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<http://www.seattle-india-gid.org/home/index.asp>

PROFESSOR, SCHOOL OF LIFE SCIENCES, JAWAHARLAL NEHRU UNIVERSITY (JNU)

JC BOSE NATIONAL FELLOW

AFFILIATE (FACULTY) MEMBER, SEATTLE BIOMEDICAL RESEARCH INSTITUTE, USA

FORMER DEAN OF SCHOOL OF LIFE SCIENCES, JNU

APPOINTMENTS

1. Director, AIRF, Jawaharlal Nehru University, New Delhi 2011-2013
2. Dean, School of Life Sciences, Jawaharlal Nehru University, New Delhi, 2009-2011
3. Affiliate Member (Faculty), Seattle Biomedical Research Institute, Seattle, USA 2008-present
4. Professor, School of Life Sciences, Jawaharlal Nehru University, New Delhi, 1999- present.
5. Associate Professor, School of Life Sciences, Jawaharlal Nehru University, New Delhi, 1990- 1998
6. Pool Officer, Council of Scientific and Industrial Research, India, 1989- 1990
7. Visiting Research Fellow, Hershey Medical Centre, Hershey, Pennsylvania, U.S.A. 1987-1988.
8. Visiting Research Fellow, University of Texas Health Science Centre, Houston, Texas, U.S.A., 1986-1987.
9. Research Associate, School of Life Sciences, University of Hyderabad, A.P., 1984-1985
10. Part Time Lecturer, Government Women's College, Karimnagar, A.P., 1983-1984
11. Lecturer Singareni Collieries women's College, 1978

AREA OF SPECIALIZATION Medical Biotechnology

MEMBERSHIP OF ACADEMIES

1. National Academy of Sciences (**F.N.A.Sc**)
2. Indian Academy of Sciences (**F.A.Sc**)
3. Indian National Science Academy (**FNA**)
4. The National Academy of Medical Sciences (**FNAMS**).

HONORS AND AWARDS

1. **International Scientific committee member of World Leish-5** fifth world congress on Leishmania to be held in Brazil from <http://www.worldleish.org/Sc.htm> 13-17th May 2013
2. **Fellow of The National Academy of Medical Sciences**, India, 2011
3. Awarded **Nature Publishing Group (NPG) GRC travel award**-2011
4. **JC Bose National Fellow** 2011-2015
5. Fellow of the **Indian National Science Academy**, 2011
6. Fellow of the **Indian Academy of Sciences**, Bangalore, 2009
7. Appointed **Affiliate Scientist, Seattle Biomedical Research Institute**, Seattle, USA. www.sbri.org/research/affiliate_scientists.asp 2008-present
8. **Editorial adviser Biochemical Journal** www.biochemj.org/bj/bjedavpanel.htm
9. Member **Editorial Board Scientific Reports**, A Nature Publishing House Group Journal www.nature.com/srep/eap-ebm/index.html#molecularbiology
10. Member, **International Scientific Committee for 4th World Congress on Leishmaniasis**, 2008 - 2009
11. Awarded **American Society of Microbiology (ASM) International Professorship**, 2007
12. **Fellow of The National Academy of Sciences**, India, 2007
13. Awarded **Global Health Travel Award** from **Bill and Melinda Gates Foundation** to attend the Keystone symposium in Tahoe city, California, USA, 28th Jan-1st Feb 2007
14. Awarded **Hari Om Trust, J. C. Bose award** in the field of Life Sciences from the University Grants Commission, 2004
15. Elected member of **Guha Research conferences**, India, 2001
16. **Career Research Initiative award** from **Wellcome Trust**, UK,
17. Awarded **Biotechnology Career Fellowship** from the **Rockefeller Foundation** to work in Seattle Biomedical Research Institute, Seattle, U.S.A. from 1993-1995 for three months every year for three years.
18. Awarded **young scientist travel award** from **Japanese Biochemical Society and International Union of Biochemistry and Molecular Biology (IUBMB)** to attend the congress on Biochemistry of Diseases held in Nagoya, Japan from 1st June-6th June, 1992.

