

# SHAHIN SHEIK

Dubai, UAE | +971 58 1987 751 | [shahinsheik@hotmail.com](mailto:shahinsheik@hotmail.com)

## EDUCATION

Master of Science in **Clinical Virology** 2012 - 2014

Department of Virus Research, Manipal University, Manipal, Karnataka

First class, GPA 7.95

Thesis: *Development of a quality control sera panel for Dengue IgM ELISA*

Guide: Dr. G Arunkumar

Bachelor of Science in **Medical Laboratory Technology** 2007 - 2011

Rajiv Gandhi University of Health Sciences (RGUHS), Bangalore, