

**Dr Nikhat Manzoor**

Medical Mycology Lab#408

Department of Biosciences

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**Academic Qualifications:**

Ph.D. Biosciences	1999	Jamia Millia Islamia (Thesis: Studies on PM-ATPase of <i>Candida albicans</i> )
M.Sc. Biosciences	1993	Jamia Millia Islamia
B.Sc. (Hons) Chemistry	1991	Jamia Millia Islamia

**Professional Experience:**

Professor	Department of Biosciences, Jamia Millia Islamia, New Delhi-25. India	2016	Till date
Associate Professor	Department of Biosciences, Jamia Millia Islamia, New Delhi-25. India	2013	2016
Associate Professor	College of Applied Medical Sciences, Taibah University, Al-Madinah Al-Munawarah, KSA (on EOL)	2014	2018
DST-BOYSCAST Fellow	Department of Oral Sciences, School of Dentistry, University of Otago, Dunedin-9054, New Zealand	2009	2010
Assistant Professor	Department of Biosciences, Jamia Millia Islamia, New Delhi-25. India	2006	2013
Young Scientist	DST, Government of India	2004	2007
Young Scientist	DST, Government of India	2001	2004

**Areas of Teaching:**

Biophysics, Bioenergetics, Biochemical Techniques, Biophysical Chemistry, Biochemistry, Toxicology, Medical Mycology, Patient Occupational Safety & Medical Ethics

**Research Interests:**

Antifungal drug discovery and development; antifungal mode of action of natural products and their derivatives; novel antifungal drug targets; drug resistance in infectious diseases.

**Research Projects:**

- 1) Apoptosis and Pathogenicity Modulation in *Candida albicans* by Curcumin and lead molecules of Tulsi Essential Oil (2010-2013) ICMR, Govt of India.
- 2) Fast reaction kinetics of glucose activation of plasma membrane H<sup>+</sup> ATPase from *Candida albicans* (2008-2011) UGC, Govt of India.
- 3) Hydrolysis of Pyrophosphate during Polynucleotide synthesis (2004-2007) DST, Govt of India
- 4) Pre-steady state kinetic studies on Na, K-ATPase (2001-2004) DST, Govt of India

**Talks:**

1. ORAL THRUSH: *Candida* isolation and Lab Diagnosis (29-03-2017) Department of Microbiology, Madinah Maternity and Children Hospital, Al Madinah Al Munawarah, KSA.
2. Pre-Analysis Errors in Laboratory Medicine (04-05-2016) Department of Microbiology, Madinah Maternity and Children Hospital, Al Madinah Al Munawarah, KSA.
3. Plant-derived Antifungal Compounds: Treating *Candida* infections the natural way (27-06-2013) Ramjas College, Delhi University. New Delhi, India.
4. Mode of action of fungicidal Pma1p inhibitor (12-10-2010) School of Dentistry, University of Otago, Dunedin, New Zealand.
5. Mapping low-resolution 3-D protein structures using chemical cross-linking and Fourier transform ion-cyclotron resonance mass spectrometry (21-04-2010) Department of Oral Sciences, School of Dentistry, University of Otago, Dunedin, New Zealand.
6. Pre-steady state kinetic studies on Na, K-ATPase (22-03-2004) Department of Zoology, Goa University, Goa-403206. India.

**Post doctoral fellows:**

Dr Sandeep B Rajput (UGC- DS Kothari fellow - 2014) Identification of potential combinations of ergosterol inhibitors for antifungal therapy: an *in vitro* & *in vivo* study using *Candida albicans*

**PhD supervised:**

1. Yamini Sharma (2020) Evaluation of anti-*Candida* potential of geraniol and its natural derivatives
2. Sumit Kumar Rastogi (2019) Functional characterization of a WW domain containing protein Ifu 5 in *Candida albicans*
3. Edwina Thomas (2014) The role of mitochondria in multidrug resistance in *Candida albicans*
4. Ruchi Srivastav (2014) Effect of cadmium and mercury on the growth and development of *Glycine max*
5. Jatinder S Verma (2013) Molecular detection and identification of *Mycobacterium tuberculosis* from clinical samples and characterization of the probable genes involved in fluoroquinolones & Aminoglycosides resistance
6. Amber Khan (2013) Apoptosis and pathogenicity modulation in *Candida albicans* by essential oil of Tulsi (*Ocimum sanctum*) and its lead molecules
7. Aijaz Ahmad (2012) Effect of eugenol and its derivatives on growth and pathogenicity markers of *Candida albicans*

