

Curriculum Vitae

Dr Ankur Sharma

F-9, Type-2, New Police Lines, Kingsway Camp, Delhi-09, India

Contact: +91(0)8587018801 ankur.sharma7@sharda.ac.in sharma-a2@ulster.ac.uk

OBJECTIVE

A Life & Health Science professional with valuable teaching & research experience contributing to biotechnology, material science and health science. Current research interest includes fabrication of drug delivery systems using biocompatible nanocarriers such as PLGA, Chitosan, Gold, magnetic and more and utilize them in the area of nanomedicine, disease diagnostic, biologics and drug discovery mainly in the area of but not limited to cancer therapeutics and autoimmune diseases. At present, I am committed to develop my skills and knowledge by working in a professional setup. I have experience and passion to contribute to the field of biotechnology and nanotechnology. My aim is to bring fruitful results and provide better solutions by honest and ethical practice prioritizing the altruistic requirements and needs. I am seeking an innovating and challenging place where I can utilize my developed professional teaching and research skills and can gain new skills.

EDUCATION

Ph.D. in Life and Health Sciences (Nanomedicine).

July 2013-17

Ulster University, Coleraine, Northern Ireland, United Kingdom

Project title: Development of nanoparticulate drug delivery systems for anti-metastatic Ran GTPase biotherapeutics.

M.Sc in Bionanotechnology

September 2010-11

University of Sheffield, Sheffield, England

Dissertation title: Encapsulation of various biomolecules via pH switch method

B.Sc Biotechnology (Hons.)

May 2006-09

Ch. Charan Singh University, Meerut, India

Professional Experience

(a) Assistant Professor at Sharda University- India (January-2019-till now)

- Develop and implement innovative instructional methods.
- Develop professional logistics to improvise student performance.
- Guide, lead and mentor students in research projects.
- Evaluate, monitor and mentor student academic progress.
- Create, innovate and implement career-enhancement programs and activities.
- Supervise and support teaching assistants.
- Participate in departmental and college activities.
- Serve and support functional activities of departmental committees.
- Assess, review and evaluate student activities and progress.
- Assist and support senior professors in their day-to-day tasks and functions

(b) Assistant Professor at NGCEF- Australia (January-2021-till now)

- Assisting Research Scholars and students in their Research related Activities
- Assisting in Research Grant Applications

(c) Placement Co-Ordinator at Life Science Department, Sharda University (August 2019- till Now)

- Coordinate with all the placement related activities for life science department's students
- Arrange and coordinate sessions on personality development for the students
- Arrange and coordinate sessions on interpersonal skills development for the students
- Liase with HRs of different companies to build up the professional ties
- Liase with HRs and students to during the interview process till their selection

(d) Research Technician at Ulster University-Northern Ireland-UK (March-2017- May-2017)-Part time

Responsibilities and Duties:

- Carrying out routine tasks accurately and following strict methodologies to carry out analyses;
- Preparing specimens and samples;
- Performing laboratory tests in order to produce reliable and precise data to support scientific investigations
- Constructing, maintaining and operating standard laboratory equipment, for example centrifuges, titrators, pipetting machines and pH meters;
- Ensuring the laboratory is well-stocked and resourced;
- Recording and sometimes interpreting results to present to senior colleagues;
- Keeping up to date with technical developments, especially those which can save time and improve reliability;
- Conducting searches on identified topics relevant to the research;
- Following and ensuring strict safety procedures and safety checks.

(e) Post Graduate Tutor and Demonstrator at University of Ulster (Jan-2014- Jan-2017)-Part time

- Demonstration and assistance with practical classes, Physical pharmacy, Immunology, and Microbiology
- Delivery and co-ordination of small group activities, e.g. tutorials
- Participation in student-led activities
- Participation in student-led seminars
- Assessment of coursework

➤ **Step-up Mentor- Step-up Northern Ireland (2014-2017)**

Worked as a step-up Mentor for GCSE students from Northern Ireland, helped them to learn various aspects of basic bioscience and helped them to successfully conduct basic scientific experiments in the field of microbiology, chemistry and biology.

➤ **Supervisor- University of Ulster (2013-2017)**

Regularly supervised B.Sc/M.Sc students with their dissertation projects at Ulster University (approx 8-10 students)

Research Experience

Projects:

- **Development and characterization of nanoparticulate delivery systems for antimetastatic RanGTPase biotherapeutics (University of Ulster)**
 - Fabrication and characterization of nanoparticulate delivery systems from different polymers formulations. Altering different parameters for making improved nanoparticulate delivery systems
 - Encapsulation of shRNA or other bioactive molecules within nanovehicles for gene /disease therapy
 - Delivery of Encapsulated drug (i.e. siRNA/shRNA/bioactive molecule) to the cancer cells (breast cancer and lung cancer cells) *in vitro* and/or *in vivo* (using xenograft mice model)
 - Determine the effects of siRNA/shRNA/ bioactive molecules delivery within cancer cells and animal model. e.g. Cell survival, Apoptosis, Metastasis, Migration studies, Invasion studies, Colony formation studies, Cellular uptake of gene loaded Nanoparticles, qRtPCR, western blot, Flow cytometry, SDS-PAGE, Apoptosis, necrosis.

