

## **Mohammad Raish, Ph.D**

Associate Professor,  
Department of Pharmaceutics,  
Collage of Pharmacy,  
King Saud University,  
Riyadh P.O.2454,  
Kingdom of Saudi Arabia,  
Email: [mraish@ksu.edu.sa](mailto:mraish@ksu.edu.sa),  
Mobile: +966508381927

### **OBJECTIVE:**

**To achieve excellence in the field of Molecular Biology and Biotechnology related research, and always try to give our best of my abilities for an organization with a challenging environment and to further hone my skills.**

### **RESEARCH EXPERIENCE**

1. Presently working as **Associate Professor** in Department of Pharmaceutics, collage of Pharmacy, King **Saud University, and Riyadh Saudi Arabia. Since 2017.**
2. Presently working as **Assistant Professor** in Department of Pharmaceutics, collage of Pharmacy, King **Saud University, and Riyadh Saudi Arabia. 2009-2017.**
- 3.
4. Worked as **Research Professor** Nov 2008-September 2009 **Catholic Research Institute of Medical Sciences, The Catholic University of Korea, Seoul, Korea**
5. Worked as a **Research Associate** in DBT Funded Project since Nov 2007-Aug 2008 in a project entitled, "*Functional and structural attributes of Zona Pellucida in fertilization*" Gamete Antigen lab National institute of Immunology, Aruna Asaf Ali Marg, New Delhi, 110067.
6. Worked as a Junior Research Fellow in DST Funded Project from Dec 2003-Sep 2007 in a project entitled, "*Evaluation of mutation and expression of fhit gene in Indian Female breast cancer patient*" under the guidance of Dr.Syed Akhtar Husain Department of Biosciences Jamia Millia Islamia New Delhi-110025 INDIA.

## LIST OF PUBLICATIONS IN REFEREED JOURNALS:

1. Raish, M., A. Ahmad, M.A. Ansari, K.M. Alkharfy, F.I. Aljenoobi, B.L. Jan, A.M. Al-Mohizea, A. Khan, and N. Ali, *Momordica charantia polysaccharides ameliorate oxidative stress, inflammation, and apoptosis in ethanol-induced gastritis in mucosa through NF-kB signaling pathway inhibition*. International journal of biological macromolecules, 2018. **111**: p. 193-199.
2. Raish, M., A. Ahmad, M.A. Ansari, K.M. Alkharfy, A. Ahad, A. Khan, F.I. Aljenoobi, N. Ali, and A.M. Al-Mohizea, *Effect of sinapic acid on aripiprazole pharmacokinetics in rats: Possible food drug interaction*. Journal of Food and Drug Analysis, 2018.
3. Raish, M., A. Ahmad, M.A. Ansari, A. Ahad, F.I. Al-Jenoobi, A.M. Al-Mohizea, A. Khan, and N. Ali, *Sinapic acid ameliorates bleomycin-induced lung fibrosis in rats*. Biomedicine & Pharmacotherapy, 2018. **108**: p. 224-231.
4. Madkhali, H.A., M.A. Ganaie, M. Raish, B.L. Jan, and A. Ahmad. *Nardostachys jatamansi ameliorates doxorubicin induced cardiotoxicity via down regulation oxidative stress and inflammatory markers in rats*. in *FASEB JOURNAL*. 2018. FEDERATION AMER SOC EXP BIOL 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3998 USA.
5. Gautam, V., S. Kohli, S. Arora, R. Bhardwaj, M. Kazi, A. Ahmad, M. Raish, M. Ganaie, and P. Ahmad, *Antioxidant and Antimutagenic Activities of Different Fractions from the Leaves of Rhododendron arboreum Sm. and Their GC-MS Profiling*. Molecules, 2018. **23**(9): p. 2239.
6. Bhat, M.A., M.A. Al-Omar, M. Raish, M.A. Ansari, H.A. Abuelizz, A.H. Bakheit, and A.M. Naglah, *Indole Derivatives as Cyclooxygenase Inhibitors: Synthesis, Biological Evaluation and Docking Studies*. Molecules, 2018. **23**(6): p. 1250.
7. Alkholief, M., H. Albasit, A. Alhowyan, S. Alshehri, M. Raish, M.A. Kalam, and A. Alshamsan, *Employing a PLGA-TPGS based nanoparticle to improve the ocular delivery of Acyclovir*. Saudi Pharmaceutical Journal, 2018.
8. Alkharfy, K.M., A. Ahmad, B.L. Jan, and M. Raish, *Thymoquinone reduces mortality and suppresses early acute inflammatory markers of sepsis in a mouse model*. Biomedicine & Pharmacotherapy, 2018. **98**: p. 801-805.

9. Ahmad, A., M. Raish, K.M. Alkharfy, I.A. Alsarra, A. Khan, A. Ahad, B.L. Jan, and F. Shakeel, *Solubility, solubility parameters and solution thermodynamics of thymoquinone in different mono solvents*. Journal of Molecular Liquids, 2018. **272**: p. 912-918.
10. Ahmad, A., B.L. Jan, M. Raish, K.M. Alkharfy, A. Ahad, A. Khan, M.A. Ganaie, and M.A.A. Hamidaddin, *Inhibitory effects of Lepidium sativum polysaccharide extracts on TNF- $\alpha$  production in Escherichia coli-stimulated mouse*. 3 Biotech, 2018. **8**(6): p. 286.
11. Ahad, A., F. Shakeel, O.A. Alfaifi, M. Raish, A. Ahmad, F.I. Al-Jenoobi, and A.M. Al-Mohizea, *Solubility determination of raloxifene hydrochloride in ten pure solvents at various temperatures: Thermodynamics-based analysis and solute-solvent interactions*. International journal of pharmaceutics, 2018. **544**(1): p. 165-171.
12. Ahad, A., M. Raish, F.I. Al-Jenoobi, and A.M. Al-Mohizea, *Sorbitane monostearate and cholesterol based niosomes for oral delivery of telmisartan*. Current drug delivery, 2018. **15**(2): p. 260-266.
13. Ahad, A., M. Raish, A. Ahmad, F.I. Al-Jenoobi, and A.M. Al-Mohizea, *Development and biological evaluation of vesicles containing bile salt of telmisartan for the treatment of diabetic nephropathy*. Artificial cells, nanomedicine, and biotechnology, 2018: p. 1-8.
14. Ahad, A., M. Raish, A. Ahmad, F.I. Al-Jenoobi, and A.M. Al-Mohizea, *Eprosartan mesylate loaded bilosomes as potential nano-carriers against diabetic nephropathy in streptozotocin-induced diabetic rats*. European Journal of Pharmaceutical Sciences, 2018. **111**: p. 409-417.
15. Ahad, A., A.A. Al-Saleh, A.M. Al-Mohizea, F.I. Al-Jenoobi, M. Raish, A.E.B. Yassin, and M.A. Alam, *Formulation and characterization of Phospholipon 90 G and tween 80 based transfersomes for transdermal delivery of eprosartan mesylate*. Pharmaceutical development and technology, 2018. **23**(8): p. 787-793.
16. Abdelgalil, A.A., M.A. Alam, M. Raish, I.E. Mohammed, A.-E.H. Mohammed, M.A. Ansari, and F.I. Al Jenoobi, *Dasatinib significantly reduced in vivo exposure to cyclosporine in a rat model: The possible involvement of CYP3A induction*. Pharmacological Reports, 2018.