19. Awarded **young scientist award** from **International Union of Biochemistry (IUB)** to attend the 15th International Congress of Biochemistry held in Jerusalem from 6th Aug-9th Aug. 1991.
20. Awarded **Wood/Whelan Fellowship** from the International Union of Biochemistry (IUB) to work in Human Oncology Centre at Madison, Wisconsin, 1991.
21. Awarded **National Scholarship** for standing third in Delhi University in B.Sc. (Hons.) final examination.

ACADEMIC HONORS

1. Invited Speaker at the 4th Zing International Drug Discovery Conference in Spain, from 17th - 20th February 2014.
2. Member of the CSIR/SRF selection committee in the area of "General Biology" organized by HRDG, CSIR.
3. Invited Chair at the International Scientific meeting "Recent Developments in Malaria Parasite Biology" at ICGEB, New Delhi 2nd Dec. 2-4, 2013
4. Nominated Member Vision Group of Biotechnology, Government of Karnataka, 2013 onwards
5. Nominated member of the Sectional Committee-09 for Microbiology and Immunology (Biology of Viruses, Bacteria and Parasites, Microbial Genetics and Genomics and Immunology) INSA from 2014-2016.
6. Member of the Research Council of CSIR-Indian Institute of Chemical Biology (CSIR-IICB), Kolkata 2013-2016
7. Invitation to be member of the project selection Committee of Indo-French Centre for Promotion of Advanced Research-IFCPAR-DST, June-2013
8. Member of the Empowered committee of Science and Engineering Research Board (SERB)-DST-Government of India. 2013-2018
9. Invitation to participate in the review of the functioning of National Assessment and Accreditation Council (NAAC), University Grants Commission (UGC), 2013 June, 2013
10. Invitation by the Planning Commission and Ministry of HRD, India, to be Panel member on a jointly convened "National Policy dialogue on University Rankings, Research Evaluation and Research funding". The policy dialogue was supported by the British council and Thomson Reuters. 22nd May 2013.

11. Invited as a distinguished speaker at the meeting "Protozoan parasites: engineering life with a different toolkit" organized jointly by the Royal Society, UK and DST at Bose Institute Kolkatta, 28th Feb-2nd March 2013.
12. Invited speaker at "Pathogen diversity meeting: Exploiting pathogen genetics for new control strategies" the meeting was jointly organized by ICGEB, ICMR and London School of Public Health and Tropical Medicine, UK. The meeting was held in ICGEB from 6-7th March, 2013.
13. Task force member of DST-PAC on Biochemistry, Biophysics, Molecular Biology and Microbiology 2013-present.
14. Chairperson (Life Sciences) panel for INSPIRE Faculty Award Pre-selection, Department of Science and Technology, 2012
15. Senior Jury, INSPIRE AWARDS, Department of Science and Technology, India, 2012, 2013
16. Invitation to DBT/Gates Foundation Translational Research to give "leadoff" talk on "Opportunities and Challenges in Leishmaniasis Vaccine Discovery & Translation." May 24th-25th, Oberoi Hotel, New Delhi, India. 2012
17. National Institute of Allergy and Infectious Diseases (NIH/NIAID) and the University of Washington, special invitee to participate in the 2012 International Centers of Excellence for Malaria Research (ICEMR) Workshop held from Wednesday, August 22 through Friday, August 24 at The Leela Goa Hotel in Goa, India. 2012
18. Speaker and Chair at the International Congress on Polyamines Biological and Clinical Perspectives Istanbul (Turkey) during September 2nd to 7th, 2012
19. Invited faculty to conduct "Pre-Meeting workshop for Global Health Awardees" at the Keystone symposium on "Drugs and Protozoan parasite" Santa Fe Community Convention Center in Santa Fe, New Mexico. Jan 15 - Jan 20, 2012
20. Speaker at the Keystone symposium on "Drugs and Protozoan parasite" Santa Fe Community Convention Center in Santa Fe, New Mexico. Jan 15 - Jan 20, 2012,
21. Invited Speaker and as an International Expert at COST meeting, Modena, Italy from 5-7th Oct. 2011. Funding was provided by the European Commission
22. Invited speaker at workshop on "Antiparasitic and anticancer drugs" organized in the framework of the European Research Area Net (ERA-NET) with India (New Indigo, a

consortium of European and Indian Science and Technology organisations involved in promoting research cooperation between Europe and India) in Portugal from 8-9th Sept. 2011.

