

## Uzma Hasan

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**Contact Information** Arvo Ylpon katu 34, 33520 Tampere Finland. [uzma310@gmail.com](mailto:uzma310@gmail.com)  
[uzma.hasan@tuni.fi](mailto:uzma.hasan@tuni.fi)

**Public Profile** [Website](#) · [LinkedIn](#) · [Google Scholar](#) · [ORCID](#)

**Research Interest** Neuroscience · Oncology · Micro-electrode arrays · Organ-on-chip

**Executive Summary** I am working as a Postdoctoral researcher at [Tampere University](#), Finland in the [NeuroGroup](#) under [Dr. Narkilahti Susanna](#). I did my PhD on neuroscience oncology and immunotherapy from [IIT Hyderabad](#), India. My area of research span across neuroscience, oncology, Micro-electrode arrays (MEA) and Organ-on-chip (OoC). I have got extensive experience in mammalian cell culture (for both cancer cells and stem cells), and bacterial cell culture. I am proficient in performing experiments that determine physical and chemical properties of cells, antibody measurements, and detection of specific proteins. I have also gained expertise in performing gene cloning techniques. I was actively involved in the research with [KeaBiotech](#) for the development of India's first long-lasting hand sanitizer during COVID-19 pandemic. The product was released under '[Atmanirbhar Bharat](#)' initiative in April, 2021, by the Honorable Education Minister of India, Mr. Ramesh Pokhriyal 'Nishank'.

**Experience** **Postdoctoral Researcher** Sept, 2024-Present  
Neuroscience ([Neuro Group](#))  
Principal Investigator: [Dr. Susanna Narkilahti](#)  
Tampere University, Tampere, Finland.

**Education** **Doctor of Philosophy** Aug, 2017-April, 2024  
Neuroscience Oncology ([eNaRM Lab](#))  
Department of Biotechnology  
Thesis Title: Unraveling the fundamentals of glioblastoma stem cells for effective therapeutic approach  
Advisor: [Prof. Jyotsnendu Giri](#)  
IIT-Hyderabad, India.

**Master of Science**, CGPA: 8.97/10 Aug, 2015-Jun 2017  
Department of Life Science  
Thesis Title: Evaluation of the storage survivability of lactobacillus paracasei KACC 12361 and lactobacillus helveticus KACC 12418 in synbiotic microcapsules  
Advisor: [Dr. Rasu Jayabalan](#)  
NIT-Rourkela, India.

**Bachelor of Science**, 75.4% Aug, 2012-May 2015  
Zoology  
St. Xavier's College, Ranchi, India.

**Bio-Medical Skills** Mammalian cell culture (Cancer cells, Stem cells), Bacterial culture, Fluorescence Microscope, PCR/RT-PCR, Flow cytometry, Western blotting, ELISA, Gene Cloning.