17. Syed Rizwan Ahamad, A.Q.A., Mohammad Raish, Faiyaz Shakeel, *Metabolomic and elemental analysis of camel and bovine urine by GC-MS and ICP-MS*. Saudi journal of biological sciences, 2017.
18. Shakeel, F., N. Haq, M.M. Salem-Bekhit, and M. Raish, *Solubility and dissolution thermodynamics of sinapic acid in (DMSO+ water) binary solvent mixtures at different temperatures*. Journal of Molecular Liquids, 2017. **225**: p. 833-839.
19. Raish, M., A. Ahmad, B.L. Jan, K.M. Alkharfy, K. Mohsin, S.R. Ahamad, and M.A. Ansari, *GC-MS-based Metabolomic Profiling of Thymoquinone in Streptozotocin-induced Diabetic Nephropathy in Rats*. NATURAL PRODUCT COMMUNICATIONS, 2017. **12**(4): p. 553-558.
20. Raish, M., A. Ahmad, K.M. Alkharfy, B.L. Jan, K. Mohsin, A. Ahad, F.I. Al-Jenoobi, and A.M. Al-Mohizea, *Effects of Paeonia emodi on hepatic cytochrome P450 (CYP3A2 and CYP2C11) expression and pharmacokinetics of carbamazepine in rats*. Biomedicine & Pharmacotherapy, 2017. **90**: p. 694-698.
21. Raish, M., *Momordica charantia polysaccharides ameliorate oxidative stress, hyperlipidemia, inflammation, and apoptosis during myocardial infarction by inhibiting the NF- $\kappa$ B signaling pathway*. International journal of biological macromolecules, 2017. **97**: p. 544-551.
22. Mothana, R.A., M.S. Al-Said, M. Raish, J.M. Khaled, N.S. Alharbi, A. Alatar, A. Ahmad, M. Al-Sohaibani, M. Al-Yahya, and S. Rafatullah, *Chemical composition, anti-inflammatory and antioxidant activities of the essential oil of Piper cubeba L*. ROMANIAN BIOTECHNOLOGICAL LETTERS, 2017. **22**(2): p. 12366-12376.
23. Madkhali, H.A., M.A. Ganaie, B.L. Jan, A. Ahmad, M.L. Raish, and S.R. Ahamad, *Elemental and Lipophilic Analysis of Kashmir Saffron by ICP-MS and GC-MS and its in-vivo Anti-inflammatory Potential*. The FASEB Journal, 2017. **31**(1\_supplement): p. lb556-lb556.
24. Kalam, M.A., M. Raish, A. Ahmed, K.M. Alkharfy, K. Mohsin, A. Alshamsan, F.I. Al-Jenoobi, A.M. Al-Mohizea, and F. Shakeel, *Oral bioavailability enhancement and hepatoprotective effects of thymoquinone by self-nanoemulsifying drug delivery system*. Materials Science and Engineering: C, 2017. **76**: p. 319-329.
25. Iqbal, M., M.A. Bhat, M. Raish, and E. Ezzeldin, *Determination of (4-(1, 3-dioxo-1, 3-dihydro-2H-isoindol-2-yl)-N'-(4-ethoxyphenyl) methylidene] benzohydrazide, a novel anti-inflammatory agent, in biological fluids by*

*UPLC-MS/MS: Assay development, validation and in vitro metabolic stability study*. Biomedical Chromatography, 2017. **31**(10): p. e3981.

26. Bhat, M.A., M.A. Al-Omar, M. Raish, M.A. Ansari, and H.A. Abuelizz, *Cyclooxygenase inhibitors*, 2017, US Patent 9,808,443.
27. Ansari, M.A., M. Raish, A. Ahmad, K.M. Alkharfy, S.F. Ahmad, S.M. Attia, A.M. Alsaad, and S.A. Bakheet, *Sinapic acid ameliorate cadmium-induced nephrotoxicity: in vivo possible involvement of oxidative stress, apoptosis, and inflammation via NF- $\kappa$ B downregulation*. Environmental toxicology and pharmacology, 2017. **51**: p. 100-107.
28. Ansari, M.A., A. Nadeem, S.M. Attia, S.A. Bakheet, M. Raish, and S.F. Ahmad, *Adenosine A2A receptor modulates neuroimmune function through Th17/retinoid-related orphan receptor gamma t (ROR $\gamma$ t) signaling in a BTBR T+ Itpr3tf/J mouse model of autism*. Cellular signalling, 2017. **36**: p. 14-24.
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30. Ansari, A.A., S. Khan, A. Aldalbahi, A.K. Parchur, B. Kumar, A. Kumar, M. Raish, and S. Rai, *In-vitro cytotoxicity evaluation of surface design luminescent lanthanide core/shell nanocrystals*. Arabian Journal of Chemistry, 2017.
31. Al-Taweel, A.M., M. Raish, S. Perveen, G.A. Fawzy, A. Ahmad, M.A. Ansari, S. Mudassar, and M.A. Ganaie, *Nepeta deflersiana attenuates isoproterenol-induced myocardial injuries in rats: Possible involvement of oxidative stress, apoptosis, inflammation through nuclear factor (NF)- $\kappa$ B downregulation*. Phytomedicine, 2017. **34**: p. 67-75.
32. Alamri, R.G., K. Mohsin, A. Ahmad, M. Raish, and F.K. Alanazi, *Development and validation of bioanalytical UHPLC-UV method for simultaneous analysis of unchanged fenofibrate and its metabolite fenofibric acid in rat plasma: Application to pharmacokinetics*. Saudi Pharmaceutical Journal, 2017. **25**(1): p. 128-135.
33. Alam, P., M.J. Ansari, M.K. Anwer, M. Raish, Y.K. Kamal, and F. Shakeel, *Wound healing effects of nanoemulsion containing clove essential oil*. Artificial cells, nanomedicine, and biotechnology, 2017. **45**(3): p. 591-597.

34. Ahmad, A., M. Raish, M. Shahid, S. Batra, V. Batra, and S.A. Husain, *The synergic effect of HPV infection and epigenetic anomaly of the p16 gene in the development of cervical cancer*. *Cancer Biomarkers*, 2017. **19**(4): p. 375-381.
35. Ahmad, A., S.A. Husain, M.A. Shahid, and M. Raish, *Screening of Mutations/SNPs through Spectrophotometric Melt-Curve Analysis: A Preliminary Study on Non-Electrophoretic and No-Dye Method of Mutation Detection*. 2017.
36. Ahamad, S.R., M. Raish, S.H. Yaqoob, A. Khan, and F. Shakeel, *Metabolomics and trace element analysis of camel tear by GC-MS and ICP-MS*. *Biological trace element research*, 2017. **177**(2): p. 251-257.
37. Ahamad, S.R., M. Raish, A. Ahmad, and F. Shakeel, *Potential health benefits and metabolomics of camel milk by GC-MS and ICP-MS*. *Biological trace element research*, 2017. **175**(2): p. 322-330.
38. Ahamad, S.R., A.Q. Alhaider, M. Raish, and F. Shakeel, *Metabolomic and elemental analysis of camel and bovine urine by GC-MS and ICP-MS*. *Saudi journal of biological sciences*, 2017. **24**(1): p. 23-29.
39. Ahad, A., F. Shakeel, M. Raish, F.I. Al-Jenoobi, and A.M. Al-Mohizea, *Solubility and Thermodynamic Analysis of Antihypertensive Agent Nitrendipine in Different Pure Solvents at the Temperature Range of 298.15 to 318.15° K*. *AAPS PharmSciTech*, 2017. **18**(7): p. 2737-2743.
40. Ahad, A., A.A. Al-Saleh, A.M. Al-Mohizea, F.I. Al-Jenoobi, M. Raish, A.E.B. Yassin, and M.A. Alam, *Pharmacodynamic study of eprosartan mesylate-loaded transfersomes Carbopol® gel under Dermaroller® on rats with methyl prednisolone acetate-induced hypertension*. *Biomedicine & Pharmacotherapy*, 2017. **89**: p. 177-184.
41. Ahad, A., A.A. Al-Saleh, A.M. Al-Mohizea, F.I. Al-Jenoobi, M. Raish, A.E.B. Yassin, and M.A. Alam, *Formulation and characterization of novel soft nanovesicles for enhanced transdermal delivery of eprosartan mesylate*. *Saudi Pharmaceutical Journal*, 2017. **25**(7): p. 1040-1046.
42. Shakeel, F., M. Raish, M.K. Anwer, and R. Al-Shdefat, *Self-nanoemulsifying drug delivery system of sinapic acid: In vitro and in vivo evaluation*. *Journal of Molecular Liquids*, 2016. **224**: p. 351-358.

43. Shakeel, F., N. Haq, M. Raish, N.A. Siddiqui, F.K. Alanazi, and I.A. Alsarra, *Antioxidant and cytotoxic effects of vanillin via eucalyptus oil containing self-nanoemulsifying drug delivery system*. Journal of Molecular Liquids, 2016. **218**: p. 233-239.
44. Shakeel, F., N. Haq, M. Raish, M.K. Anwer, and R. Al-Shdefat, *Solubility and thermodynamic analysis of sinapic acid in various neat solvents at different temperatures*. Journal of Molecular Liquids, 2016. **222**: p. 167-171.
45. Salem-Bekhit, M.M., M.O.G. El Rab, M.M. Tawfick, M. Raish, M.D. Fathallah, and M. Bayomi, *Original Research Article Humoral and cellular immune responses to modified hepatitis B plasmid DNA vaccine in mice*. Tropical Journal of Pharmaceutical Research, 2016. **15**(4): p. 687-693.
46. Salem-Bekhit, M.M., M.O.G. El Rab, M.M. Tawfick, M. Raish, M.D. Fathallah, and M. Bayomi, *Humoral and cellular immune responses to modified hepatitis B plasmid DNA vaccine in mice*. Tropical Journal of Pharmaceutical Research, 2016. **15**(4): p. 687-693.
47. Raish, M., A. Ahmad, B.L. Jan, K.M. Alkharfy, M.A. Ansari, K. Mohsin, F. al Jenooobi, and A. Al-Mohizea, *Momordica charantia polysaccharides mitigate the progression of STZ induced diabetic nephropathy in rats*. International journal of biological macromolecules, 2016. **91**: p. 394-399.
48. Raish, M., A. Ahmad, K.M. Alkharfy, F.I. Al-Jenoobi, A.M. Al-Mohizea, K. Mohsin, S.R. Ahamad, N. Ali, and F. Shakeel, *Antioxidant potential and in situ analysis of major and trace element determination of Ood-saleeb, a known unani herbal medicine by ICP-MS*. Biological trace element research, 2016. **172**(2): p. 521-527.
49. Raish, M., A. Ahmad, K.M. Alkharfy, S.R. Ahamad, K. Mohsin, F.I. Al-Jenoobi, A.M. Al-Mohizea, and M.A. Ansari, *Hepatoprotective activity of Lepidium sativum seeds against D-galactosamine/lipopolysaccharide induced hepatotoxicity in animal model*. BMC complementary and alternative medicine, 2016. **16**(1): p. 501.
50. Mothana, R., M. Alsaid, J.M. Khaled, N.S. Alharbi, A. Alatar, M. Raish, M. Al-Yahya, S. Rafatullah, M.K. Parvez, and S.R. Ahamad, *Assessment of antinociceptive, antipyretic and antimicrobial activity of Piper cubeba L. essential oil in animal models*. Pakistan journal of pharmaceutical sciences, 2016. **29**.

51. Mohsin, K., A.A. Rayan Alamri, M. Raish, F.K. Alanazi, and M.D. Hussain, *Development of self-nanoemulsifying drug delivery systems for the enhancement of solubility and oral bioavailability of fenofibrate, a poorly water-soluble drug*. International journal of nanomedicine, 2016. **11**: p. 2829.
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53. Iqbal, M., E. Ezzeldin, M.A. Bhat, M. Raish, and K.A. Al-Rashood, *Preclinical pharmacokinetics, tissue distribution and excretion studies of a novel anti-candidal agent-thiosemicarbazide derivative of isoniazid (TSC-INH) by validated UPLC–MS/MS assay*. Journal of pharmaceutical and biomedical analysis, 2016. **117**: p. 109-117.
54. Badran, M., A. Ahmad, M. Raish, and K. Mohsin, *Development, Characterization and In Vitro Skin Permeation Studies of Lornoxicam-Loaded Cubosomes (Novel Nanocarriers) versus Liposomes*. LATIN AMERICAN JOURNAL OF PHARMACY, 2016. **35**(2): p. 358-365.
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57. Alqarni, H.M., M. Kazi, A. Ahmad, M. Raish, and F.K. Alanazi, *Stability Indicating RP-UHPLC Method Development and Validation of Antipsychotic Drug Risperidone in Self Emulsifying Lipid and Solid Dosage Formulation*. LATIN AMERICAN JOURNAL OF PHARMACY, 2016. **35**(8): p. 1791-1798.
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61. Shakeel, F., F.K. Alanazi, M. Raish, N. Haq, A.A. Radwan, and I.A. Alsarra, *Pharmacokinetic and in vitro cytotoxic evaluation of cholesterol-rich nanoemulsion of cholesteryl-succinyl-5-fluorouracil*. Journal of Molecular Liquids, 2015. **211**: p. 164-168.
62. Korashy, H., F. Al-Jenoobi, M. Raish, A. Ahad, A. Al-Mohizea, M. Alam, K. Alkharfy, and S. Al-Suwayeh, *Impact of herbal medicines like Nigella sativa, Trigonella foenum-graecum, and Ferula asafoetida, on cytochrome P450 2C11 gene expression in rat liver*. Drug Res (Stuttg), 2015. **65**(7): p. 366-372.
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66. AL-Mohizea, A.M., A. Ahad, M. Raish, F.I. AL-Jenoobi, and M.A. Alam, *Improved Oral Bioavailability of Theophylline, a Narrow Therapeutic Index Drug by Ginger*. LATIN AMERICAN JOURNAL OF PHARMACY, 2015. **34**(2): p. 333-337.

