

BIOGRAPHICAL SKETCH

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|--|---|----------------|---|
| Farhat Afrin, Ph.D. | Associate Professor | | |
| Researcher ID (Web of Science): F-2346-2018 Author ID (Scopus): 6602621730 ORCID ID: 0000-0003-4443-4284 Loop profile: 119563 URLs: https://orcid.org/0000-0003-4443-4284 https://www.scopus.com/authid/detail.uri?authorId=6602621730 https://scholar.google.com/citations?user=SwSWeiYAAAAJ https://www.linkedin.com/in/farhat-afrin-2b345870/ https://www.researchgate.net/profile/Farhat-Afrin | Centre for Interdisciplinary Sciences Institute of Advanced Studies and Research JIS University Kolkata, India | | |
| A. EDUCATION/ TRAINING | | | |
| INSTITUTION AND LOCATION | DEGREE | YEAR(s) | FIELD OF STUDY |
| Center for Immunology and Infection, The Hull York Medical School, University of York, York, U.K. | Commonwealth Fellow (UGC) | 2010 | Inflammasome signaling in Leishmaniasis |
| Laboratory of Parasitic Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland, U.S.A. | Biotechnology Overseas Associate (DBT) | 2002-03 | Live vaccines, memory T cells |
| Indian Institute of Chemical Biology, Kolkata, India | Ph.D. | 1999 | Science (Microbial Immunology) |
| Aligarh Muslim University, Aligarh, U.P., India | M.Sc. | 1991 | Biotechnology |
| Aligarh Muslim University, Aligarh, U.P., India | B.Sc. | 1988 | Botany (Honors), Zoology, Chemistry. |

B. EMPLOYMENT

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| 2022-Till date | Associate Professor, Centre for Interdisciplinary Sciences, JIS Institute of Advanced Studies & Research, JIS University, Kolkata, India |
| 2014–2019 | Assistant Professor, Department of Medical Laboratory Technology, Faculty of Applied Medical Sciences, Taibah University, Madina, Saudi Arabia |
| 2006–2014 | Assistant Professor, Department of Biotechnology, Jamia Hamdard (Hamdard University), New Delhi, India |
| 2003-2005 | Lecturer (Sr. scale), Department of Biotechnology, Hamdard University, New Delhi, India |
| 1999-2003 | Lecturer, Department of Biotechnology, Hamdard University, New Delhi, India |
| 1998-1999 | Lecturer (Adhoc), Department of Biotechnology, Hamdard University, New Delhi, India |

C. FELLOWSHIPS AND AWARDS

| | |
|-----------|---|
| 2019 | Certificate of Appreciation for Outstanding Research and Teaching Performance from Vice-Dean, Faculty of Applied Medical Sciences, Taibah University, Saudi Arabia |
| 2016 | Certificate of Appreciation for Research and Publications from Vice-Deanship of Girl's Academic Studies, Taibah University, Saudi Arabia |
| 2016 | Certificate of Appreciation for Research and Academic credentials from Vice-Dean, Faculty of Applied Medical Sciences, Taibah University, Saudi Arabia |
| 2013 | DBT Travel Award (India) to participate in World Leish 5, Pernambuco, Brazil, 13-17 May 2013 |
| 2013 | CSIR Travel Award (India) to participate in World Leish 5, Pernambuco, Brazil, 13-17 May 2013 |
| 2011 | American Association of Immunologists (AAI) Junior Faculty Travel Grant to participate in 98 th AAI Annual Meeting - IMMUNOLOGY 2011 TM - San Francisco, CA, 13 - 17 May 2011 |
| 2010 | Visiting Associate, Commonwealth Academic Staff Fellowship (University Grants Commission, India), to work with Dr. Paul Kaye, University of York, U.K. |
| 2006 | Department of Science & Technology-FAST Track Proposal for Young Scientists, India |
| 2006 | ICMR International Fellowship for Young Indian Biomedical Scientists to work at NIH, U.S.A. |
| 2002-2003 | Biotechnology Overseas Associateship Award (DBT), to work with Dr. David Sacks, LPD, NIH, U.S.A. |
| 2002 | Guest Faculty, Jamia Millia Islamia, New Delhi, India |
| 2001 | Best Poster Award in XXVIII Annual Meeting of the Indian Immunology Society, New Delhi, India |

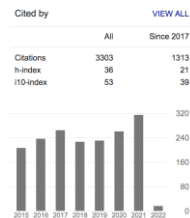
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|-----------|---|
| 1993-1998 | Research Fellow, Indian Institute of Chemical Biology, Kolkata (Recipient of CSIR-NET Fellowship) |
| 1993 | CSIR-NET Fellowship, India for Research and Lecturership |
| 1993 | Graduate Aptitude Test in Engineering (GATE), India with 93.34 percentile score |
| 1991-1993 | DBT Fellowship (M.Sc.), Aligarh Muslim University, Aligarh, India |
| 1998-1991 | Merit Scholarship, Aligarh Muslim University, Aligarh, India |

D. TEACHING EXPERIENCE

| Date | Department/ Faculty/ University | Subjects |
|---|---|---|
| 1 st Sep 2018 – Jan 2019 | B.Sc. (Clinical Nutrition Department), Faculty of Applied Medical Sciences, Taibah University, Madina, Saudi Arabia | Medical Terminology |
| 2016 – May 2019 | B.Sc. (Clinical Laboratory Sciences Department), Faculty of Applied Medical Sciences, Taibah University, Madina, Saudi Arabia | Medical Parasitology & Practicals, Clinical Practice (Serology, Parasitology) |
| 16 th Sep 2017 – Jan 2018 | -do- | Leadership Critical thinking and Communication skills |
| 15 th Sep 2014 – May 2017 | -do- | Medical Immunology & Practicals, Basic Immunology [Formerly, Medical Immunological Industry (Elective)], Stem Cells (Elective), Clinical Practice (Serology) |
| 2016 – 2017, 2018-2019 | -do- | Student Graduation Project |
| 16 th Sep 2017 – Jan 2018 | B.Sc. (Pharmacology), Faculty of Pharmacy, Taibah University, Medina, Saudi Arabia | Pharmaceutical Microbiology III & Practicals |
| 29 th Aug 1998 – 31 st Aug 2014 | M.Sc. (Biotechnology), Faculty of Science, Hamdard University, New Delhi, India | Biomolecules, Metabolomics, Immunology, Microbial and Enzyme Biotechnology, Biotechnology and Human Health, Environmental Biotechnology, practicals and dissertation projects |
| 14 th Jan 2013 – 31 st Aug 2014 | PhD. (Faculty of Science), Hamdard University, New Delhi, India | Biotechnology and Human Health (Elective) |
| July 2009 – 31 st Aug 2014 | M.Sc. (Biotechnology, Biochemistry, Toxicology, Botany, Chemistry), Faculty of Science, Hamdard University, New Delhi, India | Immunology, Stem Cells (Foundation Course) |
| October 2009 | M.Sc. (Nursing), Faculty of Nursing, Hamdard University, New Delhi, India | Clinical Biochemistry and Molecular Genetics |
| 29 th Aug 1998 – Dec. 2008 | M.Sc. (Biochemistry), Faculty of Science, Hamdard University, New Delhi | Immunology |
| Aug 2001 – Nov. 2002 | M.D. (Unani Medicine), Faculty of Unani Medicine, Hamdard University, New Delhi | The Role of Unani Medicine in relation to mental health & illness |
| 17 th Mar 2002 – Nov. 2002 (Guest Faculty) | M.Sc. (Biotechnology), Faculty of Natural Science, Jamia Millia Islamia, New Delhi | Immunology and practicals |

