates foundation to discuss Visceral Leishmaniasis elimination program in South Asia at Hotel Taj, New Delhi in Jan 2005.
11. Presented paper "Gene disrupted mutants of Leishmania as potential vaccine candidates" in Sir Dorabji Tata Symposium at Bangalore, March, 04.
12. Presented work on "Gene knockout mutants as vaccine candidates for visceral leishmaniasis" in Annual meet of Indian Association of Medical Microbiologists at Mumbai, Nov 03.
13. Presented paper 'Molecular and Immunological methods for diagnosis of leishmaniasis" in 29th Annual Conference of Association of Clinical Biochemists of India at Jaipur, in Feb 2003.
14. Presented work on "Molecular Diagnostic tools for Leishmaniasis" in National Symposium on Tropical Diseases, J.C. Ray Birth Centenary Celebration at Indian Institute of Chemical Biology, Kolkata, April 2002.
15. Presented work on Molecular methods for diagnosis and prevention of leishmaniasis In WHO sponsored Symposium at RMRI, Patna, Dec 2001.
16. Presented work on Identification of genes that exhibit stage specific expression in *L. donovani*. In Fifteenth National congress of Parasitology, Jodhpur, India Oct 2001.

Publications

In Peer Reviewed Journals

1. G. Sethuraman, VK Sharma, and P Salotra (2008). Indian mucosal leishmaniasis due to *Leishmania donovani*. **New Engl J Med**. Jan, 358 (3): 313-315.
2. Subba Raju BV, Singh R, Sreenivas G, Singh S, **Salotra P.** (2008) Genetic fingerprinting and identification of differentially expressed genes in isolates of *Leishmania donovani* from Indian patients of post-kala-azar dermal leishmaniasis. **Parasitology** Jan; 35 (1):23-32.
3. Ramesh V, Ansari, N.A. **Salotra P.** (2008). Miltefosine in Post-kala-azar Dermal Leishmaniasis. **Clin Exp Dermatol**. Jan; 33(1):103-105.
4. R Kumar, Ansari NA, Singh A, Ramesh V, **Salotra P.** (2008). Cutaneous Leishmaniasis in Nepal: *Leishmania major* is a cause. **Trans Roy Soc Trop Med Hyg**. Feb; 102 (2):202-203.

5. D Kumar, Srividya G, Verma S, Singh R, Negi NS, Fragaki K, Kubar J and **Salotra P.**(2008). Presence of anti Lepp12 antibody: a marker for diagnostic and prognostic evaluation of visceral leishmaniasis, **Trans Roy Soc Trop Med Hyg.** Feb; 102(2):167-171.
6. V Ramesh, Ramam M, Singh R, **Salotra P.** (2008). Hypopigmented post-kala-azar dermal leishmaniasis. **Int J Dermatol.**47 : 414-416.
7. Ansari NA, Ramesh V, **Salotra P.** (2008). Immune response following miltefosine therapy in a patient with post-kala-azar dermal leishmaniasis. **Trans R Soc Trop Med Hyg.** [Epub ahead of print]
8. Selvapandiyan A, Duncan R, Mendez J, Kumar R, **Salotra P,** Cardo LJ, Nakhasi HL. (2008). A Leishmania minicircle DNA footprint assay for sensitive detection and rapid speciation of clinical isolates. **Transfusion.** [Epub ahead of print]
9. Ansari NA, Kumar R, Raj A, **Salotra P.** (2008). Elevated levels of IgG3 and IgG4 subclass in paediatric cases of kala azar. **Parasite Immunol.** [Epub ahead of print]
10. Kumar R, Bumb R.A, Ansari NA, Mehta RD, **Salotra P.** (2007). Cutaneous leishmaniasis caused by *Leishmania tropica* in Bikaner, India : Parasite identification and characterization using molecular and immunological tools. **Am. J. Trop. Med. Hyg.** 76 : 896-901.
11. Srividya, G, Duncan, R, Sharma P, Subbaraju, BV, Nakhasi H, **Salotra P.** (2007). Transcriptome analysis during the process of in vitro differentiation of *Leishmania donovani* using genomic microarrays. **Parasitology** 134 :1527-39.
12. Ramesh V, Singh, R., **Salotra P.** (2007). Post kala-azar dermal leishmaniasis-an appraisal. **Trop Med & Int Health** 12(7):848-851.
13. Ramesh V, J Kataria, **Salotra P.** (2007). An unusual presentation of Post-kala-azar dermal Leishmaniasis. **Trop. Doctor** 37(3):172-173.
14. Ansari NA, Sharma P, **Salotra P.** (2007). Circulating nitric oxide and C-reactive protein levels in Indian kala azar patients: Correlation with clinical outcome. **Clin. Immunol.** 122 : 343–348.
15. Ansari NA, V Ramesh, **P Salotra** (2006). IFN- γ , TNF- α , IL-6 and IFN- γ R1 are the major immunologic determinants associated with Post kala azar dermal leishmaniasis. **J Infect Dis** 194 : 958-965.
16. Singh R, Kumar D, Ramesh V. Negi NS, Singh S, **Salotra P** (2006). High incidence of antimony refractoriness in Indian Kala azar is contributed by anthroponotic transmission via Post kala azar dermal leishmaniasis. **J Infect Dis.** 194: 302-306.