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## ACADEMIC PROFILE

**Ph.D Entitled, - Molecular Analysis of FHIT Gene and P<sup>16</sup> ink4a Gene and Their Association With Human Pappiloma Virus (HPV) In Indian Head Neck Carcinoma Patients.**

2008: **Ph,D in Human genetics of cancer** From Department of Biosciences Jamia Millia Islamia (central university) New Delhi-110025 India. Entitled,-Molecular analysis of FHIT gene and p16 gene and their association with human pappiloma virus (HPV) in Indian head neck carcinoma patients.

2002: **MS Biotechnology** scoring (*Majors: Cell & Molecular Biology.*) from Bundelkhand University, Jhansi-284128 (U.P.) India.

2000: **B.S Pharmaceutical Sciences** scoring (*Majors: Pharmaceutics, Pharmacology, medicinal chemistry, Natural Products, Pharmaceutical Biochemistry, Pharmabiotechnology*) from Jamia Hamdard University, New Delhi -110062

## **RESEARCH SPECIFIC SKILL**

### **PROTEOMICS**

- Genetic engineering: directed mutagenesis, construction of expression vectors, sequencing, production of recombinant protein, cloning, PCR, RT-PCR
- Microbiology: fermentation processes (batch, fed-batch, continuous), scale-up, production of biomass and metabolites (developed in laboratory, scaling and production)
- Proteomics: protein identification: 2D-electrophoresis, mass spectrometry (LC MS/MS, MALDITOF)
- Purification: bio-chromatography using AKTA, Gradifac, Biopilot, FPLC, immunoprecipitation, purification by extraction, Affinity chromatography.
- Isolation and characterization of Recombinant proteins.
- Immunology: Western-blot, ELISA, immuno-fluorescence, immunisation, hybridoma cloning
- MALDI-Tof-MS,ESI –MS, 2D gel electrophoresis, etc.

### ➤ **GENOMICS**

- ELISA ,Southern, Northern and Western Blotting
- cDNA library construction and screening; vector construction and cloning of gene
- PCR,Realtime PCR and RT-PCR skills
- Methylation specific PCR, Fusion PCR
- SSCP, Microsatelite Assay
- EMSA
- Si RNA mediated gene silencing
- Microarray ,CGH array

- □ Primer design for cloning and diagnostic PCR
- □ SDS Page, Native Page, 2D-Electrophoresis
- □ Immunohistochemistry, Cytochemistry
- □ Handling of animal (Mice, Rat, Rabbits and Apes )
- **CELL BIOLOGY**
- □ Tissue culture: MOLT-4, HELA, MDA-MD-435, MCF-7, HeLa Maintenance of cell lines, and their characterization.
- □ Cell proliferation assays (MTT, thymidine incorporation) and viability assays
- □ Immunoprecipitation and purification of Proteins using Dialysis
- □ Protein extraction from cells and tissue for phosphorylation or ubiquitination
- □ Antibody (Monoclonal/polyclonal) production from recombinant proteins
- □ Protein Purification (affinity, ion exchange chromatography)
- □ Bioinformatics: - Data mining in websites e.g. ensembl and NCBI Swiss Prot.
- □ Trained in Good Laboratory and Manufacturing Practices (GLP and GMP) Working knowledge of technological software Microsoft Office and bioinformatics (SRS, Entrez)

***TRAINING RECEIVED:***

Done 6 months Dissertation work at Bhabha Atomic Research Center in Cell Biology Division Section Immunology Project Entitled “Effect of Serum Transforming Growth Factor (TGFB) on Tumor Growth & its Association with Tumor Regression in Swiss Mice”.

Done 6 months Dissertation work at Bhabha Atomic Research Center in Cell Biology Division Section Immunology Project Entitled “Generation of Monoclonal Antibodies against Glycophorin A (MN)”.

**COMPUTER LITERACY:**

Basic computer applications in general and biological sciences as MS Office, Windows 98, Windows 2000, Windows XP, Internet Explorer, e-mail etc.

**Personal Details**

**Name in Full:** Dr.Mohammad Raish

**Date of Birth:** January 26, 1976

**Father's name:** Mohammad Haleem

**Permanent Address:** H.No. 5, Primary Health Centre  
Mehrouli New Delhi-110030 (INDIA)

**Marital status:** Married

**Passport No- J 5356704** **Date of expiry -22/03/2021**

**Iqama No- 2280356458** **Date of expiry -**