23. Invited **Speaker and Chair** at Amino acid meeting-**Beijing** 1-5th Aug 2011
24. Invited **speaker** at **World Congress on Microbes (WCM)-Beijing** 30th July-2nd August 2011
25. **Speaker** at the **Gordon Research Conference on Polyamines** Waterville Valley resort, **New Hampshire USA**, 19st-24th June 2011.
26. Visiting Profesoor at the **Centre for Drug Development (CDD) South Korea** 19th March-24th March 2011
27. **Speaker** at **The Indian Proteomics conference (IPCON) 2011**, New Delhi 3-5th April, 2011
28. **Speaker and Panelist** at **Young Investigator Meeting India 2011**, Orissa 12th Feb-14th Feb, 2011
29. **Speaker** at **Gordon conference on Polyamines**, Waterville Valley resort, **New Hampshire USA**, 21st-26th June 2009.
30. **Speaker** at **Keystone symposium on "Drugs and Protozoan parasite, Colorado, USA** 22-26th March 2009.
31. Invited **speaker** at **Polyamine and parasite meeting** 9-11th July, 2008 **Wayne state University, Michigan**. 2008
32. **ASM International Professor Award visit** 4th Nov-30th Nov. 2007 **Seattle Biomedical Research Institute, USA**. Funding award was from American Society of Microbiology.2007
33. **Fogarty International Research Centre (FIRCA), USA** invite to **GID grant meeting**, **Philadelphia** 3-4th Nov. 2007
34. **Speaker** at the **B22 COST meeting on "Drug Resistance"** in **Quebec City**, University of Laval, **Canada**, 21st-26th Oct. 2007
35. Invitation to **Chair and give an Invited talk** at the **DORMY II meeting on Leishmania**, **Cotswold, UK**. 24th -27th Sept., 2007. Funding was by the organizers.

36. Invitation to **Chair and give an Invited talk at the B22 COST meeting** on “Polyamines and Parasites” in **Stockholm** 21st-23rd Sept, 2007. Funding was by the organizers.
37. Invitation to chair a session and give a talk at the “**VLP MO3 Investigator meeting**” in Patna from March 26-27th 2007 Patna, India organized by the “**Institute of One World Health**”, **Sanfrancisco, USA**
38. Invited speaker at “**CME cum workshop**” at Postgraduate Institute, Chandigarh, India held from March 15-17, 2007.
39. **Global Health Travel Award** from **Bill and Melinda Gates Foundation** to attend and present work at the **Keystone symposium** in Tahoe city, California, USA, 28th Jan-1st Feb 2007
40. Invited speaker and chair at “**International workshop-cum-training course on Molecular Medicine and Drug Research** to be held in **Karachi, Pakistan** from 16-28th Jan 2007. Funding was by the organizers.
41. Invitation to give an invited lecture in **3rd COST B22 Annual congress on drug Discovery and Development for parasitic Diseases, Athens, Greece**, 1-4 October 2006. The funding was by the organizers of the meeting.
42. Invitation to give an invited lecture in “**International Conference on the Role of Polyamines and their Analogs in Cancer and other Diseases**” held in **Tivoli, Rome (Italy)**, at the **Grand Hotel Duca d’Este**, from September 10 to 14, 2006. The funding is by the organizers of the meeting.
43. Visiting Professor at the **Seattle Biomedical Research, USA**. Funding was from **Fogarty International Research Grant, USA**. July, 8-16. 2006.
44. Invitation to give a lecture in **Parasite-Polyamine Conference** held at **Oregon Health Science University, Portland, Oregon** July, 6-7, 2006. The funding was from **Wellcome Trust grant, UK**.
45. Invitation to give a lecture in “**Institute of one world health**” (**IOWH**), **San Francisco, USA**
Topic: **Molecular mechanism of resistance to antimonial compound**. July, 2006
46. Invited Speaker at “**Third World Organization of Women Scientists**” conference in India
Symposium organized by **Indian Institute of science, Bangalore** 21st-25th Nov. 2005. Topic “**Chasing black fever: a neglected disease**”