17. Ansari NA, Saluja S, **Salotra P** (2006) Elevated levels of Interferon- γ , Interleukin-10 and Interleukin-6 during active disease in Indian kala azar. **Clin Immunol.** 119 (3):339-45.
18. **Salotra P**, Duncan RC, Singh R, Subba Raju B.V, Sreenivas G, Nakhasi HL (2006). Up regulation of surface proteins in *Leishmania donovani* isolated from patients of Post Kala-azar Dermal Leishmaniasis (PKDL). **Microbes & Infection.** 8(3): 637-644.
19. **Salotra P**, Singh R. (2006). Challenges in the diagnosis of Post Kala Azar Dermal Leishmaniasis (PKDL). **Ind J. Med Res.** 123: 295-310.
20. Selvapandiyan A, Duncan R, Debrabant A, Lee N, Sreenivas G, **Salotra P**, Nakhasi HL. (2006). Attenuated Vaccines for Leishmaniasis. **Ind J. Med Res.** 123: 455-466.
21. Singh R, Subba Raju B V, Jain R.K and **Salotra P**. (2005). Potential of Direct Agglutination Test (DAT) based on promastigote and amastigote antigens for serodiagnosis of Post Kala Azar Dermal Leishmaniasis. **Clin. Diag. Lab. Immunol.** 12 (10):1191-4.
22. Maurya R, Singh RK, Kumar B, **Salotra P**, Rai M, Sundar S (2005). Evaluation of PCR for diagnosis of Indian kala-azar and assessment of cure. **J Clin Microbiol.** 43(7):3038-41.
23. Selvapandiyan A, Stabler K, Ansari NA, Kerby S, Riemenschneider J, **Salotra P**, Duncan R, Nakhasi HL. (2005). Fluorescence-based Multiplex PCR Assay for Simultaneous Detection of Bacterial and Parasitic Pathogens. **J Mol Diag.** 7: 268-75.
24. **Salotra P**, Singh R. (2005). Rapid and reliable diagnostic tests for visceral leishmaniasis. **Ind J. Med Res.** 122: 464-7.
25. Selvapandiyan A, Debrabant A, Duncan R, Muller J, **Salotra P**, Sreenivas G, Salisbury JL, Nakhasi HL. (2004). Centrin gene disruption impairs stage-specific basal body duplication and cell cycle progression in *Leishmania*. **J. Biol. Chem.** 279:25703-25710.
26. Sreenivas G, Nasim AA, Joginder K, **Salotra P**. (2004). Nested-PCR assay for detection of *Leishmania donovani* in slit aspirates from Post kala-azar dermal leishmaniasis lesions. **J. Clin. Microbiol.** 42:1777-1778.
27. Sreenivas G, Subba Raju BV, Singh R, Selvapandiyan A, Duncan R, Sarkar D, Nakhasi HL, **Salotra P**. (2004). DNA polymorphism assay distinguishes isolates of *Leishmania donovani* that cause Kala-azar from those that cause Post kala azar dermal leishmaniasis. **J. Clin. Microbiol.** 42:1739-1741.
28. Khandpur S, Ramam M, Sharma VK, **Salotra P**, Singh MK, Malhotra A.(2004). Nerve involvement in Indian Post kala-azar dermal leishmaniasis. **Acta Derm. Venereol.** 84:1-3.

