## NIDA FATHIMA

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| Phone number:(+91)8943684426  nidafathima@students.iisertirupati.ac.in | Vadakara,Calicut  Kerala,673541 |

## PROFILE

Passionate researcher with experience at the intersection of chemistry and biology, with a growing interest in data analysis..Experienced in designing and characterizing RNA/DNA nanostructures for drug delivery and nanotechnology applications. Strong analytical, computational, and presentation skills, with expertise in Python programming and data handling.

## RESEARCH EXPERIENCE

**MS Thesis (Jun 2022 - May 2023)**

**Supervisor**: Dr. Ashwani Sharma ,Assistant Professor, Dept. of Chemistry & Biology, IISER

Tirupati

***Title*** *: Engineering of Highly Stable RNA Nanomotifs for Nanotechnology Applications*

* Designed a fluorescence-based method to compare the stability of different RNA three-way junctions (3WJs) used in RNA nanotechnology.
* Investigated the potential of RNA nanostructures in targeted drug delivery applications.

**Semester Project (Jan 2022 - Apr 2022)**

***Supervisor****: Dr. Ashwani Sharma, Assistant Professor, Dept. of Chemistry & Biology, IISER*

*Tirupati*  
***Title:*** *Construction of Stimuli-Specific DNA Nanostructures Using i-Motif Sequences*

* Designed pH-responsive DNA nanostructures such as triangles, squares, and tetrahedrons using i-motif sequences.

**Summer Internship in Cancer Biology (Jun 2019 - Jul 2019)**  
***Supervisor****: Dr. Sanjay Kumar, Assistant Professor, Dept. of Biology, IISER Tirupati*

* Worked on molecular biology techniques relevant to cancer biology research.

## ****EDUCATION****

**BS-MS (Bachelor of Science-Master of Science)**  
Indian Institute of Science Education and Research (IISER), Tirupati  
2018 - 2023 | CGPA: 7.0

**12th Standard**  
Memunda Higher Secondary School, Kozhikode, Vadakara  
2015 - 2017 | Percentage: 98.1%

## ****TECHNICAL SKILLS****

* **Molecular Biology Techniques:** PCR, Transcription, DNA/RNA purification, Gel Electrophoresis (Agarose, Native PAGE, Denaturing PAGE, SDS PAGE)
* **Nucleic Acid Analysis:** Aptamer design using NUPACK, Fluorescence analysis (Synergy H1 microplate reader), UV-Melting techniques
* **Spectroscopy & Particle Analysis:** Circular Dichroism (CD) Spectroscopy, Dynamic Light Scattering (DLS)
* **Oligonucleotide Synthesis:** DNA/RNA synthesis using K&A-H6/H8 DNA-RNA Synthesizer
* **Computational & Data Analysis:** Python programming, Data handling in Excel, MS Office (Word, PowerPoint, Excel)
* **Presentation & Communication:** Strong scientific writing and presentation skills

## ****CERTIFICATIONS & QUALIFICATIONS****

* **GATE Qualified (2025)**

## VOLUNTEERING

* National Service Scheme (2018 to 2023)
* Bharat Scout & Guide (2010 to 2017)

## LANGUAGES

* English - Fluent
* Malayalam-Fluent
* Hindi – Intermediate
* Arabic - Intermediate

## ****REFERENCES****

* **Dr. Ashwani Sharma**  
  Assistant Professor, Department of Chemistry & Biology, IISER Tirupati

Email:a.sharma@labs.iisertirupati.ac.in

* **Dr .pankaj kumar koli**

Assistant Professor, Department of Chemistry, IISER Tirupati

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