47. Invitation to **Lund University, Sweden** to give a lecture on **polyamines and parasites**. Funding award was from Swedish International Development Agency. July, 2005
48. Invitation to give a **lecture on antimonial resistance in Leishmania** in **COST-B-22 meeting in Glasgow**, July, 2005. Funding award was from Wellcome Trust
49. Invitation to give a **lecture in "Institute of one world health" (IOWH), San Francisco, USA** to support Leishmania research, July 2005. Funding was from IOWH.
50. Invitation by **Bill and Melinda Gates Foundation** on 10th Jan, New Delhi, 2005 for a brain storming session on Leishmania
51. Invitation to give a **lecture at International conference on polyamines at Chiba, Japan** from 28th Nov-2nd Dec. 2004. The funding award is from the organizers of the meeting.
52. Invited speaker at the **British Society of Parasitology meet at Czech Republic**, from 27th Aug 2004-1st Sept.2004. The funding award was from the Wellcome Trust. 2004.
53. Invitation to visit **University of Glasgow, UK** from 24th-26th Aug. 2004. The funding award was from the Wellcome Trust. 2004.
54. Visiting faculty **Seattle Biomedical Research Institute, Seattle**, 18th June-30th June. 2004. The funding award was from the Wellcome Trust.
55. Invitation to visit give a **lecture in Polyamines and parasite meeting, Pace University, New York, USA** from 11th June-14th June, 2004. The funding award was from the Wellcome Trust.
56. Invitation and Travel award from **Woods Hole Immunoparasitology** organizers to present a paper on DNA vaccine development. 25th April-30th April, 2004.
57. Invitation to give a **lecture in Institute of Infectious diseases, Chul hospital, Quebec Canada** on: Functional characterization of open reading frame F from the LD1 locus of *Leishmania donovani*. The funding award was from Altana Pharma and Infectious disease Institute. 2003
58. Invitation to **Joint European Chapter meeting at the University of Lund, Sweden**. The funding award was from Swedish Research Links. 2003.
59. Invited visiting professor to **University of Glasgow, UK** and give a lecture on **Leishmaniasis**. The funding award was from the Wellcome Trust. 2002
60. Invited speaker at the **International Centre for Genetic Engineering and Biotechnology, Trieste** 2002

61. Invited visiting Professor to **Bon Nocht Institute of Tropical Medicine, Hamburg, Germany**. The funding award was from **Indo -German collaborative grant** on “ Polyamine Biosynthetic pathway as a target for chemotherapy in *P. falciparum.*, 2002
62. **Chaired a session in the XXIV All India Cell Biology conference** held in the School of Life Sciences, Jawaharlal Nehru University, **New Delhi** from 24-26 Nov, 2000.
63. Invitation to **Chair a session and present a paper** on “Molecular cloning and sequence analysis of gene encoding bifunctional S-adenosylmethionine decarboxylase - ornithine decarboxylase of *Plasmodium falciparum* at **European commission Expert Committee meeting** on Polyamines at **Bon Nocht Institute of Tropical Medicine, Hamburg, Germany** from 1st –6th July, 2000.
64. Invited visiting Professor to **Bon Nocht Institute of Tropical Medicine, Hamburg, Germany** from 24th May -24th July 1999. The funding award was from **Indo -German collaborative grant** on “ Polyamine Biosynthetic pathway as a target for chemotherapy in *P. falciparum.*”
65. Special invitee to **Indo-US Vaccine Action Programme** meeting from the 5th-7th Oct, 1998 at National Institute of Health, Bethesda, U.S and visiting faculty to **Seattle Biomedical Research Institute**, from 7th Oct. to 25th Oct., 1998. The funding award was from the National Institute of Health, USA.
66. Invited visiting Professor **Seattle Biomedical Research Centre** from 5th –20th July, in connection with **INDO-US Vaccine Action Programme grant**, 1997. The funding award for travel etc. was from the National Institute of Health, U.S.
67. **Speaker in International Symposium on Polyamines** (21st Oct.-25th Oct, 1996), Japan. Invitation to give a lecture in **Josai University, Japan**. The funding award for both the lectures was from the Organizing Committee.
68. **Chaired a session in the "Global Meet on Parasitology"** held in **New Delhi** from 18-24 March, 1996.
69. **Speaker at the Gordon conference on Polyamines** in June from 11-16,1995 at Kimball Union Academy, Meriden, **New Hampshire**. Funding was from the Organizing Committee of Gordon Conference.
70. Selected as a **member of the executive committee of Indian Society of Parasitology**, 1995.
71. **Chaired a scientific session** of Biochemistry and Molecular Biology of Parasites in **XIIth National Congress of Parasitology** at **Goa** from 23-25th Jan. 1995.
72. Awarded **Indian Scientist award** to attend **International Union of Biochemistry** meet at **New Delhi** in Sept. 1994