E. PUBLICATIONS IN PEER REVIEWED JOURNALS

- Want MY, Yadav P, Khan R, Chauhan G, Islammuddin M, Aloyouni SY, Chattopadhyay AP, AlOmar SY, **Afrin F**. Critical antileishmanial *in vitro* effects of highly examined gold nanoparticles. *Int. J. Nanomed.* **16**: 7285-95, 2021.
- Hemeg HA, Almutairi AZ, Alharbi NL, Alenezi RF, Alturkostani MA, Ozbak HA, **Islam FA**. Blood culture contamination in a tertiary care Hospital of Saudi Arabia: A one-year study. *Saudi Med. J.* **41**: 508-15, 2020.
- Afrin F**, Khan I, Hemeg H. *Leishmania*-host interactions – An Epigenetic Paradigm. *Front Immunol.* **10**: 492, 2019.
- Afrin F**, Chouhan G, Islammuddin M, Want M, Ozbak H, Hemeg H. *Cinnamomum cassia* exhibits antileishmanial activity against *Leishmania donovani* infection *in vitro* and *in vivo*. *PLoS Negl Trop Dis.* **13**: e0007227, 2019.
- Verma G, Khan MF, Nainwal LM, Ishaq M, Akhter M, Bakht A, Anwer T, **Afrin F**, Islammuddin M, Husain I, Alam MM, Shaquiquzzaman M. Targeting Malaria and Leishmaniasis: Synthesis and Pharmacological Evaluation of Novel Pyrazole-1,3,4-Oxadiazole Hybrids. Part II, *Bioorganic Chemistry* **89**: 102986, 2019.
- Ozbak HA, El-Sayed WS, Al Hazmi JM, Hassan HA, Al Harbi HE, **Afrin F**, Abdelrahman AA, Toker RA, Zakai SA, Alshami I, Abdel-Aziz NA. Isolation of a novel *Streptococcus anginosus* subspecies, AW1 from wound infection in Al-Madinah Al-Munawarah province. *J. Microbiol. Antimicrob. Agents* **3(2)**: 38-45, 2017.