 - **Intracellular Nano-vehicle mediated Drug Delivery (1 year) at University of Sheffield (2010-11)**
 - Project : Encapsulation of biomolecules of various molecular sizes and concentrations via pH switch method
 - Engineered bio-mimetic nanoparticles by exploiting self-assembling properties of pH sensitive polymer PMPC-PDPA surfactants to manufacture self-assembled energy driven drug carrying vehicles called polymersomes to encapsulated bioactive molecules of different sizes and in various concentrations to study the effects of aforementioned parameters on the pharmaceutical properties of the loaded-polymersomes.

 - **Fabrication of Electrochemical Biosensors (2 months, 2010-11) - University of Leeds/Sheffield**
 - I have worked on small project on fabrication of Electrochemical Biosensors at University of Leeds as a part of my academic work where I learned and successfully manufactured electrochemical biosensors mainly Glucose biosensor and lactic acid biosensor based on nanotechnology principles.
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Research and Methodologies Skills

- Cell culture, ● DNA Extraction, ● Protein Identification and Characterization, ● Nano-vector Fabrication (pH Switch Method, Double Emulsion solvent evaporation Technique, Ion gelation Method and Thin Film Rehydration method ● Biosensor fabrication –Electrochemical, ● Gene Amplification, ● Sequencing, ● *in vivo* Experience (i.e. animal handling), ● Cell Invasion assays, ● Migration Assay ● Western Blotting ● Agarose Gel Electrophoresis ● SDS-PAGE, ● Apoptosis (Comet assay, acridine orange / ethidium bromide staining, TUNEL assay, caspase 3 / 7 assay)

Technical and Instrumentation Skills

- TEM (Transmission Electron Microscope), ● BD Microscope, ● RT-PCR, ● HPLC (High Pressure Liquid Chromatography), ● AFM (Atomic Force Microscope), ● Fluorescence Spectrophotometer, ● NanoDrop Spectrofluorometer, ● DLS (Dynamic Light Scattering Instrument), ● Confocal Microscopy, ● UV-vis Spectrophotometer ● SEM (Scanning Electron Microscope) ● MALDI ToF ● NMR ● Fluorescence Microscopy

IT/Computer Skills

- MS-DOS, Windows 95/98/NT/2000/XP/7, C/C++, MS Office Tools, Internet & Emailing Services, EndNote, RefWorks, Medical database search (Pub med, Web of Knowledge)

Research Grants/ Reviewer

Recently awarded a joint Grant of Rs. 200, 000 (INR) from Sharda University, India, 2019-2021

Reviewer: Reviewer for “**Journal of Molecular Neuroscience**” (Springer, IF 2.5), International Peer review journal

Publications

- **Anti-Invasive and Anti-Proliferative Effects of shRNA-Loaded Poly(Lactide-Co-Glycolide) Nanoparticles Following RAN Silencing in MDA-MB231 Breast Cancer Cells**

Ankur Sharma,¹ Paul McCarron,¹ Kyle Matchett,² Susan Hawthorne,¹ and Mohamed El-Tanani³
(Pharmaceutical Research Journal, IF-3.8)

- **Nanoparticulate RNA delivery Systems in Cancer**

Sharma, Ankur; Jha, Niraj; Dholpuria, Sunny; Dahiya, Kajal; Jha, Saurabh; Nand, Parma; Ruokolainen, Janne; Kesari, Kavindra; Astya, Rani; Singh, Vivek; Chaurasiya, Kundan; Kumar, Amit; Mishra, Prabhu; Jha, Aditya
(Cancer Reports Journal, Wiley)

- **“NOTCH” deeper into the Epithelial-to-Mesenchymal Transition (EMT) program in Breast cancer**

Rohan Kar, Saurabh Jha, **Ankur Sharma**, Nidhi Asthana, Kundan Chaurasiya, Vivek Singh, Shuaib Burgee, Parma Nand, Niraj Jha *
(Journal- Genes, IF- 3.3)

- **Fostering Mesenchymal Stem Cell Therapy to Halt Cytokine Storm in COVID-19**

Madhan Jeyaraman; Albin John; Santhosh Koshy; Rajni Ranjan; Talagavadi Channaiah Anudeep Anudeep; Rashmi Jain; Kumari Swati; Niraj Kumar Jha; **Ankur Sharma**; Kavindra Kumar Kesari; Anand Prakash; Parma Nand; Saurabh Kumar Jha; Hemachandra Reddy