**PhD co-supervised:**

1. Nafeesa Khatoon (2018) Screening of medicinal plants for the synthesis of silver nanoparticles and their application as antimicrobial agents
2. Mohd Irfan (2017) Antifungal evaluation and molecular docking studies of new azole derivatives against *Candida* spp
3. Neha Samber (2014) Antifungal activity and mode of action of *Mentha Piperita L.* and its major constituents on *Candida albicans*
4. Neelofar Khan (2014) Effect of Curcumin on growth and pathogenicity of *Candida* spp.
5. Rimple Bhatia (2014) Effect of ferulic acid and its derivatives on growth and pathogenicity markers of *Candida albicans*

6. Sheikh Shreaz (2014) Growth and pathogenicity modulation by cinnamaldehyde and its derivatives in *Candida albicans*
7. Rashmi Ojha (2012) Effect of vitamin C on growth and pathogenicity of *Candida albicans*

### **Publications:**

#### **Book Chapters:**

1. **Manzoor N. (2019)** *Candida* Pathogenicity and Alternative Therapeutic strategies. In: Hameed S., Fatima Z. (eds) Pathogenicity and Drug resistance of Human Pathogens, Springer Singapore. pp135-146
2. **Manzoor N. (2015)** Plasma Membrane ATPase: Potential Target for Antifungal Drug Therapy In: Chakraborti S., Dhalla N. S. (eds) Regulation of Ca<sup>2+</sup>-ATPases, V-ATPases and F-ATPases. Advances in Biochemistry in Health and Disease series, Springer, vol 14 pp 519-530.

#### **Research Papers:**

1. Sharma Y, Rastogi SR, Perwez A, Rizvi MA, **Manzoor N.**  $\beta$ -citronellol alters cell surface properties of *Candida albicans* to influence pathogenicity related traits. Medical Mycology (2020) 58 (1): 93-106.
2. Rastogi SK, Wijlick L, Ror S, Lee KK, Román E, Agarwal P, **Manzoor N**, Gow NAR, Pla J, Ernst JF, Panwar SL. Ifu5, a WW domain-containing protein interacts with Efg1 to achieve coordination of normoxic and hypoxic functions to influence pathogenicity traits in *Candida albicans*. Cellular Microbiology (2019) 22 (2) e13140.
3. Khatoon N, Sharma Y, Sardar M, **Manzoor N.** Mode of action and anti-*Candida* activity of *Artemisia annua* mediated-synthesized silver nanoparticles. Journal de Mycologie Médicale. (2019) 29:201-209.
4. Shahid M, Salam S, Jameel L, **Manzoor N**, Mohammed F. Simultaneous Shade Development, Antibacterial and Antifungal Functionalization of Wool using *Punica granatum* L. Peel Extract as a Source of Textile Dye. Journal of Natural Fibers. (2019) 16 (4): 555-566.
5. Sharma Y, Rastogi SR, Saadallah SSA, Fadel KA, **Manzoor N.** Anti-*Candida* Activity of Geraniol: Effect on Hydrolytic Enzyme Secretion and Biofilm Formation. Journal of Pure and Applied Microbiology. (2018) 12(3):1337-1349.