7. Want MY, Islamuddin M, Chouhan G, Hani AO, Hassan AH, Chattopadhyay AP, **Afrin F**. Nanoliposomal artemisinin for the treatment of murine visceral leishmaniasis. *Int. J. Nanomed.* **12**: 2189, 2017.
8. Shafi S, **Afrin F**, Islamuddin M, Chouhan G, Ali I, Naaz F, Sharma K, Zaman MS. β -Nitrostyrenes as potential anti-leishmanial agents. *Front Microbiol.* **7**: 1379, 2016.
9. Islamuddin M., Chouhan G, Want MY, Hani AO, Hassan AH, **Afrin F**. Immunotherapeutic potential of eugenol emulsion in experimental visceral leishmaniasis. *PLoS Negl Trop Dis.* **10**: e0005011, 2016
10. Want MY, Yadav P, **Afrin F**. Nanomedicines for therapy of visceral leishmaniasis. *J. Nanomed. Nanotechnol.* **16**: 2143-51, 2016
11. Chouhan G, Islamuddin M, Want MY, Hani AO, Hassan AH, Sahal D, **Afrin F**. Leishmanicidal activity of *Piper nigrum* bioactive fractions is interceded via apoptosis in vitro and substantiated by Th1 immunostimulatory potential *in vivo*. *Front Microbiol.* **6**: 1368-87, 2015. **Corrigendum: Front Microbiol.** **7**: 955, 2016.
12. Farooque A, **Afrin F**, Adhikari JS, Dwarakanath BS. Polarization of macrophages towards M1 phenotype by a combination of 2-deoxy-D-glucose and radiation: Implications for tumor therapy. *Immunobiology* **221**: 269-81, 2016.
13. Want MY, Islamuddin M, Chouhan G, Hani AO, Hassan AH, Abdin, MZ, Dasgupta AK, Chattopadhyay AP, **Afrin F**. Therapeutic efficacy of artemisinin-loaded nanoparticles in experimental visceral leishmaniasis. *Colloid Surf B Biointerfaces* **130**: 215-221, 2015
14. Chouhan G, Islamuddin M, Want MY, Abdin MZ, Hani AO, Hassan AH, Sahal D, **Afrin F**. Apoptosis mediated leishmanicidal activity of *Azadirachta indica* bioactive fractions is accompanied by Th1 immunostimulatory potential and therapeutic cure in vivo. *Parasit Vectors.* **8**: 183-207, 2015 **Erratum: Parasit Vectors.** **9**: 308, 2016.
15. Islamuddin M, Chouhan G, Farooque A, Sahal D, Dwarakanath BS, **Afrin F**. Th1-biased immunomodulation and therapeutic potential of *Artemisia annua* in murine visceral leishmaniasis. *PLoS Negl Trop Dis.* **9**: e3321, 2015
16. Islamuddin M, Chouhan G, Muzamil MY, Tyagi M, Abdin MZ, Sahal D, **Afrin F**. Leishmanicidal activities of *Artemisia annua* leaf essential oil against Visceral Leishmaniasis. *Front Microbiol.* **5**: 626, 2014 **Corrigendum: Front Microbiol.** **6**: 1015, 2015.
17. Chouhan G, Islamuddin F, Ahmad F, Sahal D, **Afrin F**. Antileishmanial potential of *Piper nigrum* seed extracts against *Leishmania donovani*. *Open J. Med. Microbiol.* **4**: 228-235, 2014
18. Pandey S, **Afrin F**, Tripathi RP, Gangenahalli G. Conformal coating (encapsulation) of human single cells by biodegradable chitosan nanoparticles and their response assessment in vitro and in vivo. *J. Nanopharmaceutics Drug Delivery* **2**: 227-234, 2014
19. Farooque A, Singh N, Adhikari JS, **Afrin F**, Dwarakanath BS. Enhanced antitumor immunity contributes to the radio-sensitization of Ehrlich ascites tumor by the glycolytic inhibitor 2-deoxy-D-glucose in mice. *PLoS One.* **9**: e108131, 2014
20. Ahmad M, Tarique M, **Afrin F**, Tuteja N, Tuteja R. Identification of inhibitors of *Plasmodium falciparum* RuvB1 helicase using biochemical assays. *Protoplasma.* **252**: 117-125, 2015
21. Sharma M, **Afrin F**, Tripathi R, Gurudutta G. Transgene expression study of CXCR4 active mutants: Potential prospects in up-modulation of homing and engraftment efficiency of hematopoietic stem/progenitor cells. *Cell Adh Migr.* **8**: 384-388, 2014
22. Want MY, Islamuddin M, Chouhan G, Dasgupta AK, Chattopadhyay AP, **Afrin F**. A new approach for the delivery of artemisinin: formulation, characterization, and *ex-vivo* antileishmanial studies. *J. Colloid Interface Sci.* **432**: 258-269, 2014
23. Chouhan G, Islamuddin F, Sahal D, **Afrin F**. Exploring the role of medicinal plant-based immunomodulators for effective therapy of leishmaniasis. *Front. Immunol.* **5**: 193, 2014.
24. Islamuddin M, Sahal D, **Afrin F**. Apoptosis-like death in *Leishmania donovani* promastigotes induced by eugenol-rich oil of *Syzygium aromaticum*. *J. Med. Microbiol.* **63**: 74-85, 2014.
25. Jameel M, Islamuddin M, Ali A, **Afrin F**, Ali M. Isolation, characterization and antimicrobial evaluation of a novel compound N-octacosan 7 beta ol, from *Fumaria parviflora* Lam. *BMC Complement Altern Med.* **14**: 98, 2014.
26. Sharma M, **Afrin F**, Tripathi RP, Gangenahalli G. Regulated expression of CXCR4 constitutive active mutants revealed the up-modulated chemotaxis and up-regulation of genes crucial for CXCR4 mediated homing and engraftment of hematopoietic stem/progenitor cells. *J Stem Cells Regen Med.* **9**: 19-27, 2014.
27. Ahmad M, **Afrin F**, and Tuteja R. Identification of R2TP complex of *Leishmania donovani* and *Plasmodium falciparum* using genome wide in-silico analysis. *Commun Integr Biol.* **6**: e26005, 2013
28. Pandey S, **Afrin F**, Tripathi RP, Gangenahalli G. Human T-cell line (Jurkat cell) encapsulation by nanoorganized polyelectrolytes and their response assessment in vitro and in vivo *J Nanopart Res.* **15**: 1793-1804, 2013.
29. Satija NK, Sharma D, **Afrin F**, Tripathi RP, Gangenahalli G. High throughput transcriptome profiling of lithium stimulated human mesenchymal stem cells reveals priming towards osteoblastic lineage. *PLoS One.* **8**: e55769, 2013.
30. Islamuddin M, Farooque A, Dwarakanath BS, Sahal D, **Afrin F**. Extracts of *Artemisia annua* leaves and seeds mediate programmed cell death in *Leishmania donovani*. *J. Med. Microbiol.* **61**: 1709-18, 2012
31. Ahmad M, Singh S, **Afrin F**, Tuteja R. Novel RuvB nuclear ATPase is specific to intraerythrocytic mitosis during schizogony of *Plasmodium falciparum*. *Mol Biochem Parasitol.* **185**: 58-65, 2012
32. Farooque A, Mathur R, Verma A, Kaul V, Bhatt AN, Adhikari JS, **Afrin F**, Singh S, Dwarakanath BS. Low dose radiation therapy of cancer: Role of immune enhancement. *Exp. Rev. Anticancer Ther.* **11**: 791-802, 2011
33. Ali I, Sharma P, Suri KA, Satti NK, Dutt P, **Afrin F**, Khan IA. *In vitro* antifungal activities of amphotericin B in combination with acteoside, a phenylethanoid glycoside from *Colebrookea oppositifolia*. *J. Med. Microbiol.* **60**: 1326-36, 2011
34. Sharma M, Satija NK, **Afrin F**, Gurudatta GU. Stromal Derived Factor-1/CXCR4 Signaling: Indispensable role in Homing and Engraftment of Hematopoietic Stem Cells in Bone Marrow. *Stem Cells Dev.* **20**: 933-46, 2011
35. Rathore S, Sinha D, Asad M, Bottcher T, **Afrin F**, Chauhan VS, Gupta D, Sieber S, Mohammed A. A cyanobacterial serine protease of *Plasmodium falciparum* is targeted to the apicoplast and plays an important role in its growth and development. *Mol. Microbiol.* **77**: 873-90, 2010
36. Ali I, Khan FG, Suri KA, Gupta BD, Satti NK, Dutt P, **Afrin F**, Qazi GN, Khan IA. *In vitro* antifungal activity of hydroxychavicol isolated from *Piper betle* L. *Ann. Clin. Microbiol. Antimicrob.* **9**: 7-15, 2010

