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**Biological Sciences**

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**Specialization:**

Virology and Immunology (Neuroscience)

**Education:**

PhD Virology and Immunology (2010-2017), National University of Sciences and Technology (NUST), Islamabad, Pakistan.

M. Phil Biology (2007-2009), Pir Mehr Ali Shah University, Rawalpindi, Pakistan.

M.Sc. Biochemistry (2005-2007), Pir Mehr Ali Shah University, Rawalpindi, Pakistan.

B.Sc. (Bot, Zool., Chem.), (2003-2005) F. G. College for Women, Wah Cantt.

**Experience:**

Assistant Professor (2018 – To date), National University of Medical Sciences, Rawalpindi, Pakistan.

**Research Interests:**

Molecular Mechanisms involved in neurodegenerative disorders, Metal Neurotoxicity, Cholinergic system,

**Publications:**

**1. Oral exposure to aluminum leads to reduced nicotinic acetylcholine receptor gene expression, severe neurodegeneration and impaired hippocampus dependent learning in mice.**

**Syeda Mehpara Farhat**, Aamra Mahboob., and Touqeer Ahmed.  
Drug and Chemical Toxicology. 2019, 1-9.

**2. Aluminum Suppresses Effect of Nicotine on Gamma Oscillations (20-40 Hz) in Mouse Hippocampal Slices.**

**Syeda Mehpara Farhat** and Touqeer Ahmed.  
CNS & neurological disorders drug targets. 2018, 17(6):404-411.

**3. Cortex-and Amygdala-Dependent Learning and Nicotinic Acetylcholine Receptor Gene Expression is Severely Impaired in Mice Orally Treated with AlCl<sub>3</sub>.**

**Syeda Mehpara Farhat**, Aamra Mahboob., and Touqeer Ahmed.

Biological Trace Element Research, 2017, 179(1): 91-101.

**4. Aluminum-Induced Cholinergic Deficits in Different Brain Parts and Its Implications on Sociability and Cognitive Functions in Mouse.**

**Syeda Mehpara Farhat**, Aamra Mahboob., Ghazala Iqbal and Touqeer Ahmed.

Biological Trace Element Research, 2016, 177(1): 115-121.

**5. Neuroprotective and Neurotoxic Implications of  $\alpha 7$  Nicotinic Acetylcholine Receptor and A $\beta$  Interaction: Therapeutic Options in Alzheimer's Disease.**

**Syeda Mehpara Farhat** and Touqeer Ahmed.

Current Drug Targets, 2016, 18(13):1537-1544.

**6. Alpha-lipoic acid-mediated activation of muscarinic receptors improves hippocampus-and amygdala-dependent memory.**

Aamra Mahboob., **Syeda Mehpara Farhat.**, Ghazala Iqbal, Mustafeez Mujtaba Babar, Najam-us-Sahar Sadaf Zaidi, Seyed Mohammad Nabavi, Touqeer Ahmed

Brain Research Bulletin, 2016, 122: 19-28.

**7. Cholinergic System and Post-translational Modifications: An Insight on the Role in Alzheimer's Disease.**

Touqeer Ahmed, Saadia Zahid, Aamra Mahboob, **Syeda Mehpara Farhat**

Current neuropharmacology, 2016, 15(4):480-4940

**8. Memory Enhancing Effect of Black Pepper in the AlCl<sub>3</sub> Induced Neurotoxicity Mouse Model is Mediated Through Its Active Component Chavicine.**

Ghazala Iqbal, Anila Iqbal, Aamra Mahboob, **Syeda Mehpara Farhat** and Touqeer Ahmed

Current Pharmaceutical Biotechnology, 2016, 17(11): 962-973.