

EXECUTIVE SUMMARY

- Molecular Biologist with more than **9 years of experience** in designing and performing research experiments, Intellectual Property domain, research project writing experience, and **clinical trial** research and product evaluation experience in the field of medical sciences.
- Completed Research project as **Principal Investigator from All India Institute of Medical Sciences, New Delhi**, sanctioned by Department of Science & Technology (DST), New Delhi.
- **Editorial board member** of - International Journal of Medical Laboratory Research (IJMLR) [ISSN 2456-4400]; and Biochemistry and Molecular Biology [ISSN Print: 2575-5064; ISSN Online: 2575-5048].
- Published- **5 Research Articles, 2 Book chapters, 1 WIPO publication and 1 granted Patent**. – (Citations-55)
- Presented work and received **certificate of appreciation** as an **invited speaker on “Epigenetics: The Future for Diagnosing and Treating Reproductive Disorder”** in the international conference of Genomic Medicine-2017 (22nd - 24th February 2017) at Double-Tree by Hilton in **Baltimore, USA**.
- Focused on **translational Research**: Being an inventor and assignee of a patented Medicated thread that has been tested through randomized, triple-blind, parallel-group, single-site **Clinical trial (Phases-I to III)**, giving 100% result in curing patients with fistula-in-ano through medicated thread leading to epigenetic modulation.
- Worked in the Department of Forensic Medicine and Toxicology, All India Institute of Medical Sciences, New Delhi for my M.Sc. dissertation.

IP EXPERIENCE

- **Execution of projects** – Market research, Product profiling, Landscape studies, **Competitive intelligence**, SWOT analysis in Biotechnology, Food technology, Pharmacology, and Biomedical domain.
- Training new techies in Intellectual Property Right technical insights & related projects, data analysis, data representation.
- Instituting innovations in proposal, Excel reports, PowerPoint reports.
- Managing on time completion of deliverables.
- **Experience in databases such as** - Patseer, **PharmaProjects, TrialTrove, Cortellis, PharmaTell, Decision Resources**, Citeline, Biomedtracker, Questel Orbit, Thomson Innovation, Lexis Nexis Patent Strategies, Total Patent, Patsnap, Food Navigator, Clinicaltrials.gov, FDA website, EMA website, Citeline, Cortellis, AdisInsight, Global Data, Bloomberg, Thomson Reuters, Pitch book, Cosmetic Ingredient Review (CIR).
- Formulation of proposals (effort estimates, inclusions, exclusions, execution plans of deliverables) for biotechnology, Pharmaceuticals, FMCG & Healthcare technology domain.
- Efficient in handling all IP related projects pertaining to Patent landscape, Freedom-to-operate (FTO), Invalidation, Infringement analysis, White space identification, Patent watch, Legal status watch, etc.

RESEARCH SKILLS & ABILITIES

- **Field of expertise:** Intellectual Property, Project Proposal writing (DST, ICMR, Govt, etc.), Scientific paper writing, Molecular Biology, Immunology, Biochemistry, Microbiology, drug-delivery, Epigenetics and Reproductive Biology.
- **Samples handled:** Human Tissue & blood, Mouse model, Animal cell culture and Microbial culture.
- **Technical skills:** Methylation specific PCR, Real-time PCR, Western Blot, ELISA, Confocal Microscopy, Live-cell imaging, Immuno-(histo/cyto)-chemistry, cell based-assays, Flow cytometry, UV-Vis Spectroscopy, Chromatography (Silica Gel, ion exchange, affinity, size-exclusion). Scanning Electron Microscopy (NPL, New Delhi), Gel electrophoresis (SDS-PAGE, agarose gel), Southern blotting, Dot blot, Northern blotting.
- **Computer and bioinformatics skills:**
 - Software (IBM and MAC environments): Microsoft Windows® and DOS, WordPerfect, Microsoft Word with excellent knowledge of the Internet.
 - Proficiency in performing Statistical Analysis using SPSS, AMOS, SAS, Sigma Plot, Excel, Structural Equation Modelling (SEM), R-Language, etc.
 - Expert in using ChemImager and other such softwares for result interpretation.
 - Experience in using Bioinformatics tools- BLAST, FASTA3x, Primer-BLAST etc.
 - Experience in Unique primer designing for mutation analysis, Methylation analysis and general genome and transcript studies.