73. National Institute of allergy and Infectious disease (NIAID), National Institute of Health (NIH) invitation to attend the International Centre of Tropical Diseases meet at Bethesda, USA, from April 27-29, 1994. The funding award was from NIH, USA.

74. Invited *Gordon Conference* in July 1993 at New Hampshire, U.S.A.

PATENTS

US PATENT No. 7186702, issued on the 6th March 2007: Method for treating leishmaniasis using methylcyclodextrin. Inventors: Amitabha Chattopadhyay, Hyderabad and Rentala Madhubala, New Delhi, India

EDITORIAL BOARD MEMBER

1. Editorial adviser Biochemical Journal <http://www.biochemj.org/bj/bjedavpanel.htm>
2. Member editorial board Scientific Reports, A Nature Publishing House Group Journal <http://www.nature.com/srep/eap-ebm/index.html#molecularbiology>
3. Member editorial board of Journal of Parasitic Diseases, Indian Journal
4. Member editorial board of Asian Journal of Drug Metabolism and Pharmacokinetics, International Journal
5. Regional editor of American Journal of Biochemistry and Biotechnology, quarterly publications, <http://www.scipub.us/>
6. Reviewer Journal of Eukaryotic Microbiology <http://mc.manuscriptcentral.com/jeukmic>
7. Editorial Board International Journal of Biomedical Science (IJBS, ISSN 1550- 9702) <http://www.ijbs.org>

SERVICE

Administrative

1. Member of the selection Committee of women Post-doctoral Fellows, University Grants Commission
2. Member Project Review Committee, South Asian University (SAU) 2012, 2013
3. Member Academic Committee of CCMB 26th July-2012- 26th July 2014
4. Member Selection Committee for promotion as an Associate Professor, Jawaharlal Nehru University, 2012

5. Chairperson NAAC committee, Jawaharlal Nehru University, 2011-2012
6. Nominated Expert for the recruitment and Assessment of Scientists, National Institute of Science Communication and Information Resources (NISCAIR, CSIR). 2010-2012
7. Member Standing Committee, International collaboration, JNU, 2009-present
8. Member University of Potential For Excellence Committee, JNU, 2012
9. Member Academic Committee, IMTECH, Chandigarh, 2011-2013.
10. Member Academic Committee, National Institute of Immunology, Delhi 2005-2007 (Completed)
11. Member Academic committee, CCMB, Hyderabad 2006-2008 (Completed)
12. Member University Court of Jawaharlal Nehru University 2009-2011 (Completed), 2000-2001
13. Member Executive Council of Jawaharlal Nehru University 2010-2011 (Completed)
14. Member Academic Council of Jawaharlal Nehru University 2009-2011 (Completed) 2006-2008
15. Member Advisory Committee for Career Advancement Scheme of School of Life Sciences, JNU 2006-2011
16. Member School level and University level Purchase Committee, JNU
17. Member Standing Committee on plagiarism JNU
18. Member University Level Grievance Redressal Committee, JNU
19. Selection committee member of Commonwealth Scholarship, Ministry of Human Resource Development, India 2009-2010
20. Chairperson University level Animal Ethics Committee 2004-2009
21. Selection Committee for Lecturer for Department of Zoology, Hindu College, Delhi University 2009
22. Selection Committee for Lecturer for Sri Venketeswara College, Delhi University 2006
23. Member Academic committee, Rajdhani College, Delhi 2009-2011
24. Member of Advisory cum Executive Committee for the Centre of Excellence in Bioinformatics, Jawaharlal Nehru University
25. Member Guha research conferences
26. Member American Society for Microbiology