6. Rastogi S K, Sharma Y, **Manzoor N**. Effect of  $\beta$ -Citronellol on Hydrolytic Enzyme Secretion, Ergosterol Biosynthesis and Biofilm Formation in *C. albicans*. International Journal of Trend in Scientific Research and Development (2018) 2 (5): 2310 – 2317.
7. Khatoon N, Alam H, **Manzoor N**, Sardar M. Removal of toxic contaminants from water by sustainable Green synthesized silver nanoparticles. Ecotoxicology and Environmental Safety. IET Nanobiotechnology. (2018) 12(8): 1090 – 1096.
8. Shamsi T N, Parveen R, Afreen S, Sen P, Azam M, Sharma Y, Haque QMR, Fatma T, **Manzoor N**, Fatima S. Trypsin Inhibitors from *Cajanus cajan* and *Phaseolus limensis* Possess Antioxidant, Anti-Inflammatory, and Antibacterial Activity. Journal of Dietary Supplements (2018) 15(6):939-950.
9. Al-Shenqiti A, Bahashwan SA, Ghanem S, **Manzoor N**, El Shafey HM. Nosocomial infections in intensive care and medical rehabilitation units, and evaluation of antibiotics prescription. Afr. J. Microbiol. Res. (2017) 11(20):776-783.
10. Irfan M, Alam S, **Manzoor N**, Abid M. Effect of quinoline based 1,2,3-triazole and its structural analogues on growth and virulence attributes of *Candida albicans*. PLOSone (2017) 12(4):e0175710.
11. Mirza MA, Panda AK, Asif S, Verma D, Talegaonkar S, **Manzoor N**, Khan A, Ahmed FJ, Dudeja M, Iqbal Z. A Vaginal Drug Delivery Model. Drug Delivery (2016) 23 (8):3123-3134.
12. Aneja B, Irfan M, Kapil C, Jairajpuri MA, Maguire R, Kavanagh K, Rizvi MM, **Manzoor N**, Azam A, Abid M. Effect of novel triazole-amino acid hybrids on growth and virulence of *Candida* species: *In vitro* and *in vivo* studies. Organic & Biomolecular Chemistry (2016) 14 (45):10599-10619.
13. Irfan M, Khan S.I, **Manzoor N**, Abid M. Biological activities and in silico physico-chemical properties of 1,2,3-triazoles derived from natural bioactive alcohols. Anti-Infective Agents (2016) 14 (2):126-131.
14. Sharma Y, Khan LA, **Manzoor N**. Anti-*Candida* activity of geraniol involves disruption of cell membrane integrity and function. Journal de Mycologie Médicale (2016) 26:244-254.

15. Singh U, Bukhari MN, Anayutullah S, Alam H, **Manzoor N**, Hashmi AA. Synthesis, Characterization and Biological Evaluation of Metal Complexes with Water-Soluble Macromolecular Dendritic Ligand. *Pharmaceutical Chemistry Journal* (2016) 49 (12): 868-877.
16. Shamsi TN, Parveen R, Afreen S, Azam M, Sharma Y, Fatma T, Haque QMR, **Manzoor N**, Fatima S. Biological activities of Indian Aryurvedic formulation, Panchakola. *International Journal of Pharmaceutical Research and Bioscience* (2015) 4(6):17-27.
17. Ahmad A, Wani MY, Khan A, **Manzoor N**, Molepo J. Synergistic Interactions of Eugenol-tosylate and Its Congeners with Fluconazole against *Candida albicans*. *PLoS ONE* (2015) 10 (12): e0145053.
18. **Manzoor N**. Reversing Antifungal Drug Resistance using Natural Plant Products. *Transcriptomics: Open Access*. (2015) 3(1):1365-1371.
19. Rahisuddin, Al-Thabaiti SA, Khan Z, **Manzoor N**. Biosynthesis of silver nanoparticles and its antibacterial and antifungal activities toward Gram positive, Gram negative bacterial strains and different species of *Candida* fungus. *Bioprocess and Biosystems Engineering* (2015) 38 (9):1773-1781.
20. Singh U, Dar M M, Anayutullah S, Alam H, **Manzoor N**, Al-Thabaiti SA, Hashmi AA. Design and synthesis of Co(II) and Cu(II) complexes of a dendrimeric chelate: Promising anticandidal potential of chelotherapeutic agents. *Journal of Coordination Chemistry* (2015) 68 (12): 2096-2106.
21. Samber N, Khan Amber, Varma A, **Manzoor N**. Synergistic anti-candidal activity and mode of action of *Mentha piperita* essential oil and its major components. *Pharmaceutical Biology* (2015) 53(10):1496-1504.
22. Khan N, Mishra A, Alam H, **Manzoor N**, Sardar M. Biosynthesis, characterization and antifungal activity of the Silver nanoparticles against pathogenic *Candida* species. *BioNanoScience* (2015) 5: 65-74.
23. Dar MM, Singh U, Alam H, **Manzoor N**, Al-Thabaiti SA, Hashmi AA. Synthesis, Electrocatalytic Behavior and Biological Evaluation of Trimetallic Macrocyclic Complex with Two Different Bridging Ligands. *Canadian Chemical Transactions* (2015): 3(2):184-194.

