Gayathri R

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#68, 2nd floor, Kammasandra village road, Ananth nagar phase 2, Phase 1
Kammasandra, Electronic city, Bengaluru 560 100

Senior Research Associate specializing in establishing project objectives, developing experimental plan and effectively prioritizing tasks to meet time sensitive delivery goals. Meticulous and analytical Researcher with 3 years of hands-on experience with method development in Molecular Biology, and Cell Culture techniques. Adaptive team player with in-depth knowledge of data collection, confidential document control and problem-solving.

Skill set

- **Molecular Biology:** Method development, NGS Library preparation, RT-PCR, qPCR, SDS-PAGE, Western blotting, ELISA, Nucleic acid extraction, Transformation, Restriction digestion and ligation, Agarose gel electrophoresis, RNA - Denaturing gel electrophoresis.
- **Cell Biology:** Cell and animal ex-plant culture techniques, Assay development, MTT assay, proliferation assay, Boyden's chamber, fluorescent staining, scratch assay.
- **Bioprocess:** Worked with lab scale Batch reactors (capacity- 2 L).
- Basic microbiology techniques.
- **Instrumentation:** Real time- PCR, Nanodrop, Automated nucleic acid extraction, Bio-analyzer, Tape station, Fluorescent microscopy, Clinostat (stimulating microgravity conditions for studying hyper and micro- gravity effects).

Work Experience

MagGenome Technologies — October 2019- October 2022

Senior Research Associate

- **Promoted from Research Associate to Senior Research Associate on June 2022.**
- Worked with Magnetic nanoparticle based technology for Nucleic acid extraction (Manual and automation procedure) from different biological samples.
- Has experience in handling total RNA extraction and RT-PCR based RNA detection and quantification techniques.
- Experienced in method development, handling, and troubleshooting in the field of molecular biology especially nucleic acid extraction and quantification techniques.
- Has experience in handling multiple projects and good in maintaining time lines.
- Certified ISO 9001:2015- Internal Auditor.

Research projects

MagGenome Technologies |2019- 2022

- Development of manual extraction **total RNA** kit for Bacteria, Cell line and Whole Saliva samples, using MagGenome's patented novel Magnetic Nanoparticle.
- Development of manual extraction **total RNA** kit for Bacteria, Cell line and Whole Saliva samples, using MagGenome's patented novel Magnetic Nanoparticle.
- Development of manual and automated methods of **Viral RNA extraction kit** from SARS-COVID-19 samples using MagGenome's patented novel Magnetic Nanoparticle.
- Development of manual extraction kit for Total RNA from animal tissue samples using MagGenome's patented novel Magnetic Nanoparticle.

- **BIRAC project** **September 2020 - April 2021**

  "Development of a diagnostic kit comprising Saliva sample collection buffer and RNA extraction kit for real time RT PCR based detection of SARS CoV-2"

Academic Experience

- **Masters in technology** **July 2018-May 2019**

AU-KBC RESEARCH CENTRE- Madras Institute of Technology

- Worked in developing tissue and cell culture models using Chick embryo for the project titled **"Studying microgravity implications in sprouting angiogenesis and characterization of tip cells in sprouting angiogenesis"**.

- **Bachelors in technology** **Dec 2016- April 2017**

CANCER AND STEM CELL BIOLOGY LABORATORY

- Worked in isolated hematopoietic stem cells from bone marrow of mouse to check its bio-compatibility with the developed scaffold for the project titles **"Developing a scaffold using Aloe Vera and gelatin embedded with stem cells for wound healing"**.

Publication

"An effective method for saliva stabilization and magnetic nanoparticles based DNA extraction for genomic applications". Bhati Aniruddha, Anu Varghese, **Gayathri Rajan**, Vandana Sridhar, Yedhu Mohan, Swetha Pradeep, Seethal Babu, Nimisha Kaikkolante, Minu Sarma, Sreepriya Arun, Arun Prasath Sekar,Tessy Iype, Sam Santhosh, Chaniyilparampu Nanappan Ramchand, Analytical Biochemistry Vol. 624 (1 July 2021): 114182.

Patent

Sreedhar Santhosh, Aniruddha Bhati, Minu Sarma, Sreepriya Arun, Anu Varghese, Vandana S, **Gayathri R**, ArunPrasath Sekar, Mohamed Kashith M, Reenu Joseph, Yedhu MohaN, Seethal Babu, Ajith Arumugam, Tessy Iype, CN Ramchand, 2022, **"*A method for the extraction of nucleic acids from a biological sample*"**, WO2022003723A, WIPO.

Paper

1. **"Enrichment of Viral RNA from biological samples using uncoated magnetic nanoparticle based technology"** Bhati Aniruddha, **Gayathri Rajan,** Arun Prasath Sekar,Tessy Iype, Sam Santhosh, Chaniyilparampu Nanappan Ramchand.

2. **“Stabilization, enrichment and purification of total RNA from biological sample”** Reenu Joseph, **Gayathri Rajan,** Anu Varghese, Minu Sarma N, Yedhu Mohan, Tessy Iype, Lyju Jose V, Sreedhar Santhosh, C N Ramchand,

Provisional Patent

Reenu Joseph, **Gayathri R**, Anu Varghese, Minu Sarma N, Yedhu Mohan, Tessy Iype, Lyju Jose V, Sreedhar Santhosh, C N Ramchand, 2022, **“Stabilization, enrichment and purification of total RNA from biological sample”.**

Educational Qualification

Masters in technology- Biotechnology

Anna University- AC Tech Campus 2017 to 2019

Relevant Coursework Completed:

- Advances in Gentics and Proteomics
- Tissue Engineering and regenerative Medicine
- Advances in Molecular Pathogenesis.
- Immunotechnology

Bachelors in technology- Industrial Biotechnology

Anna University- AC Tech Campus 2013 to 2017

Relevant Coursework Completed:

- Molecular Biology
- Genetic engineering
- Cell biology
- Bio-process engineering

Other qualification

- **Qualified in GATE** (Graduate Aptitude Test Engineering) **2017 with all Indian rank of 2311 in Biotechnology.**
- Qualified JNU-Combined entrance exam for Biotechnology **(JNU-CEEB)- 2017**.
- Attended a **Global Initiative of Academic Networks (GIAN)** course in “ Anti-parasite drug discovery-An insight into human infectious diseases” at Anna university, Chennai, India.

Additional information

- Participated in an international conference titled **“Advances in Molecular Diagnosis and Precision Medicine- AMDP 2022”**.
- Organizer in **AVIDADHAM-2019** an international conference on “Metamorphosis form academia to bio- industrialization”.
- Participated in **AVIDADHAM - 2018** an international conference on “Current trends in diagnostic and therapeutics for lifestyle diseases”.
- Event host in **BIOTECHXELLENCE-2016** a national level technical symposium by Department of Biotechnology, Anna university, Chennai, India.
- Ability to work in multidisciplinary lab environment with excellent documentation skills and quantitative approach in research.

Self declaration:

I hereby declare that all the above information are true to my knowledge.