29. Sreenivas G, Singh R, Selvapandiyan A, Negi NS, Hira L Nakhasi, **Salotra P.** (2004). Arbitrary-primed PCR for genomic fingerprinting and identification of differentially regulated genes in Indian isolates of *Leishmania donovani*. **Exp. Parasitol.** 106:110-118.
30. Duncan R, **Salotra P**, Goyal N, Akopyants N, Beverley SM, Nakhasi HL. (2004). The application of gene expression microarray technology to kinetoplastid research. **Curr. Mol. Med.** 4:611-621.
31. **Salotra P**, Sreenivas G, Beena KR, Mukherjee A, Ramesh V. (2003). Parasite identification by molecular and immunological methods in Post Kala-azar Dermal Leishmaniasis patients in India. **J Clin Path.** 56(11): 840-843.
32. Malla N, Sengupta C, Dubey ML, Sud A, Ansari NA, **Salotra P.** (2003). Antigenaemia and antibody response to *Leishmania donovani* stage-specific antigens and rk39 antigen in human immunodeficiency virus-infected patients. **Br J Biomed Sci.**; 60(4):210-216.
33. **Salotra, P.**, Sreenivas G., Ansari NA, Subba Raju BV, and Ramesh,V. (2002). Evaluation of ELISA for diagnosis of PKDL using crude and recombinant k39 antigen. **Clin Diag Lab Immunol.** 9(2): 370-373.
34. Sreenivas G., Ansari NA, Singh R, Subba Raju BV. Bhateja R, Negi N.S and **Salotra P** (2002).Diagnosis of visceral leishmaniasis: Comparative potential of amastigote antigen, recombinant antigen and PCR. **Br J Biomed Sci.** 59 (4):218-222.
35. Selvapandiyan, A., Duncan R, Debrabant A, Bertholet S, Sreenivas G, Negi NS, **Salotra P**, Nakhasi H L (2001). Expression of a mutant form of *Leishmania donovani* Centrin reduces the growth of the parasite. **J Biol Chem.** 276 (46): 43253-43261.
36. **Salotra, P.**, Sreenivas, G., Sundar, S. and Ramesh,V. (2001). A rapid and sensitive diagnostic test for post kala-azar dermal leishmaniasis. **Br J Dermatol.**145 (4): 630-632.
37. **Salotra, P.**, G. Sreenivas, G. P. Pogue, N. Lee, H. Nakhasi, V. Ramesh and N.S. Negi (2001). Development of a species-specific PCR assay for detection of *Leishmania donovani* in clinical samples of kala-azar and post kala-azar dermal leishmaniasis. **J Clin Microbiol.** 39: 849-854.
38. **Salotra, P.**, Ralhan R. and Sreenivas, G. (2000). Heat stress induced modulation of protein phosphorylation in virulent promastigotes of *Leishmania donovani*. **Int J Biochem Cell Biol.** 32: 309-316.
39. Adhuna, **Salotra, P.**, and Bhatnagar, R. (2000). Nitric oxide induced expression of stress proteins in virulent and avirulent promastigotes of *Leishmania donovani*. **Immunol Lett.** 71:716-721.