24. Khan A, Ahmad A, Khan LA, Padoa CJ, Vuuren Sv, **Manzoor N**. Effect of two monoterpene phenols on antioxidant defense system in *Candida albicans*. *Microbial Pathogenesis* (2015) 80: 50-56.
25. Irfan M, Aneja B, Yadava U, Khan SA, **Manzoor N**, Daniliuc CG, Abid M. Synthesis, QSAR and anticandidal evaluation of 1,2,3-triazoles derived from naturally bioactive scaffolds. *European Journal of Medicinal Chemistry* (2015) 93:246-254.
26. Ahmad A, Khan A, Samber N, **Manzoor N**. Antimicrobial activity of *Mentha piperita* essential oil in combination with silver ions. *Synergy* (2014) 1(2): 92-98.
27. Verma JS, Gupta Y, Nair D, **Manzoor N**, Rautela RS, Rai A, VM Katoch. Evaluation of *gid B* alterations responsible for streptomycin resistance in *Mycobacterium tuberculosis*. *Journal of Antimicrobial Chemotherapy* (2014) 69: 2935-2941.
28. Rastogi N, Nagpal N, Alam H, Pandey S, Gautam L, Sinha M, Shin K, **Manzoor N**, Viridi JS, Kaur P, Sharma S, Singh TP. Preparation and Antimicrobial Action of Three Tryptic Digested Functional Molecules of Bovine Lactoferrin. *PLoS ONE* (2014) 9(3): e90011.
29. Ahmad T, Wani IA, **Manzoor N**, Ahmed J, Kalam A, Al-Shihri A. Structural Characterization, Antifungal Activity and Optical Properties of Gold Nanoparticles Prepared by Reverse Micelles. *Adv. Sci. Lett.* (2014) 20:1631-1636.
30. Khan A, Ahmad A, Khan LA, **Manzoor N**. *Ocimum sanctum* (L.) Essential oil and its lead molecules induce apoptosis in *Candida albicans*. *Research in Microbiology* (2014) 165:411-419.
31. Irfan M, Khan M, **Manzoor N**, Abid M. Synthesis of N-2-aryl-substituted-1,2,3-triazole Derivatives as Novel Inhibitors of *Entamoeba histolitica*. *Open Journal of Organic Chemistry* (2014) 2(2):21-28.
32. Khan A, Ahmad A, Xess I, Khan LA, **Manzoor N**. *Ocimum sanctum* essential oil inhibits virulence attributes in *Candida albicans*. *Phytomedicine* (2014) 21:448-452.
33. Samber N, Varma A, **Manzoor N**. Evaluation of *Mentha piperita* essential oil and its major constituents for antifungal activity in *Candida* spp. *International Journal of Innovative Research in Science, Engineering and Technology* (2014) 3(2): 9404-9411.

34. Thomas E, Roman E, Claypool S, **Manzoor N**, Pla J, Panwar S. Mitochondria influences *CDR1* efflux pump activity, Hog1-mediated oxidative stress pathway, iron homeostasis and ergosterol levels in *Candida albicans*. *Antimicrobial Agents and Chemotherapy* (2013) 57(11):5580-99.
35. Ahmad T, Wani IA, **Manzoor N**, Ahmed J, Asiri AM. Biosynthesis, Structural Characterization and Antimicrobial Activity of Gold and Silver Nanoparticles. *Colloids and Surfaces B: Biointerfaces* (2013) 107:227–234.
36. Khan R, Srivastava R, Abdin, MZ, **Manzoor N**, Zafar M. Effect of soil contamination with heavy metals on soybean seed oil quality. *European Food Research and Technology* (2013) 236:707–714.
37. Irshad M, Ahmad A, Zafaryab M, Ahmad F, **Manzoor N**, Singh M, Rizvi MMA. Composition of *Cassia fistula* oil and its antifungal activity by disrupting ergosterol biosynthesis. *Natural Product Communications* (2013) 8(2):261-264.
38. Wani IA, **Manzoor N**, Ahmad T. Size and shape dependant antifungal activity of gold nanoparticles: A case study of *Candida*. *Colloids and Surfaces B: Biointerfaces* (2013) 101:162– 170.
39. Wani IA, Khatoon S, Ganguly A, Ahmed J, **Manzoor N**, Ahmad T. Structural characterization and antimicrobial properties of silver nanoparticles prepared by inverse microemulsion method. *Colloids and Surfaces B: Biointerfaces* (2013) 101: 243-250.
40. Shreaz S, Maurya IK, Bhatia R, Khan N, Muralidhar S, **Manzoor N**, Khan LA. Influences of cinnamic aldehydes on plasma membrane H<sup>+</sup> ATPase activity and ultrastructure of *Candida*, *J Medical Microbiology*. (2013) 62 (Pt 2): 232-40.
41. Mirza MA, Ahmed S, Mallick MN, **Manzoor N**, Talegaonkar S and Iqbal Z. Development of a novel synergistic thermosensitive gel for vaginal candidiasis: an *in vitro*, *in vivo* evaluation. *Colloids and Surfaces B: Biointerfaces* (2013) 103(1):275-282.
42. Ahmad T, Wani IA, Lone IH, Ganguly A, **Manzoor N**, Ahmad A, Ahmad J, Al-Shihri AS. Antifungal Activity of Gold Nanoparticles Prepared by Solvothermal Method. *Materials Research Bulletin*. (2013) 48:12–20.
43. Ahmad A, Khan A, **Manzoor N**. Reversal of efflux mediated antifungal resistance underlies synergistic activity of two monoterpenes with fluconazole. *European Journal of Pharmaceutical Sciences*. (2013) 48:80-86.



44. Khan SA, Ahmad A, Khan MI, Yusuf M, Shahid M, **Manzoor N**, Mohammad F. Antimicrobial activity of wool yarn dyed with *Rheum emodi* L. (Indian Rhubarb). Dyes and Pigments. (2012) 95(2): 206–214.
45. Shahid M, Ahmad A, Yusuf M, Khan MI, Khan SA, **Manzoor N**, Mohammad F. Dyeing, fastness and antimicrobial properties of woolen yarns dyed with gallnut (*Quercus infectoria Oliv.*) extract. Dyes and Pigments 95 (2012) 53-61.
46. Ali I, Wani WA, Khan A, Haque A, Ahmad A, Saleem K, **Manzoor N**. Synthesis and synergistic antifungal activities of a Pyrazoline based Ligand and its Copper (II) and Nickel (II) complexes with conventional antifungals. Microbial Pathogenesis (2012) 53(2):66-73.
47. Verma J S, Dhavan I, Nair D, **Manzoor N**, Kasana D. Rapid culture diagnosis of tuberculosis lymphadenitis from a tertiary care centre in an endemic nation: potential and pitfalls. Indian Journal of Medical Microbiology (2012) 30(3):342-345.
48. Khan N, Shreaz S, Bhatia R, Ahmad SI, Muralidhar S, **Manzoor N**, Khan LA. Anticandidal activity of curcumin and methyl cinnamaldehyde. Fitoterapia. (2012) 83(3) 434–440.
49. Shreaz S, Bhatia R, Khan N, Maurya IK, Ahmad SI, Muralidhar S, **Manzoor N**, Khan LA. Cinnamic aldehydes affect hydrolytic enzyme secretion and morphogenesis in oral *Candida* isolates. Microbial Pathogenesis (2012) 52(5):251-8.
50. Yusuf M, Ahmad A, Shahid M, Khan MI, Khan SA, **Manzoor N**, Mohammad F. Assessment of colorimetric, antibacterial and antifungal properties of woolen yarn dyed with the extract of the leaves of henna (*Lawsonia inermis*). Journal of Cleaner Production (2012) 27:42-50.
51. Bhatia R, Shreaz S, Muralidhar S, Basir SF, **Manzoor N**, Khan LA. Proton pumping ATPase mediated fungicidal activity of two essential oil components. Journal of Basic Microbiology (2012) 52: 504-512.
52. Verma J S, Rawat D, **Manzoor N**, Deb M, Nair D. Evaluation of nucleic acid probe for rapid identification of *Mycobacterium tuberculosis* complex in extra-pulmonary culture isolates. Journal of Communicable Diseases. (2011) 43 (1):11-5.

53. Shreaz S, Bhatia R, Khan N, Muralidhar S, Basir SF, **Manzoor N**, Khan LA. Spice oil cinnamaldehyde exhibits potent anticandidal activity against fluconazole resistant clinical isolates. *Fitoterapia* (2011) 82(7):1012–1020.
54. Srivastava R, Khan R, Nasim SA, **Manzoor N**, Mahmooduzzafar. Cadmium Treatment Alters Phytochemical and Biochemical Activity in *Glycine max* L. *International Journal of Botany*. (2011) 7(4): 305-309.
55. Srivastava R, Khan R, **Manzoor N**, Mahmooduzzafar. Responses of cadmium exposures on growth, physio-biochemical characteristics and the antioxidative defense system of soybean (*Glycine max* L.) *Journal of Phytology* (2011) 3(10): 20-25.
56. Verma JS, Nair D, Rawat D, **Manzoor N**. Assessment of trends of Ofloxacin resistance in *Mycobacterium tuberculosis*. *Indian Journal of Medical Microbiology* (2011) 29(3):280-282.
57. Ahmad A, Khan A, Kumar P, Bhatt RP, **Manzoor N**. Antifungal activity of *Coriaria nepalensis* essential oil by disrupting ergosterol biosynthesis and membrane integrity against *Candida*. *Yeast* (2011) 28(8):611-617.
58. Shreaz S, Bhatia R, Khan N, Ahamd S I, Muralidhar S, Basir SF, **Manzoor N**, Khan L A. Interesting anticandidal effects of anisic aldehydes on growth and proton-pumping ATPase targeted activity. *Microbial Pathogenesis* (2011) 51(4):277-84.
59. Shreaz S, Bhatia R, Khan N, **Manzoor N**, Muralidhar S, Khan LA. Exposure of *Candida* to p-anisaldehyde inhibits its growth and ergosterol biosynthesis. *Journal of General and Applied Microbiology*. (2011) 57: 129-136.
60. Shreaz S, Rayees AS, Bhatia R, Khan N, Imran S, Hashmi AA, **Manzoor N**, Basir SF, Khan LA. Antifungal activity of  $\alpha$ -methyl trans cinnamaldehyde, its ligand and metal complexes: Promising growth and ergosterol inhibitors. *Biometals* (2011) 24(5):923-33.
61. Ahmad A, Khan A, Bharathi NP, Hashmi AA, Khan LA, **Manzoor N**. Impaired ergosterol biosynthesis mediated fungicidal activity of oil based tin polymer. *Medicinal Chemistry Research*. (2011) 20 (8): 1141-1146.
62. Khan MI, Ahmad A, Khan SA, Yusuf M, Shahid M, **Manzoor N**, Mohammad F. Assessment of antimicrobial activity of *Catechu* and its dyed substrate. *Journal of Cleaner Production* (2011) 19:1385-1394.

63. Khan N, Sheikh S, Bhatia R, S. Muralidhar, **Manzoor N**, Khan LA. Curcumin as a promising antifungal of clinical interest. *Canadian Journal of Microbiology* (2011) 57:204-210.
64. Irshad M, Shreaz S, **Manzoor N**, Khan LA, Rizvi MA. Anticandidal activity of *Cassia fistula* and its effect on ergosterol biosynthesis. *Pharmaceutical Biology* (2011) 49(7):727-733.
65. Yousuf S, Ahmad A, Khan A, **Manzoor N**, Khan LA. Effect of garlic derived allylsulphides on Morphogenesis and hydrolytic enzyme secretion in *Candida albicans*. *Medical Mycology*. (2011) 49 (4): 444-448.
66. Mehdi SJ, Ahmad A, Irshad M, **Manzoor N**, Rizvi MMA. Cytotoxic effect of Carvacrol on human cervical cancer cells. *Biology and Medicine* (2011) 3(2) 307-312.
67. Khan A, Ahmad A, Akhtar F, Yousuf S, Xess I, Khan LA, **Manzoor N**. Induction of oxidative stress as a possible mechanism of antifungal action of Three Phenylpropanoids. *FEMS-Yeast Research* (2011) 11(1):114-122.
68. Ahmad A, Khan A, Akhtar F, Yousuf S, Xess I, Khan LA, **Manzoor N**. Fungicidal activity of thymol and carvacrol by disrupting ergosterol biosynthesis and membrane integrity against *Candida*. *Eur J Clin Microb & Infect Diseases*. (2011) 30 (1) 41-50.
69. Khan A, Ahmad A, Akhtar F, Yousuf S, Xess I, Khan LA, **Manzoor N**. *Ocimum sanctum* essential oil and its active principles exert their antifungal activity by disrupting ergosterol biosynthesis and membrane integrity. *Research in Microbiology*. (2010) 161:816-823.
70. Ahmad A, Khan A, Yousuf S, Khan LA, **Manzoor N**. Proton translocating ATPase mediated fungicidal activity of Eugenol and Thymol. *Fitoterapia*. (2010) 81(8):1157-1162.
71. Yousuf S, Ahmad A, **Manzoor N**, Khan LA. Effect of Diallyldisulphide on Antioxidant Enzyme System in *Candida* species. *Canadian J of Microbiology* (2010) 56(10) 816-821.
72. Ahmad A, Khan A, Khan LA, **Manzoor N**. *In vitro* synergy of eugenol and methyl eugenol with fluconazole against clinical *Candida* isolates. *J of Medical Microbiology* (2010) 59: 1178-1184.

73. Shreaz S, Rayees AS, Bhatia R, Hashmi AA, **Manzoor N**, Khan LA. Anticandidal activity of cinnamaldehyde, its ligand and Ni(II) complex: Effect of increase in ring and side chain. *Microbial Pathogenesis* (2010) 49: 75-82.
74. Khan A, Ahmad A, Immaculata X, Khan LA, **Manzoor N**. Anticandidal effect of *Ocimum sanctum* Essential Oil and its synergy with fluconazole and ketoconazole. *Phytomedicine* (2010) 17:921-925.
75. Khan A, Ahmad A, **Manzoor N**, Khan LA. Antifungal activities of *Ocimum sanctum* essential Oil and its lead molecules. *Natural Products Communications* (2010) 5(2): 345-349.
76. Ahmad A, Khan A, **Manzoor N**, Khan LA. Evolution of Ergosterol Biosynthesis Inhibitors as Fungicidal against *Candida*. *Microbial Pathogenesis* (2010) 48:35-41.
77. Ojha R, Prasad R, **Manzoor N**, Khan LA. Vitamin C modulates oxidative stress related enzyme activities in *Candida albicans*. *Turkish Journal of Biochemistry* (2010) 35 (1): 35-40.
78. Ojha R, **Manzoor N**, Khan LA. Ascorbic acid modulates Pathogenicity markers of *Candida albicans*. *International Journal of Microbiology Research* (2009) 1(1): 19-24.
79. **Manzoor N**, Haque MM, Khan LA. Pre-steady state kinetics of Na, K-ATPase. *Cell Biochemistry & Function*. (2009) 27 (3): 135-41.
80. Rashid B, **Manzoor N**, Khan LA. Kinetic Analysis of Nutrient stimulated H<sup>+</sup> efflux by PM-ATPase of *Candida albicans*. *Revista Latinoamericana de Microbiologia* (2007) 49(3-4):55-59.
81. Haque MM, **Manzoor N**, Amin M, Hussain E, Khan LA. Glucose Regulation of Pre-steady state kinetics of ATP hydrolysis by Na, K-ATPase. *Acta Biochimica et Biophysica Sinica* (2007) 39(8):583-590.
82. Haque MM, Pooja, **Manzoor N**, Khan LA, Basir SF. Effect of Sodium nitroprusside on H<sup>+</sup>-ATPase activity and ATP concentration in *Candida albicans*. *Indian Journal of Experimental Biology* (2005) 43: 873-879.
83. **Manzoor N**, Haque MM, Khan LA. Inhibition of H<sup>+</sup> extrusion by Phosphocreatine in *Candida albicans*. *Journal of Plant Biochemistry and Biotechnology* (2004) 13:65-67.

84. Rashid B, **Manzoor N**, Khan LA, Amin M. Effect of glucose, its analogs and some amino acids on pre-steady state kinetics of ATP hydrolysis by PM-ATPase of *Candida albicans*. Korean Journal of Biological Sciences (2004) 8:307-312.
85. Haque MM, **Manzoor N**, Hussain E, Khan LA. Effect of nitric oxide on H<sup>+</sup>-efflux in the presence of various nutrients in *Candida albicans*. Indian Journal of Experimental Biology (2004) 42:86-90.
86. **Manzoor N**, Khan LA, Amin M. Effect of Phosphocreatine on H<sup>+</sup>-extrusion, pH<sub>i</sub> and dimorphism in *Candida albicans*. Indian Journal of Experimental Biology (2002) 40:785-790.
87. **Manzoor N**, Khan LA, Amin M. Nutrient associated changes in plasma membrane H<sup>+</sup>-ATPase activity of permeabilized *Candida albicans* cells. Indian Journal of Biochemistry & Biophysics (2000) 37: 241-244.
88. **Manzoor N**, Khan LA, Amin M. Pre steady state kinetic studies on H<sup>+</sup>-ATPase from *Candida albicans*. Journal of Biochemistry (Japan) (1999) 126:776-780.

#### **Articles:**

1. Almonds-The King of Nuts, Health Watch, Science Reporter, January 2006, pp. 32-34, NISCAIR.
2. DNA Fingerprinting — Biomedical Applications, CURE Environment Bulletin 2004 Vol X, pp. 27-29.
3. BIOSENSORS — Probing into Medicine and Environment, Cover story, Science Reporter, September 2003 pp. 9-15, NISCAIR.
4. Bacteria in Beads, Science Reporter, Jan 2001, NISCOM

#### **Membership of Academic/Professional/Administrative Bodies**

- Deputy Proctor, Jamia Millia Islamia (2019 till date)
- Anti-Ragging Squad, Jamia Millia Islamia, 2019-2020
- Teacher Incharge, Grievance Committee, Jamia Millia Islamia (2019- till date)
- Assistant Superintendent, even semester exams of UG/PG courses, F/O Natural Sciences, 2018-2019
- Member, Expert Committee Meeting to design and develop Core Course of Zoology entitled “Immunology”, IGNOU on 6<sup>th</sup> March 8, 2019.
- Member, Advisory Committee, UGC Sponsored National Seminar on Recent Advances in Environmental Toxicology 13-14th February, 2017

- Member, Microbiology Track, MLT, Applied Medical Sciences, Taibah University, Al-Madinah Al-Munawarah, KSA (2014 - 2018)
- Academic Advisor to students, MLT, College of Applied Medical Sciences, Taibah University, Al-Madinah Al-Munawarah, KSA. (2014 - 2018)
- Member, Committee for development of faculty members and students' skills, College of Applied Medical Sciences, Taibah University, Al-Madinah Al-Munawarah, KSA (2014-2018).
- Assistant Proctor, Jamia Millia Islamia (2013-2014)
- Incharge, Girls Common Room, Dept of Biosciences, Jamia Millia Islamia (2013-2014)
- Member, Purchase Committee, Dept of Biosciences, Jamia Millia Islamia (2011-14)
- Advisor, Bioscience Subject Association, Jamia Millia Islamia (2007-2009)
- Member, Faculty Committee, Faculty of Natural Sciences, Jamia Millia Islamia.
- Life Member, Association of Microbiologists of India (AMI) [1707-2003].
- Life Member, Society of Biological Chemists [2454]

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