PROJECT DETAILS

Project Title	Funding Agency	Duration	Role and Organization	Status	Total Cost
<i>Impact of parental history of type 2 diabetes mellitus and consanguinity on clinical, biochemical, hormonal and genetic variations in Indian women with polycystic ovary syndrome (PCOS)</i>	DST	May 2018-March 2019	Research Associate- III AIIMS, New Delhi	Completed	INR 76.69 lacs
<i>To evaluate the epigenetic regulation of molecules involved during steroidogenesis activities in Leydig cell line.</i>	DST	3 years [2014-2017]	Principal Investigator AIIMS, New Delhi	Completed	INR 29.4 Lacs

EXPERIENCE

Post Held	Employer Name & Address	Period From	Period To	Responsibility
Manager	Ennoble IP	Sep 4, 2023	Ongoing	<ul style="list-style-type: none"> QC all the IP/Scientific research work Build new product concepts for capturing clients. Write proposal benefitting the organization and for client to increase revenue. Helping Clients for their presentation skill. Building Client-based Presentation for them to presenting to Indian Govt/Internationally. Market Research domain establishment. Due diligence for Client-based query for expansion/collaboration/selling. Interdepartmental support on various levels to smoothen the workflow and delivery process.
Senior Associate	Stellarix	May 10, 2021	May 31, 2023	<ul style="list-style-type: none"> Initiation, conceptualization and execution of projects – Market research, Thought Starters, Product profiling, Landscape studies, Competitive Intelligence, Exploratory search, Technology Scouting. Interactions with global partners (Europe, United States, Australia) for providing innovative solutions to aid in development of their technologies. Strategic planning in projects.
Editorial Board	Biochemistry and Molecular Biology [ISSN Print: 2575-5064; ISSN Online: 2575-5048]	Sep 10, 2020	--	Editorial board member
Editorial Board	International Journal of Medical Laboratory Research [ISSN 2456-4400]	May 18, 2019	--	Working as an Editorial board member and reviewing articles
Research Associate-III	All India Institute of Medical Sciences, New Delhi	May 16, 2018	March 27, 2019	Worked as a Research Associate and Team leader by handling all the running projects apart from the one in which recruited, facilitated teams with intellectual support and direction. Also, engaged in different project proposal writing and submission to the funding agency.

Principal Investigator & Women Scientist	All India Institute of Medical Sciences, New Delhi	Nov 01, 2014	Oct 31, 2017	Worked as a Scientist and Principal Investigator on a DST WOS-A funded project in the field of Epigenetics in Department of Biochemistry. This work is based on mouse leydig cell line to evaluate the role of various hormones and epigenetic effects on normal functioning of these cells. The outcome of this study will help to understand the male reproductive disorders and cancer.
Research Associate	Dr. R. M.L. Hospital, New Delhi	Feb 10, 2012	Jul 31, 2013	A phase-III clinical trial experience- I have been involved in Formulating nano-encapsulated herbal medicated thread for healing in fistula-in-ano cases which got published in WIPO and subsequently patented.
Senior Research Associate/Analyst	Evalueserve, Gurgaon, Haryana	Dec 06, 2010	Feb 03, 2012	My role was to conduct Competitive intelligence. Prior art studies, Patentability searches, Invalidation of existing patents, Design patents, Patent drafting, Technology Landscape, Technology Scouting, Patent watch, Data mining (Patent lens, Thompson Innovation, Micropatent, Scirus, Pubmed, etc) and Scientific literature searches.

SCIENTIFIC COMMUNICATIONS

JOURNAL PUBLICATIONS

- **Nishat Fatima***, S H Ahmed, S. S. Chauhan, M. Owais, S. M. F. Rehman. Structural equation modelling analysis determining causal role among methyltransferases, methylation, and apoptosis during human pregnancy and abortion. **Scientific Reports** 07/2020; 10:12408. **[Nature]**
- **Nishat Fatima***, S H Ahmed, Sudha Salhan, S M F Rehman, Jatinder Kaur, M Owais, Shyam S Chauhan: Study of methyl transferase (G9aMT) and methylated histone (H3-K9) expressions in unexplained recurrent spontaneous abortion (URSA) and normal early pregnancy. **Molecular Human Reproduction** 05/2011; 17(11):693-701. **[Oxford]**
- Harisankar Singha, Amirul Islam Mallick, Chandrakanta Jana, **Nishat Fatima**, Mohammad Owais, Pallab Chaudhuri: Co-immunization with interleukin-18 enhances the protective efficacy of liposomes encapsulated recombinant Cu-Zn superoxide dismutase protein against Brucella abortus. **Vaccine** 06/2011; 29(29-30):4720-7. **[Elsevier]**
- K Arif, A Ejaj, A Maroof, A K Azmat, C Arun, **Nishat Fatima**, M A Gatoo, M Owais: Protective effect of liposomal formulation of tuftsin (a naturally occurring tetrapeptide) against cyclophosphamide-induced genotoxicity and oxidative stress in mice. **Indian journal of biochemistry & biophysics** 03/2009; 46(1):45-52. **[CSIR-NISCAIR]**
- Varun Dwivedi, Arif Khan, Azevedo Vasco, **Nishat Fatima**, Vishal Kumar Soni, Anil Dangi, Shailja Misra-Bhattacharya, Mohammad Owais: Immunomodulator effect of picroliv and its potential in treatment against resistant Plasmodium yoelii (MDR) infection in mice. **Pharmaceutical Research** 07/2008; 25(10):2312-9. **[Springer]**

BOOK CHAPTERS

- Mansi Manchanda, **Nishat Fatima**, and S.S. Chauhan. Chapter: Physiological and pathological functions of cysteine cathepsins. (Chapter-11) Springer-Nature Singapore, 2017.
- Qamar Zia, **Nishat Fatima**, Maroof Alam, Deepa Bisht, Prashant Yadav, Iqbal Ahmad, Farrukh aqil, and Mohammad Owais. Combatting Fungal Infections Problems and Remedy. Immunomodulators: Potential in Treatment of Systemic Fungal Infections. (Book chapter-17) Springer-Verlag Berlin Heidelberg, 2010.