37. Satija NK, Singh VK, Verma YK, Gupta P, Sharma S, **Afrin F**, Sharma M, Sharma P, Tripathi RP, Gurudatta GU. Mesenchymal Stem Cell-based Therapy: A New Paradigm in Regenerative Medicine *J. Cell. Mol. Med.* **13**: 4385-402, 2009
38. Farooque A, **Afrin F**, Adhikari JS, Dwarakanath BS. Protection of normal cells and tissues during radio- and chemosensitization of tumors by 2-deoxy-D-glucose. *J. Cancer Res. Ther.* **5 Suppl 1**: S32-5, 2009
39. Satija NK, Gurudatta GU, Sharma S, **Afrin F**, Gupta P, Verma YK, Singh VK, Tripathi RP. Mesenchymal stem cells: molecular targets for tissue engineering. *Stem Cells Dev.* **16**: 7-23, 2007
40. Sharma S, Gurudatta GU, Satija NK, Pati S, **Afrin F**, Gupta P, Verma YK, Singh VK, Tripathi RP. Stem cells c-Kit and HOXB4 genes: Critical roles and mechanisms in self-renewal, proliferation and differentiation. *Stem Cell Dev.* **15**: 755-778, 2006
41. Charu R, Stobdan T, Ram RB, Khan AP, Pasha MAQ, Norboo T, **Afrin F**. Susceptibility to high-altitude pulmonary edema: Roles of *ACE* and *ET-1* polymorphisms. *Thorax* **61**: 1011-1012, 2006
42. Bertholet S, Goldszmid R, Morrot A, Debrabant A, **Afrin F**, Collazo-Custodio C, Houde M, Desjardins M, Sher A, Sacks D. *Leishmania* antigens are presented to CD8⁺ T cells by a transporter associated with antigen processing-independent pathway in vitro and in vivo. *J. Immunol.* **177**: 3525-3533, 2006
43. Shukla SK, Chaudhary P, Kumar IP, Samanta N, **Afrin F**, Gupta ML, Sharma UK, Sinha AK, Sharma YK, Sharma RK. Protection from radiation-induced mitochondrial and genomic DNA damage by an extract of *Hippophae rhamnoides*. *Environ. Mol. Mutagen.* **47**: 647-656, 2006
44. Rajput C, Arif E, Vibhuti A, Stobdan T, Khan AP, Norboo T, **Afrin F**, Qadar Pasha MA. Predominance of interaction among wild-type alleles of *CYP11B2* in Himalayan natives associates with high-altitude adaptation. *Biochem. Biophys. Res. Commun.* **348**: 735-740, 2006
45. Chaudhary P, Shukla SK, Kumar IP, Namita I, **Afrin F**, Sharma RK. Radio-protective properties of apple polyphenols: An in vitro study. *Mol. Cell. Biochem.* **288**: 37-46, 2006
46. Rajput C, Najib S, Norboo T, **Afrin F**, Qadar Pasha MA. Endothelin-1 gene variants and levels associate with adaptation to hypobaric hypoxia in high-altitude natives. *Biochem. Biophys. Res. Commun.* **341**:1218-24, 2006
47. Shukla SK, Chaudhary, P, Prem Kumar, I, **Afrin, F**, Sharma, RK. *Hippophae rhamnoides* protects both mitochondrial and Nuclear DNA from radiation induced DNA damage. *Indian J. Radiation Res.* **3**: 215, 2006
48. Shukla SK, Chaudhary P, Kumar IP, **Afrin F**, Puri SC, Qazi GN, Sharma RK. Cytotoxic and radioprotective effects of *Podophyllum hexandrum*. *Environ. Toxicol. Pharmacol.* **22**: 113-120, 2006
49. Bertholet S, Debrabant A, **Afrin F**, Caler E, Mendez S, Tabbara K, Belkaid Y, Sacks D. Antigen requirements for efficient priming of CD8⁺ T cells by *Leishmania major*-infected dendritic cells. *Infect. Immun.* **73**: 6620-6628, 2005
50. **Tabbara K, **Peters NC, ****Afrin F**, Mendez S, Bertholet S, Belkaid Y, Sacks D. Conditions influencing the efficacy of vaccination with live organisms against *Leishmania major*. *Infect. Immun.* **73**: 4714 - 4722, 2005
51. Rajput C, Makhijani K, Norboo T, **Afrin F**, Sharma M, Pasha ST, Pasha MA. CYP11B2 gene polymorphisms and hypertension in highlanders accustomed to high-salt intake. *J. Hypertens* **23**: 79-86, 2005
52. Ahsan A, Charu R, Pasha MA, Norboo T, **Afrin F**, Baig MA. eNOS allelic variants at the same locus associate with HAPE and adaptation. *Thorax* **59**: 1000-1002, 2004
53. **Afrin F**, Rajesh R, Anam K, Gopinath M, Pal S, Ali N. Characterization of *Leishmania donovani* antigens encapsulated in liposomes that induce protective immunity in BALB/c mice. *Infect. Immun.* **70**: 6697-6706, 2002
54. **Dey T, ****Afrin F**, Anam K, Ali N. Infectivity and virulence of *Leishmania donovani* promastigotes: a role for media, source and strain of parasite. *J. Eukaryot. Microbiol.* **49**: 270-274, 2002
55. **Afrin F**, Dey T, Anam K, Ali N. Leishmanicidal activity of stearylamine-bearing liposomes in vitro. *J. Parasitol.* **87**: 188-193, 2001
56. **Afrin F**, Anam K, Ali N. Induction of partial protection against *Leishmania donovani* by promastigote antigens in negatively charged liposomes. *J. Parasitol.* **86**: 730-735, 2000
57. Dey T, Anam K, **Afrin F**, Ali N. Antileishmanial activities of stearylamine-bearing liposomes. *Antimicrob. Agents Chemother.* **44**: 1739-1742, 2000
58. Anam K, **Afrin F**, Banerjee D, Pramanik N, Guha SK, Goswami RP, Saha SK, Ali N. Differential decline in *Leishmania* membrane antigen-specific immunoglobulin G (IgG), IgM, IgE, and IgG subclass antibodies in Indian kala-azar patients after chemotherapy. *Infect. Immun.* **67**: 6663-6669, 1999
59. Anam K, **Afrin F**, Banerjee D, Pramanik N, Guha SK, Goswami RP, Gupta PN, Saha SK, Ali N. Immunoglobulin subclass distribution and diagnostic value of *Leishmania donovani* antigen specific immunoglobulin G3 in Indian kala-azar patients. *Clin. Vaccine Immunol* (Formerly, *Clin. Diag. Lab. Immunol.*) **6**: 231-235, 1999
60. **Afrin F**, Ali N. Isotype profiles of *Leishmania donovani* infected BALB/c mice: preferential stimulation of IgG2a/b by liposome associated promastigote antigens. *J. Parasitol.* **84**: 743-748, 1998
61. **Afrin F**, Ali N. Adjuvant activity and protective immunity elicited by *Leishmania donovani* antigens encapsulated in positively charged liposomes. *Infect. Immun.* **65**: 2371-2377, 1997
62. Ali N, **Afrin F**. Protection of mice against visceral leishmaniasis by immunization with promastigote antigen incorporated in liposomes. *J. Parasitol.* **83**: 70-75, 1997. **Erratum. J. Parasitology** **83**: 792, 1997

§ Corresponding Author, ** Equal contribution

F. PUBLICATION OF BOOK CHAPTERS

1. **Afrin F** and Hemeg H. Introductory Chapter: Leishmaniasis: An emerging clinical syndrome *In: Leishmaniasis as re-emerging diseases*. Afrin F., Hemeg H. (Ed). Published by: InTech, Croatia – European Union, 2018, ISBN 978-953-51-3476-3, Print ISBN 978-953-51-3475-6 <http://dx.doi.org/10.5772/intechopen.79662>