27. Member of the executive committee of Indian Society of Parasitology, 1995
28. Life Member Indian society of Parasitology
29. Life Member Indian Society of Immunology

Grant Reviews

1. Member **Department of Science and Technology Task Force** for Biochemistry, Biophysics, Molecular Biology and Microbiology
2. Reviewer for Grant proposals from **Fonds de recherche sur la nature et les technologies, Quebec, Canada**
3. Reviewer for Grant proposals from **Canadian Institute of Health Research Grant (CIHR)**
4. Reviewer for Grant proposals from the **Department of Biotechnology, India**
5. Reviewer for Grant proposals from **Life Science Research Board, DRDO, India**
6. Reviewer for Grant proposals from **Council of Scientific and Industrial Research, India**

Journal Reviews

Reviewer for: American Journal for Tropical Medicine and Hygiene, Antimicrobial Agents and Chemotherapy, Journal of Antimicrobial Chemotherapy, Biochemistry, European Journal of Biochemistry, Experimental Parasitology, Journal of Cellular Biochemistry, Journal of Eukaryotic Microbiology, Journal of Parasitology, Molecular and Biochemical Parasitology, PLoS One, pLoS Neglected Tropical Diseases, Microbiology Reviews, Scientific Reports, Biochemical Journal, International Journal for Parasitology, Journal of Immunology, Journal of Parasitic Diseases, Infection and Immunity

Other

Meetings Conferences and Workshops organized

1. Organized a lecture series course on a Global Infectious diseases training program (GID-RTIP) course/workshop supported by Fogarty Centre (USA) and the Centre for Excellence (COE-DBT). The course/workshop was on "Drug design for Infectious Diseases". The course was held at SLS, JNU from the 14th-18th Jan. 2013. The course was conducted by Drs. Wimhole (Seattle) and Paul Michaelis (Belgium)

2. Organized a workshop with Marilyn Parsons (SBRI) on “Advance Technologies and Research Proposal Development Workshop” from 30 Jan-5th Feb. 2011, at Jawaharlal Nehru University, New Delhi, India. 2011 <http://www.sbri-india-gid.org/home/workshop.asp>
3. Organized Indo-Swiss Joint symposium 3-4th Nov. 2011 at at Jawaharlal Nehru University, New Delhi, India
4. Global Infectious Diseases training grant workshop supported by the National Institute of Health, USA in Hyderabad from 21-24th Jan. 2008 <http://www.sbri-india-gid.org/home/workshop.asp>
5. Organized a workshop with Peter Myler (SBRI) on “Bioinformatics of Intracellular Pathogens” from 7-9th Feb. 2009 at Jawaharlal Nehru University, New Delhi, India. 2008 <http://www.sbri-india-gid.org/home/workshop.asp>
6. Organized a workshop with Dr. Ken Stuart (SBRI) and Marilyn Parsons on “Intracellular Pathogens” from 1-7th Feb. in Goa, India. Global Infectious Diseases training grant workshop supported by the National Institute of Health, USA 2008 <http://www.sbri-india-gid.org/home/workshop.asp>
7. Organized INDO-Swedish meet on “Intracellular Pathogen” in Goa from 7th-10th Dec., 2005, in India supported by Swedish International Development Agency
8. International training and Research in Infectious disease grant funded by Fogarty International Centre of the National Institute of Health, U.S.A. The project was a joint training grant with Dr. Ken Stuart of Seattle Biomedical Research Institute, Seattle. There were three elements to this programme. The first was holding training course at several regional training centres of which JNU was one. The second element was training Ph.D students and post-doctoral fellows in Seattle within the existing program. The third was organizing International training and workshops. Two major events (conferences and workshops) were organized by her in New Delhi in Dec.1999 and March 2005.