40. **Salotra, P.**, Raina, A., and Ramesh, V. (1999). Western blot analysis of humoral immune response to antigens of *Leishmania donovani* in patients of PKDL. **Trans R Soc Trop Med Hyg.** 93:98-101.
41. Rao, C.M., **Salotra, P.**, and Datta, K. (1999). Possible role of the 34-kilodalton hyaluronic acid-binding protein in visceral leishmaniasis. **J Parasitol.** 85: 682-687.
42. **Salotra, P.**, Raina, A., and Negi, N.S. (1999). Immunoblot analysis of antibody response to antigens of *Leishmania donovani* in Indian kala-azar. **Br J Biomed Sci.** 56 : 263-267.
43. Ramesh, V., Misra, R.S., Khunger, N., Beena, K.R., **Salotra, P.**, and Mukherjee, A.(1999). Shave excision as an adjunct to the therapy of a rhinophyma-like complication in PKDL. **Acta Derm Venereol.** 79:330-331.
44. Adhuna, **Salotra, P.**, Mukhopadhyay, B. and Bhatnagar, R. (1997). Modulation of macrophage heat shock protein expression in response to intracellular infection by virulent and avirulent strains of *Leishmania donovani*. **Biochem Mol Bio Int.** 43:1265-1275.
45. Ralhan, R., Narayan, M., **Salotra, P.**, Shukla, N.K., Chauhan, S. (1997). Evaluation of p-glycoprotein expression in human oral oncogenesis: correlation with clinico-pathological features. **Int J Cancer.** 72:728-734.
46. Radha, S., **Salotra, P.**, Bhat, R. and Bhatnagar, R. (1996). Thermostabilization of protective antigen-the binding component of anthrax lethal toxin. **J Biotech.** 50:235-242.
47. **Salotra, P.**, Chauhan, D., Ralhan, R. and Bhatnagar, R. (1995). TNF-alpha induced preferential expression of stress proteins in virulent promastigotes of *Leishmania donovani*. **Immunol Lett.** 44:1-5.
48. **Salotra, P.**, Seal, K.P., Krishna, N., Jaffe, H. and Bhatnagar, R. (1995). Expression of DnaK and GroEL homologs of *Leuconostoc mesenteroides* in response to heat shock, cold shock or chemical stress. **FEMS Microbiol Lett.** 131:57-62.
49. Richa, S., **Salotra, P.**, Bhatnagar, R. and Datta, K.(1995). L-alanine- dioxovalerate transaminase in *Leishmania donovani* that differs from the mammalian enzyme. **Microbiol Res.** 151:1-5.
50. **Salotra, P.**, Ralhan, R. and Bhatnagar, R. (1994). Differential expression of stress proteins in virulent and attenuated promastigotes of *Leishmania donovani*. **Biochem Mol Biol Intl.** 33:691-697.
51. Lai, C.Y., Xia, Q.C. and **Salotra, P.** (1983). Location and amino acid sequence around the ADP-ribosylation site in the cholera toxin active subunit A. **Biochem Biophys Res Commun.** 116:341-348.

52. **Salotra, PT.** and Singh, V.N. (1982). Regulation of glucose metabolism in rat lung: subcellular distribution, isozyme pattern and kinetic properties of hexokinase. **Arch Biochem Biophys.** 216:758-764.
53. **Salotra, PT.,** and Singh, V.N. (1982). Regulation of glucose metabolism in lung: hexokinase catalyzed phosphorylation a rate limiting step. **Life Sciences** 31:791-794.
54. **Salotra, P Talwar.** and Khuller, G.K. (1977). Lipids of *Streptomyces griseus*. **Ind J Biochem Biophys.** 14:72-74.
55. **Salotra, P. Talwar** and Khuller, G.K. (1977). Effect of age on major phospholipids of *Streptomyces griseus*. **Ind J Biochem Biophys.** 14:85-86.

Chapters in Books

56. **Salotra, P.,** Selvapandiyan, A., Sreenivas, G., Nakhasi, H.L. (2005) Gene Knock out mutants of *Leishmania* as potential vaccine candidates. In "Trends and Research in Leishmaniasis" Volume 5 series of "Status Report on Tropical Diseases in India". Eds D. Raghunath and R. Nayak. PP 265-286.
57. Sreenivas G., Nasim NA., Joginder K, Ramesh V., **Salotra P.** (2001). Evaluation of PCR and ELISA for diagnosis of post kala azar dermal leishmaniasis. In "Strategies for control of Kala azar and Malaria", Proceedings of WHO workshop. Ed. S.K. Bhattacharya. PP51-59.
58. **Salotra, P.** and Bhatnagar, R. (1998). Role of stress proteins in *Leishmania*. Chapter in book "Microbes: For Health, Wealth & Sustainable Environment". MPH, New Delhi. 595-615.