2. Chouhan G, Hani AO, Hemeg HA, **Afrin F.** Leishmanicidal compounds of natural origin: their prospective mantle in antileishmanial therapy. In: *The Battle Against Microbial Pathogens: Basic Science, Technological Advances and Educational Programs*. Mendez-Vilas A (Ed). Published by Formatex Research Centre, Spain 2015. ISBN-13 Vol. 1: 978-84-942134-6-5
3. Chouhan G, Islamuddin F, Sahal D, **Afrin F.** Exploring the role of medicinal plant-based immunomodulators for effective therapy of leishmaniasis. In: *Control of Visceral Leishmaniasis by Immunotherapeutic and Prophylactic Strategies*. Ali N, Nakhasi HL, Valenzuela JG, Reis AB (Ed). Published by: Frontiers Media, SA, 2015. ISSN: 1664-8714, ISBN 978-2-88919-552-7

G. OTHER PUBLICATIONS

- 1 Chouhan G, Islamuddin F, Sahal D, **Afrin F.** Exploring the role of medicinal plant-based immunomodulators for effective therapy of leishmaniasis. *MDLinx*. (2014)
- 2 Artemisinin. Hamdard University New Delhi, Extracts of *Artemisia annua* leaves and seeds mediate programmed cell death in *Leishmania donovani*. In: Sesquiterpenes—Advances in Research and Application: p39, 2013 Edition
- 3 Islamuddin M, Sahal D, **Afrin F.** Apoptosis-like death in *Leishmania donovani* promastigotes induced by eugenol-rich oil of *Syzygium aromaticum* *MDLinx*. (2013)
- 4 Islamuddin M, Farooque A, Dwarakanath BS, Sahal D, **Afrin F.** Extracts of *Artemisia annua* leaves and seeds mediate programmed cell death in *Leishmania donovani*. *Global Medical Discovery*. ISSN: 1929-8536 (2013)
- 5 *Farooque A, Singh N, Verma A, Agrahari S, Pandey S, Kumar A, **Afrin F**, Adhikari JS, Chandna S, Dwarakanath BS, Immunomodulation linked to the depletion of T regulatory cells contributes to the radio-sensitization of tumors by the glycolytic inhibitor 2-deoxy-D-glucose. *Abstract published in Journal of Cancer Research and Therapeutics* **8**: 468-506 (2012).
- 6 **Afrin F.**, Chouhan G., Islamuddin M., Yadav P., Ahmad F., Want, M.Y. Immunotherapy with leishmanial antigen versus immunochemotherapy in murine visceral leishmaniasis. *Abstract published in Journal of Immunology* **186**(1 Supplement): 106.7 (2011).
- 7 Islamuddin M, Chouhan G, Farooque A, Ahmad F, Tasleem M, Inam S, Khan MAH, Guha S, Zavosh S, Giri P, Khan S, Dwarakanath BS, **Afrin F.** Comparative immunogenicity of leishmanial antigens in experimental visceral leishmaniasis. *Abstract published in International Immunology* **22**(Suppl 1 Pt 1): i 23-i 35 (2010).
- 8 Bertholet, S., Debrabant, A., **Afrin, F.**, Belkaid, Y., Desjardin, M. and Sacks, D. Antigens released into the *Leishmania* phagosome avoid the efficient cross-presentation machinery associated with ER-mediated phagocytosis by dendritic cells. *Abstract published as a supplement in Clinical and Investigative Medicine, Vol. 27 No. 4*, August 2004.
- 9 **Afrin, F.**, and Ali, N. Adjuvanticity and protective immunity elicited by *Leishmania donovani* antigens encapsulated in positively charged liposome. *Abstract published in Acta Parasitologica Turcica* **21**(S1): 35, 1997
- 10 Leishmaniasis: Immunotherapeutic antigens encapsulated in liposomes characterized. *Published in Vaccine Weekly*, January 22nd, 2003
- 11 *Gurudutta GU, Satija NK, **Afrin F** and Tripathi RP. High-throughput transcriptome profiling of human mesenchymal stem cells reveals a role for Wnt/GSK-3 signaling in their hypoimmunomodulation. *Nature Precedings* 2011 (doi:10.1038/npre.2011.5512.1).

H. PRESENTATIONS IN SEMINARS/ WORKSHOPS

1. Invited speaker at “International Conference on Innovations for the Elimination and Control of Visceral Leishmaniasis, New Delhi, India. “Nanoliposomal artemisinin: Hope towards elimination of visceral leishmaniasis” (28-30 November 2018)
2. Participated in “Meta-Analysis Workshop” at New York, USA, (16-18 April, 2018).
3. Delivered an invited talk on ‘Laboratory Diagnosis of Leishmaniasis’ at Microbiology Lab., King Fahad Hospital, Madina, KSA. (12th February 2018).
4. Oral presentation at “6th World Congress on Leishmaniasis”, Spain. “Amplifying the antileishmanial potential of artemisinin in nano and nano liposomal form” (16-20 May 2017).
5. Poster presentation at “6th World Congress on Leishmaniasis”, Spain. “*Cinnamomum cassia* exhibits apoptosis mediated antileishmanial activity complemented by therapeutic cure *in vivo*” (16-20 May 2017).
6. Poster presentation at “6th World Congress on Leishmaniasis”, Spain. “Antileishmanial potential of lemongrass oil – An *in vitro* and *in silico* study”. 6th World Congress on Leishmaniasis” (16-20 May 2017).
7. Conducted a Workshop on ‘Stem Cells’ to Classes XI and XII Science Stream students, The Frank Anthony Public School, Kolkata, India (27th July 2016).
8. Invited speaker at “2nd World Congress and Expo on Nanotechnology and Materials Science”, Dubai, UAE. “Synergistic antileishmanial and immunomodulatory activity of nanoliposomal artemisinin” (4-6 April 2016).
9. Invited speaker at “Global Conference on Vaccines”, Dubai, UAE. “Leishmaniasis vaccines and immunotherapeutics” (13-15 April 2015).
10. Invited speaker at “World Congress and Expo on Nanotechnology and Materials Science”, Dubai, UAE. “Therapeutic efficacy of artemisinin-loaded nanoparticles in experimental visceral leishmaniasis” (13-15 April 2015).
11. Invited speaker at “UGC-SAP-DRS-I Sponsored National Seminar on Plant Biotechnology: Challenges and Opportunities in 21st Century”, Jamia Hamdard, New Delhi. “Immunomodulation augments antileishmanial efficacy of nanoliposomal plant secondary metabolite” (3-4 March 2014).
12. Oral presentation at UGC-SAP-DRS Sponsored National Seminar on Chronic Inflammatory Disorders, Jamia Hamdard, New Delhi. “Augmentation of antileishmanial activity of medicinal plants by immunomodulation *in vivo*”. (13-15 February, 2014).