GRANT SUPPORT

Current

- Department of Biotechnology (DBT) - “Genome-wide characterization of tRNA synthetases and their Paralogs from *Leishmania*” 2013-2016
- Department of Science and Technology (DST) “Modulation of Global changes in host cell by Intracellular pathogen *Leishmania donovani*” 2013-2016
- Department of Biotechnology (DBT)-Centre for Excellence BT/01/CEIB/11/V/08 “Programme support on Molecular Parasitology,” 2011-2016

- **Council of Scientific and Industrial Research (CSIR)**, R.Madhubala, P.I., 37(1511)/11/EMR-II “Characterization of Vitamin C biosynthesis pathway as a drug target in *Leishmania donovani*,” 2012-2015
- **Department of Science and Technology (DST) (Indo-Russian)**, R.Madhubala, P.I., 100/IFD/12501/2011 “Characterization of the role of c- methylated spermidine analogous on polyamine and trypanathione biosynthesis in antimony susceptible/resistant strains of *L. donovani*,” 2011-2013

Recently Completed Projects:

Global Infectious Diseases Training Grant, Fogarty International Centre of ,NIH, USA, R.Madhubala, P.I., PC/SLS/4(541)-6 “Global Infectious diseases training grant,” **2006-2012**

Department of Biotechnology (DBT), R.Madhubala, P.I., BT/PR10569/MED/12/391/2008 Development of biomarkers for Drug resistance in *L. donovani*

Life Science Research Board Grant (LSRB) from DRDO A ubiquitin-conjugated-Leishmanial gene (ORFF) as a DNA vaccine against both antimonial-susceptible and -resistant strains of *L. donovani* **2008-2011**. Role: PI

Council of scientific and Industrial Research 2008-2011 Role: PI
Characterization of Hypusine pathway in *L. donovani*

Indo-Swiss Joint Research Programme (ISJRP) 2009-2010 Evaluation of drug resistance in *Leishmania donovani* by Implementing a novel Cell Death assay.

Department of Science and Technology project 2005-2008 Role: PI
Functional characterization of *Leishmania* genes by tetracycline-responsive repressor/operator system.

Council of scientific and Industrial Research 2005-2008 Role: PI
Polyamine biosynthetic enzymes as drug targets in *Leishmania donovani*,

Institute of One World Health Grant (iOWH, San Fransisco, USA) 2006-2008 Role: PI Characterization of the molecular mechanisms of paromomycin transport in *Leishmania donovani* and determination of the paromomycin sensitivity of visceral leishmaniasis clinical isolates

University of Excellence grant: 2002-2007 Role: PI Functional genomics of *Leishmania*. The project involves identification of stage specific genes of *Leishmania donovani* and characterizing them.

Swedish Research Council grant: 2003-2007 Role: Co-PI PI- Lo Persson and Olle Heby, Sweden
Structure based drug development against malaria and leishmaniasis under Swedish Research Link Programme. Extension granted for one year.

The Wellcome Trust Award: 2002-2005 Joint project with Mike Barrett, University of Glasgow. Role PI
Molecular and Biochemical mechanisms of Pentamidine resistance

UNICEF/UNDP/WORLD BANK/WHO Special Programme for Research and Training in Tropical Diseases (TDR): Jointly with Dr. Richard Burchmore, Glasgow, 2005 Role Co PI. Comparative proteomic analysis of pentamidine resistance in *Leishmania donovani*.