(BBA - Molecular Basis of Disease, Elsevier IF 4.3)

- **Deciphering the SSR incidences across viral members of *Coronaviridae* family**

Rohit Satyam^a, Niraj Kumar Jha^b, Rohan Kar^c, Saurabh Kumar Jha^b, Ankur Sharma^d, Dhruv Kumar^e, Parma Nand^b, Janne Ruokolainen^f, Kavindra Kumar Kesari^f, Mohammad Amjad Kamal^{g,h}

(Chemico-biological Interaction, Elsevier, IF 3.9)

- **A pandemic associated with novel coronavirus of probable animal origin**

Navroop Kaur*, Saurabh Kumar Jha , Premnidhi Yadav , Soni Mishra, Umar Farooq, Umme Salma Siddiqui, Mohammad Zuhair , Arshi Amin , Niraj Kumar Jha , Ankur Sharma
(Research in Pharmacy and Health Sciences Journal)

Alzheimer's disease-like perturbations in HIV-mediated neuronal dysfunctions: understanding mechanisms and developing therapeutic strategies

Niraj Kumar Jha, Ankur Sharma, Saurabh Kumar Jha, Shreesh Ojha, Dinesh Kumar Chellappan, Gaurav Gupta, Kavindra Kumar Kesari, Shanu Bhardwaj, Shakti D. Shukla, Murtaza M. Tambuwala, Janne Ruokolainen, Kamal Dua and Sandeep Kumar Singh
(Open Biology- Royal Society, IF-5.0)

●“Targeting Biofilms in Respiratory Diseases using Novel Drug Delivery Systems”

Ankur Sharma, Kajal Dahiya, Chitra Vasu1, Saurabh Kumar Jha, Niraj Kumar Jha, Parma Nand, Madhan Jeyaraman, Rashmi Jain
(Drug Delivery and Translational Research IF 2.9, Under Review)

Book Chapters

● “Alterations in Metabolite-driven Gene Regulation in Cancer Metabolism”

Saurabh Kumar Jha^{1*}, Rahul Yadav², Kumari Swati¹, Niraj Kumar Jha¹, Ankur Sharma², Fahad Khan³, Neeraj Kumar⁴, Parma Nand¹, Prabhjot Kaur², Tanaya Gover² and Geetika Rawat²
(Publishing House- Springer Nature Publication)

● “Clinical relevance of “Diagnostic markers” in cancer metabolism”

Niraj Kumar Jha^{1*}, Saurabh Kumar Jha¹, Ankur Sharma², Rahul Yadav², Pratibha Pandey³, Kavindra Kumar Kesari⁴, Neeraj Kumar⁵, Parma Nand¹, Mansi Agrahari² and Nancy Sanjay Gupta
(Publishing House- Springer Nature Publication)

Conferences

● Abstract in at 36th All Ireland School of Pharmacy Conference 2014 (April), Dublin, Ireland “Preparation, Characterization and, *in vivo* evaluation of insulin loaded PLGA-PEG nanoparticles for controlled delivery”

Y. Haggag, A. Sharma, M. Osman, S. Elgizawy, P. McCarron, A. Faheem

● Abstract in at American Association of Pharmaceutical Scientists (AAPS) conference, 2014 (November), San Diego, USA

“Assessment of Insulin Stability In PLGA-PEG Nanoparticles Prepared by the Double Emulsion Solvent Evaporation Technique

Y. Haggag, A. Sharma, O. Opeolu, Y. Abdel-Waheb, M. Osman, S. Elgizaway, P. McCarron, A. Faheem

● Abstract in 6th APS International pharmc Sci conference, September 2015, Nottingham, England (United Kingdom)

“Evaluation of Biodegradable Nanoparticles as a potential shRNA delivery system for anti-metastatic RanGTPase Biotherapeutics”

Sharma A¹, McCarron PA¹, El-Tanani M², Faheem A, Hawthorne SJ¹

● Abstract in at American Association of Pharmaceutical Scientists (AAPS) conference, 2015 (October),
Orland, Florida, USA

“*In-vitro* evaluation of shRNA Nanoparticles for anti-metastasis RanGTPase Biotherapeutics”

Sharma A¹, McCarron PA¹, El-Tanani M², Hawthorne SJ¹

References

- Dr Susan Hawthorne, Lecturer at Ulster University (UK), s.hawthorne@ulster.ac.uk
- Prof. Paul McCarron, Head of School of Pharmacy and Pharmaceutical Sciences at Ulster University (UK), p.maccarron@ulster.ac.uk
- Prof. Mohamed El-Tanani, Professor in Molecular Pathologist and Cancer Therapeutics at University of Bradford, UK, m.el-tanani@bradford.ac.uk