13. Invited speaker at “Current Facets of Biotechnology: From Genes to proteins” Interdisciplinary Biotechnology Unit, Aligarh Muslim University, Aligarh. *In silico* approach for unraveling potential therapeutic targets in *Leishmania spp.* (January 15-17, 2014)
14. Invited speaker at Nanomedicine, New Delhi. “Potential of metallic nanoparticles in the therapy of visceral leishmaniasis”. (May 29-30, 2013). Could not participate
15. Poster presented at “Fifth World Congress on Leishmaniasis, Worldleish 5” Porto de Galinhas, Pernambuco, Brazil. Potential of secondary metabolites from traditional medicinal plants as leads against visceral leishmaniasis. (May 13-17, 2013)
16. Oral presentation at UGC-SAP (DRS-1) National Seminar on Proteomic Based Biomarkers for Animal and Plant Diseases Jamia Hamdard, New Delhi. “Contribution of proteomics of *Leishmania spp.* to the understanding of drug and vaccine development”. (1-2 March, 2013).
17. Invited speaker at UGC-SAP (DRS-1) National Seminar on Medicinal Plants and their Characterization Jamia Hamdard, New Delhi. “Potential antileishmanial activities of selected medicinal plants from Herbal Garden of Jamia Hamdard” (26-27 February, 2013).
18. Invited talk at S.N. Bose National Centre for Basic Sciences, Kolkata “Leishmaniasis: Therapeutics and Vaccine development” (16 August, 2012).
19. Invited speaker at “World Congress of Microbes-2012” Guangzhou, China. Development of vaccines and immunotherapeutics of *Leishmania* infection. (July 31-3 August, 2012). Could not attend.
20. Oral presentation at International Congress on Advances in Human Healthcare Systems, New Delhi. “Dendritic cell-based vaccine delivery in visceral leishmaniasis”. (February 20-23, 2012)
21. Oral presentation at ICNANO, New Delhi. “Application of Nanotechnology in *Leishmania* Infection”. (December 18-21, 2011)
22. Invited speaker at “36th Annual Conference of Indian Immunology Society. IMMUNOCON 2009” NIMHANS, Bangalore. Immunotherapy of leishmaniasis: An adjunct to chemotherapy. (December 16-19, 2009).
23. Oral presentation at “4th World Congress on Leishmaniasis” Lucknow. Therapeutic efficacy of drug-loaded nanoparticles in visceral leishmaniasis (February 3-7, 2009)
24. Invited speaker at “IX International Symposium on Vectors and Vector Borne Diseases”, Puri, Orissa, Development of vaccines against leishmaniasis and immune therapeutics (February 15-17, 2008)
25. Invited speaker at “International Conference on Research Advances in Traditional Medicine: Challenges and Opportunities”, Jamia Hamdard, Hamdard University, New Delhi, India. Vaccination and therapeutic efficacy of lipid nanoparticles in visceral leishmaniasis (October 30-31, 2007)
26. Oral presentation at Faculty of Science, Jamia Hamdard, Hamdard University, New Delhi, India. “Role of antigen persistence in long-term maintenance of *Leishmania* -specific memory CD4⁺ and CD8⁺ T cells” (July 30, 2004)
27. Poster presented at “Immunology Interest Group Retreat”, Airlie, Virginia, U.S.A. Role of antigen persistence in long-term maintenance of *Leishmania* -specific CD4⁺ and CD8⁺ memory T cells (October 20-22, 2003)
28. Poster presented at “The American NIH Research Festival”, Bethesda, Maryland, U.S.A. Role of antigen persistence in long-term maintenance of *Leishmania*-specific CD4⁺ and CD8⁺ memory T cells (October 14-17, 2003)
29. Poster presented at “The American Association of Immunologists: 90th Anniversary Annual Meeting”, Denver, Colorado, U.S.A. Role of antigen persistence in long-term maintenance of *Leishmania* -specific CD4⁺ and CD8⁺ memory T cells (May 6-10, 2003)
30. Poster presented at “XXVIII Annual Conference of Indian Immunology Society and Symposium on Immune-effector mechanisms”, New Delhi, India. Antileishmanial activities of stearylamine-bearing liposomes (October 4-6, 2001)
31. Poster presented at “10th International Congress of Immunology”, New Delhi, India. Vaccine potential of promastigote membrane derived antigens of *Leishmania donovani*. (December 1-6, 1998)
32. Poster presented at “XXIV Annual Conference of Indian Immunology Society and Symposium on Immunomodulation in Health and Diseases”, Calcutta, India. Western blot analysis of *Leishmania donovani* promastigote antigens that elicit protective responses in hamsters and BALB/c mice (December 20-24, 1997)
33. Poster presented at “Indo-French Symposium on Immunomodulation”, New Delhi, India. Protection against experimental visceral leishmaniasis: immunopotentiality with positively charged liposomes-encapsulated antigen (December 10-13, 1995)
34. Poster presented at “UN Brahmachari and Perspectives of Kala-azar Research”, Calcutta, India Leishmanicidal activity of stearylamine bearing liposomes (November 3-4, 1995)
35. Poster presented at the “64th Annual Meeting of Society of Biological Chemists”, Lucknow, India. Leishmanicidal activity of stearylamine bearing liposomes (October 6-8, 1995)
36. Oral presentation at the “IVth International Symposium on Vectors and Vector Borne Diseases”, Bhubaneswar, India. Immunoadjuvant activity of positively charged liposomes towards *Leishmania donovani* promastigote antigens (November 12-15, 1994)

I. EDITOR OF PEER REVIEWED INTERNATIONAL JOURNALS/ BOOKS

1. Academic Editor of PLoS ONE (2014-2021)
2. Associate Editor of Frontiers in Microbiology (2017-till date)
3. Guest Associate Editor of Frontiers in Medicine (2020)
4. Guest Associate Editor of Frontiers in Pharmacology (2020-21)
5. Member of Editorial Advisory Board of:
 - The Open Microbiology Journal (2017-till date)
 - Anti-Infective Agents (2018)
6. Editor-in-chief:
 - Research and Reports in Immunology (2017-till date)
7. Executive Editor:
 - Nanoresearch and Application (2016-till date)
8. Member of Editorial Board of:
 - The Open Journal of Medical Microbiology (2017-till date)
 - Trends in Medicine (Formerly, Trends in Medicine and Therapeutics) 2017-till date

Annals of Applied Microbiology & Biotechnology Journal (2017-till date)
 Journal of Immunology Forecast (2017-till date)
 Journal of Immune Research (2016-till date)

9. Associate Editor of Cambridge Scholars Publishing for Pharmacology Books (2017-till date)
10. Associate Editor of In Tech Books:
 1. Leishmaniasis as re-emerging diseases. Afrin F and Hassan H. (Ed). Published by: In Tech, Croatia – European Union, 2018 ISBN: 978-1-78984-102-2 Print ISBN: 978-1-78984-101-5 DOI: 10.5772/intechopen.71150
 2. Vaccines Afrin F, Hassan H, Hani O, (Ed). Published by: In Tech, Croatia – European Union, 2017, ISBN 978-953-51-3476-3, Print ISBN 978-953-51-3475-6 http://dx.doi.org/10.5772/65856
11. Co-Editor of In Tech Book on *Staphylococcus aureus* Hassan H, Hani O and Afrin F. (Ed). Published by: In Tech, Croatia – European Union, ISBN 978-1-78984-592-1, eISBN 978-1-78984-593-8, 2019.
12. Managing Editor of Frontiers in Bioscience (2015-till date)
 1. Strategies for intervention of Infectious Diseases. Afrin F, Chouhan G, Hassan H, Hani O (Ed.). (under process).
 2. Nanomedicines for Infectious Diseases. Afrin F, Hani O, Hassan H (Ed.). (under process).