Canadian Institute of Health Research Grant (CIHR) Mechanism of antimony drug resistance in *Leishmania*, Jointly with **Marc Ouellette, 2005-2006 Role Co-PI**

TEACHING/TRAINING

Teaching following courses at the Jawaharlal University, Postgraduate students from 1990-present

Molecular and Cellular Biology

Molecular Parasitology

External Thesis Examiner

Evaluation of Thesis for Ph.d degree of following Institutions 1990-present Postgraduate Institute of Medical Education and Research, Chandigarh, Central Drug Research Institute, Lucknow, Indian Institute of Chemical Biology, Kolkatta, Post-graduate Institute, Kolkata University, CCU university, Lucknow University, Kanpur University, University of Hyderabad, University of Pune, University of Lund, Sweden.

Ph.D. Dissertation Director

Over 24 students have completed their doctoral thesis. And have gone on other professional positions including faculty appointments. Twelve M.Sc students have completed dissertation and have gone for higher studies. Over 10 Post-doctoral fellows have been trained. Two UGC-Kothari fellows are working as post-doctoral fellows.

Training

Efforts in training summer Research Fellows under “Summer Research Fellowship Program” by Jawahar Nehru Centre for Advanced Studies, Bangalore, graduate student training and under-graduate training is a continuous process.

Coordinator of a major “Global Infectious Diseases Initiative and Training” with Seattle Biomedical Research Institute, USA for the last 15 years

CURRENT AREA OF RESEARCH AND SIGNIFICANT ACHIEVEMENTS

Research focus is on Kala-azar, a major public health problem in parts of India. Major contribution has been Functional genomics and proteomics, identification of novel drug targets, development of diagnostic biomarkers for drug resistance in *Leishmania* and producing the first indigenous DNA and protein vaccines which are also effective against antimony drug resistant clinical isolates from Kala-azar patients. This work has wide ranging scope for clinical applications in the field.

EDUCATION

B.Sc	Zoology	1971	Miranda House, Delhi University
M.Sc	Zoology	1973	Miranda House, Delhi University
M.Phil	Life Science	1974	Jawaharlal Nehru University
Ph.D	Life sciences	1983	University of Hyderabad

DATE OF BIRTH: 08 August, 1952

BIBLIOGRAPHY

Published Full Papers: 95 **International: 92** **National: 3**
Chapter in books: 8 **Reviews: 4**

Total citations: 1071 **H Index: 19**

1. Deletion of vitamin c biosynthesis enzyme, Arabino-1, 4-Lactone Oxidase in *Leishmania donovani* results in increased pro-inflammatory responses from host immune cells. Reetika Manhas, Sneha Anand, Pankaj Tripathi and **Rentala Madhubala**. **Molecular Microbiology** DOI: 10.1111/mmi.12530, **2014**
2. Visceral and post-kala-Azar dermal leishmaniasis isolates show significant difference in their in vitro drug susceptibility pattern Jyotsna Mishra, **Rentala Madhubala** and Sarman Singh **Parasitology Res.** 112(3):1001-9. doi: 10.1007/s00436-012-3222-1. Epub 2012 Dec 18. **2013**
3. Structural insight into DFMO resistant ornithinedecarboxylase from *Entamoeba histolytica*: an inkling to adaptive evolution Preeti, Satya Tapas, Pravindra Kumar, **Rentala Madhubala** and Shailly Tomar **Plos One** 8(1):e53397. doi: 10.1371/journal.pone.0053397. Epub 2013 Jan 11. **2013**
4. Unique posttranslational modifications in Eukaryotic translational factors and their roles in protozoan parasites viability and pathogenesis Nimisha Mittal, Gowri Subramanian, Peter Butikofer and **Rentala Madhubala**. **Mol Biochem Parasitol**; 187(1):21-31. doi: 10.1016/j.molbiopara.2012.11.001. Epub 2012 Nov 28. **2013**
5. Unusual domain architecture of aminoacyl tRNA synthetases and their paralogs from *Leishmania major* V S Gowri Indira Ghosh, Amit Sharma and **Rentala Madhubala** **BMC Genomics** **13: 621, 2012**
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