<b>Computer Proficiency</b>	Software : GraphPad, Prism, FlowJo, Ocular, EndNote, ImageJ. Editing Tools : MS Word, MS Excel, MS PowerPoint, MS Publisher, Latex.
<b>Publications</b>	<p>[1] Prince Sharma, Sahil Rohila, <b>Uzma Hasan</b>, P Hari Krishna, Chima Ugwuegbu, Abhishek Tiwari, Manish Joshi : Multiscale Modeling-Driven Synthesis of Cu<sub>40</sub>Zn<sub>24</sub>Ni<sub>24</sub>Ag<sub>8</sub>Hg<sub>4</sub> High Entropy Alloy with Antibacterial Properties. Nano-Structures and Nano-Objects.</p> <p>[2] Ruby Singh, Purandhi Roopmani, <b>Uzma Hasan</b>, Poonam Dogra, Jyotsnendu Giri : Airbrushed nanofibers with bioactive core and antibacterial shell for wound healing application. European Journal of Pharmaceutics and Biopharmaceutics.</p> <p>[3] <b>Uzma Hasan</b>, Eerappa Rajakumara, Jyotsnendu Giri : Reversal of multidrug resistance by the synergistic effect of reversan and hyperthermia to potentiate the chemotherapeutic response of doxorubicin in glioblastoma and glioblastoma stem cells. ACS Applied Bio Materials.</p> <p>[4] <b>Uzma Hasan</b>, Meenakshi Chauhan, Suparna Mercy Basu, Jayakumar R, Jyotsnendu Giri : Overcoming multidrug resistance by reversan and exterminating glioblastoma and glioblastoma stem cells by delivering drug-loaded nanostructure hybrid lipid capsules (nHLCs). Drug Delivery and Translational Research.</p> <p>[5] Nimeet Desai, <b>Uzma Hasan</b>, K Jeyashree, Rajesh Mani, Meenakshi Chauhan, Suparna Mercy Basu, Jyotsnendu Giri : Biomaterial-based Platforms for Modulating Immune Components against Cancer and Cancer Stem Cells. Acta Biomaterialia.</p> <p>[6] Tarun K Panda, Kathirvelan Devarajan, Sivakali Mayakrishnan, Suparna Mercy Basu, Chinmoy Biswas, Meenakshi Chauhan, <b>Uzma Hasan</b>, Pannerselvam Yuvavaraj, Uma Maheswari Narayanan, Sai Santosh Kumar Raavi, Jyotsnendu Giri : Design and Synthesis of Photostable Triphenylamine Based Neutral AIE Nano Luminescence: Specific and Long-Term Tracking of Mitochondria in Cells. Biomaterials Science.</p> <p>[7] Induvahi Veernala, Purandhi Roopmani, Ruby Singh, <b>Uzma Hasan</b>, Jyotsnendu Giri: Cell encapsulated and microenvironment modulating microbeads containing alginate hydrogel system for bone tissue engineering. Progress in Biomaterials.</p> <p>[8] <b>Uzma Hasan</b>, Sandeep K. Singh: The Astrocyte–Neuron Interface: An Overview on Molecular and Cellular Dynamics Controlling Formation and Maintenance of the Tripartite Synapse. Published in Astrocytes: Methods and Protocols.</p> <p>[9] Sahoo Moumita, Bhaskar Das, <b>Uzma Hasan</b>, R. Jayabalan: Effect of long-term storage on viability and acceptability of lyophilized and spray-dried synbiotic microcapsules in dry functional food formulations. Elsevier LWT.</p>
<b>Industrial Projects</b>	<p><b>Long-lasting Hand Sanitizer:</b> I was involved in the research and development of long-lasting hand sanitizer for <b>Ke-aBiotech</b> during COVID-19 pandemic. The hand sanitizer was able to eradicate germs for over 24 hours. It became India's first home developed long-lasting hand sanitizer, and was launched by the Honorable Education Minister in April, 2021.</p>

## **Regulation of miRNA biogenesis (Internship)**

Jawaharlal Nehru University (JNU), New Delhi.

May 2016 - July 2016

### **Conference and Workshops**

- Finnish Organ-on-Chip meeting 2024, Tampere University, Tampere, Finland. October 2024.
- Oral presentation at 3<sup>rd</sup> International Conference on Frontiers in Biological Sciences, NIT Rourkela, India. October 2023.
- Poster presentation at Bengaluru India Nano. March 2022.
- Poster presentation at International e-Conference on Nanomaterial and Nanoengineering APA-Nanoforum-2022.
- Workshop on Olympus' "IXplore" Solution Based Microscopy, CSIR-CCMB, Hyderabad, India. August 2019.
- Indo-European Partnership Symposium on Emerging Trends in Cancer Research and Therapeutics, IIT Hyderabad, India. September 2018.
- 4<sup>th</sup> International conference on Anthropogenic Impact on Environment and Conservation Strategy, St. Xavier's College, Ranchi, India. November 2012.

### **Personal Details**

- Gender: Female
- Hobbies: Swimming, Basketball, Gardening
- Languages: English and Hindi

### **References**

**Dr. Susanna Narkilahti**, Senior Researcher, Tampere University [susanna.narkilahti@tuni.fi](mailto:susanna.narkilahti@tuni.fi)  
**Prof. Samir Kumar Patra**, Professor, NIT Rourkela, [samirp@nitrkl.ac.in](mailto:samirp@nitrkl.ac.in)  
**Dr. Binod Bihari Sahu**, Associate Professor, NIT Rourkela, [sahub@nitrkl.ac.in](mailto:sahub@nitrkl.ac.in)