J. REVIEWER OF PEER REVIEWED INTERNATIONAL JOURNALS

Frontiers in Immunology (2021); Frontiers in Nanotechnology (2021); Frontiers in Cellular and Infection Microbiology (2021-22); Biologia (2021); Drug Development Research (2021); Journal of Nanobiotechnology (2021); Saudi Journal of Biological Sciences (2021); Journal of Taibah University Medical Sciences (2016-2021); Journal of Infection and Public Health (2021); PLoS Neglected Tropical Diseases (2014-20); Experimental Parasitology (2014-20); Immunotherapy (2020); Parasitology International (2019); One Health (2019); BMC Public Health (2018-19); Anti-Infective Agents (2018-19); Environmental Toxicology and Pharmacology (2019); Journal of Tropical Medicine (2019); Cytokine (2018); Biomedicine and Pharmacotherapy (2017-2018); BMC Infectious Diseases (2018); Frontiers in Microbiology (2018); Biomedical Research International (2018); F1000Research (2018); Pathogens and Global Health (2018); Nanomedicine (2018); Infection and Drug Resistance (2017-2018); African Journal of Traditional Complementary and Alternative Medicines (2016-2018); Antimicrobial Agents and Chemotherapy (2013-2018); Asian Pacific Journal of Tropical Medicine (2017); Therapeutic Delivery (2017); Current Eye Research (2017); Histology and Histopathology (2017); Journal of Medical Microbiology (2012-17); Parasitology (2015-17); Oriental Pharmacy and Experimental Medicine (2016-17); International J Nanomedicine (2016-17); Molecular Immunology (2017); Drug Design, Development and Therapy (2017); Parasites and Vectors (2016); Parasitology International (2016); ACS Medicinal Chemistry Letters (2016); J Colloid Interface Sci (2016); Vaccine: Development and Therapy (2016); Immunotargets Therapy (2016); Acta Tropica (2015-16); Evidence-based Complementary Alternative Medicine (2013-2016); BMC Infectious Diseases (2015); PLoS ONE (2013-14); Indian Journal of Medical Research (2013)

K. ABSTRACTS FROM PROCEEDINGS OF SEMINARS/SYMPOSIUMS/WORKSHOPS – 96

L. RESEARCH GUIDANCE –

1. Ph.D. Students - As Supervisor – 4; As Co-Supervisor – 11
2. M.Sc. (Biotechnology) Students For 3-Months In-House Dissertation and Review Writing – 59
3. Bachelors Students in Clinical Laboratory Sciences for Graduation Project – 9

M. RESEARCH GRANTS / COMPLETED RESEARCH

1. 2018 – 2019 - Research Group Proposal (50248) on “Nano-antibiotics for infectious diseases”. Co-PI - Dr. Hassan Hemeg, Dr. Hani A. Ozbak.
2. 2018 – 2019 – Project on “Antistreptolysin O and antideoxyribonuclease B as biomarkers for tonsillitis compared with routine cultures”. Co-PI - Dr. Hassan Hemeg, Dr. Hani Ozbak, Dr. May Alsayb, Dr. Omar AlHazmi, Dr. Sahar Saad Allah, Dr. Rania Mousa, Dr. Abdullah Zaben Almotairy
3. 2017 – 2019 - Project on “Antimicrobial susceptibility pattern of bacterial isolates among patients at King Fahad Hospital, Madina”. Co-PI - Dr. Hassan Hemeg, Dr. Mohamed Abdelrahman Ahmed, Dr. Khaled Shabaan, Dr. Omar AlHazmi
4. 2009 – 2014 – Department of Biotechnology (India) Project on “Evaluation of therapeutic efficacy of functionalized nanoparticles in visceral leishmaniasis” (Rs.59.978 lakhs) Completed.
5. 2009–2012 – Central Council for Research in Unani Medicine (India) Project on “Antileishmanial activity of Unani drugs against *Leishmania donovani* in vitro and in vivo” (Rs. 26 lakhs) Completed.
6. 2008-2012– Department of Biotechnology (India) project on “Bioactivity-guided fractionation of *Nyctanthes arbortristis* and *Artemisia annua* extracts for antileishmanial activities against *Leishmania donovani*” (Rs. 42.93 lakhs) Completed.
7. 2007-2010- Department of Science and Technology-SERC Fast-track proposal for Young Scientists (India) grant, entitled “Vaccination against visceral leishmaniasis using dendritic cells” (Rs. 16.47 lakhs) Completed.
8. 2006 - Hamdard National Foundation, to work on “Comparative efficacy of liposome encapsulated autoclaved *L. major* (ALM) and autoclaved *L. donovani* (ALD) against experimental visceral leishmaniasis” (Rs. 0.25 lakhs)

9. 2000-2002 – Unassigned Grants of UGC, entitled “Investigation of the vaccine potential of the major surface protein, gp63 of *Leishmania donovani* in association with different adjuvants” Completed. (Rs. 1,00,000/-)

N. RESEARCH INTERESTS/ FUTURE PROSPECTS

1. Therapeutic interventions of microbial infections, leishmaniasis and cancer using nanoparticles alone or as drug carriers.
2. Dendritic cell, DNA and nano-particles based prophylactic and therapeutic vaccines against leishmaniasis and other infectious diseases and cancer.