WIPO PUBLICATION

- **Nishat Fatima***, S. M. F. Rehman, I. M. Fatima, et al. Formulations, herbal medicated threads and preparing processes thereof. (WO/2009/141835; Pub.Date-26.11.2009; Filing date-11.05.2009)

PATENT

- **Nishat Fatima***, S. M. F. Rehman, I. M. Fatima, et al. "Formulations, Medicated Threads and Preparing Process Thereof" (Patent Number: 266636; Pub.Date-22.05.2015; Filing date-19.05.2008)

CONFERENCE PROCEEDINGS

- **Talk- Presented work as an invited speaker** on "**Epigenetics: The Future for Diagnosing and Treating Reproductive Disorder**" in the International conference of Genomic Medicine-2017 (22nd -

24th February 2017) at Double-Tree by Hilton in Baltimore, USA. (<http://unitedscientificgroup.com/conferences/genemed/2017/speakers>)

- INDO-US Symposium on Regenerative Medicine; From bedside to bench, **AIIMS, New Delhi**, 12th & 13th January 2015.
- SYSCON 2014, A national conference on Recent Advances in Biological Sciences, **AIIMS, New Delhi**, 10th December 2014.
- Poster- "Methyl Transferases: Link for Causation and Prevention of Human Unexplained Recurrent Spontaneous Abortions", International Conference on Frontiers in Reproductive Biotechnology & 21st Annual Meeting of ISSRF, Feb 9th-11th, 2011, **National Dairy Research Institute, Karnal**. Page No 166. (Reproductive Health & Sexually Transmitted Infections)-Nishat Fatima
- Poster- "DNMT1 altered Expression is responsible for unexplained recurrent spontaneous abortions in Human". ACBICON, 13th December, 2010. **World Trade Center, Cuffe Parade, Mumbai** -Nishat Fatima
- Poster- Participated in XXXIII EMSI Annual International conference on Predictive, Preventive and Mechanistic Mutagenesis, Department of Agricultural Microbiology, **Aligarh Muslim University**, Aligarh, and presented poster entitled "G9a Methyl transferase expression profiling in Recurrent Spontaneous abortion cases: A perspective prognostic evaluation". [1/1/2008 to 3/1/2008]. -Nishat Fatima

[*Corresponding Author]

EDUCATION

DEGREE	UNIVERSITY	DEPARTMENT	YEAR OF AWARD	DIVISION
Ph.D. Biotechnology	Aligarh Muslim University, Aligarh	Interdisciplinary Biotechnology Unit	2011	Awarded
M.Phil. Biotechnology	Aligarh Muslim University, Aligarh	Interdisciplinary Biotechnology Unit	2007	First
M.Sc. Biosciences	Jamia Millia Islamia, New Delhi	Biosciences	2005	First
B.Sc. Biosciences	Jamia Millia Islamia, New Delhi	Biosciences	2003 (Distinction in 2 subjects)	First
Intellectual Property (DL-101)	WIPO, Geneva	WIPO	2009	Additional Certificate

THESIS DETAILS:

- **Ph. D. Thesis:** "Study of various factors involved in recurrent spontaneous abortion in females". **(In Collaboration with AIIMS, New Delhi and Safdarjung Hospital, New Delhi)**
Details: This work comprised of study of the epigenetic factors which were found to be involved during recurrent spontaneous abortions of unknown aetiology in human. We found methylation caused by G9aMT to be one of the important factors for normal pregnancy sustenance. We have worked on other molecular pathways to be involved in it and are towards designing the RSA detection kit. (Thesis work published in Molecular Human Reproduction & Nature Scientific Reports)
- **M.Phil. Thesis:** "Anti-fertility Vaccine: Expression of proteins in Recurrent Spontaneous Abortion cases as compared to normal in North Indian Population" **(In Collaboration with AIIMS, New Delhi and Safdarjung Hospital, New Delhi)**
Details: This work was a humble effort in recognizing the biomarkers involved during abortions of unknown aetiology in which we came across G9a as an important molecule to be present during reproduction.
- **M.Sc. Project:** "Statistical analysis of random Indian Population (male and female) in THO1 locus" **(In Collaboration with AIIMS, New Delhi)**
Details: Under the supervision of Dr. Anupama Raina, Scientist, Department of Forensic Medicine and toxicology, we conducted the study to examine a number of short tandem repeats (STRs) loci for their usefulness as markers of identity.