O. COLLABORATIONS

1. ICGEB, INMAS, IGIB, NII, IIM, IOP, New Delhi, India
2. IIM, Jammu, India
3. University of Calcutta, Kolkata, Kalyani University, Kalyani, West Bengal, India
4. Ahmadu Bello University, Zaria, Nigeria, Africa
5. King Fahad Hospital, Madina, Saudi Arabia
6. Maternity and Children Hospital, Madina, Saudi Arabia

P. PROFESSIONAL SKILLS

- i. *Leishmania* handling including *in vitro* culture of promastigotes and amastigotes, isolation of metacyclics by peanut agglutination, on ficoll gradient, isolation of intracellular amastigotes, opsonization of metacyclic promastigotes for *in vitro* infection of dendritic cells (DCs) and macrophages (mφs), freezing, thawing, etc.
- ii. Isolation of bone marrow derived DCs and mφs, isolation of peritoneal mφs.
- iii. Maintaining cell lines, freezing, thawing.
- iv. Positive and negative selection of CD4/CD8 T cells using magnetic beads
- v. Cell phenotyping by FACS and confocal microscopy, cell cycle analysis, TUNNEL assay, Annexin-PI assay, dyskinetoplastidy, analysis of ROS, mitochondrial membrane potential by fluorescence microscopy and FACS
- vi. Intracellular staining for cytokines by FACS, Cytokine bead array
- vii. Cytokine ELISAs and bioassays, transwell assays, RT-PCR
- viii. Cell proliferation by CFSE labeling by FACS, [³H] thymidine incorporation and MTT assays.
- ix. Intradermal, subcutaneous, intramuscular, intravenous, intraperitoneal, intracardiac inoculations in animal models,
- x. Isolation of dermal cells from ears and lymph node cells.
- xi. Limiting dilution assays, setting blood agar plates.
- xii. SDS-PAGE and western blot analysis, ECL
- xiii. Liposome and nanoparticles preparation and encapsulation, preparation of OVA-coated latex beads
- xiv. Generation of CD8⁺ memory T cells *in vitro* and *in vivo*
- xv. Cryosectioning, confocal microscopy and imaging, microarrays
- xvi. Meta-Analysis
- xvii. Antimicrobial susceptibility assays, MIC and MBC determination.

Q. CLINICAL LABORATORY EXPERIENCE

15th February 2016 – May 2019: Working once a week at Microbiology Laboratory, King Fahad Hospital (KFH), Madina, Saudi Arabia

6th April 2015 – December 2015: Worked once a week at Clinical Parasitology Laboratory, Al Meeqat Hospital, Madina, Saudi Arabia

R. MEMBERSHIP IN ACADEMIC SOCIETIES/ COMMITTEES

1. 2019 – Member of Committee for Quality, Faculty of Applied Medical Sciences, Taibah University, Saudi Arabia
2. 2016 – 2019 – Coordinator of Statistics and Information Unit of Development and Quality Committee, National Committee for Academic Accreditation and Assessment, Faculty of Applied Medical Sciences (Female section), Taibah University, Saudi Arabia
3. 2016 – 2017 - Member of Research Project Committee, Dept. of Medical Lab. Technology, Faculty of Applied Medical Sciences, Taibah University, Saudi Arabia
4. 2014 - 2019 – Member of Department of Clinical Laboratory Sciences, Faculty of Applied Medical Sciences, Taibah University, Saudi Arabia
5. 2015 – 2019 – Member of Hematology and Immunology Track, Department of Clinical Laboratory Sciences, Faculty of Applied Medical Sciences, Taibah University, Saudi Arabia
6. 2015 – 2019 – Member of Microbiology Track, Department of Clinical Laboratory Sciences, Faculty of Applied Medical Sciences, Taibah University, Saudi Arabia
7. 2014 - Doctoral Committee, Department of Biotechnology, Jamia Hamdard, New Delhi, India
8. 2009 - 2014 - Board of Research Studies, Faculty of Science, Hamdard University, New Delhi, India
9. 1999 – 2014 - Academic Council, Hamdard University, New Delhi, India
10. 1999 – 2014 - Board of Studies, Department of Biotechnology, Jamia Hamdard, New Delhi, India
11. 1999 – 2014 - Hamdard Union of Teacher’s Association (HUTA), Jamia Hamdard, New Delhi, India

S. OTHERS

1. **Chaired a session** at “International Conference on Innovations for the Elimination and Control of Visceral Leishmaniasis, New Delhi, India (28-30 November 2018)
2. **Expert for short-listing Jubilee Scholarship Applications** in the field of Science and Technology at British Council (24-25 May 2012)
3. **Expert on the Ph.D. Programme Committee** in Biotechnology, Bharati Vidyapeeth University, Pune (2009)
4. **Expert member at 12th Project Monitoring & Review Committee meeting (Quarterly) of XI Five Year Plan** ‘Enhancing Troop Health through Radiation Science Approach’ at INMAS on 29th Jan 2014.
5. **External Expert for conducting Ph.D. viva voce** examination at AIIMS, 12.11.2012
6. **Member of Selection Committee** for appointment of Project Fellow at Jamia Millia Islamia (May, 2009)
7. **External Expert of Committee** for evaluating progress of JRF to SRF at INMAS (2008), ICGEB (2012-14)
8. **Member of Organizing Committee and Resource Person** of several National level Seminars at Jamia Hamdard, New Delhi.
9. **Evaluated several Ph.D. Theses**
10. **Warden of P.G. Girl’s Hostel**, Jamia Hamdard from 1.10.2007 – 31.7.2009
11. **Coordinator** of NET Coaching to M.Sc. (Biotechnology) students (2014)

T. LIFE MEMBERSHIP IN PROFESSIONAL SOCIETIES – Cytometry Society (India), Indian Immunology Society, National Academy of Vector borne Diseases**U. PARTICIPATION IN WORKSHOPS/COURSES**

1. Participated in “Meta-Analysis Workshop” at New York, USA, 16-18 April, 2018.
2. Completed National Committee of Bioethics web-based training course offered by King Abdulaziz City for Science and Technology, Saudi Arabia, December 25, 2018.
3. Participated in Immunolabelling and fluorescence microscopy workshop: From basic to advanced microscopy at University of Leicester, U.K., August 23-27, 2010.
4. UGC-sponsored Workshop “Capacity Building of Women Managers in Higher Education: Sensitivity/Awareness/Motivation Workshop” organized by Jamia Millia Islamia, 16-20 February, 2009
5. Attended the Course # IMMU522 “Molecular and Cellular Mechanisms of Immunity II” at Bldg 10, NIH, Bethesda, MD, U.S.A. from 27/1/2003 – 16/5/2003
6. Completed training on “Using Animals in Intramural Research: Guidelines for Animal Users” at NIH, Bethesda, MD, U.S.A. on 12/11/2002
7. Completed “Computer Security Awareness Course” at NIAID, NIH, Bethesda, MD, U.S.A. on March 22, 2002
8. Teacher’s Training Workshop at Jamia Hamdard, New Delhi from 3-4 October, 2001
9. Refresher Course in Life Science at University of Calcutta, Kolkata from 18.11.08 - 08.12.08
10. Refresher Course in Biotechnology at University of Calcutta, Kolkata from 25.02.08 - 15.03.08
11. Orientation Course at University of Calcutta, Kolkata from 30.05.05 - 25.06.05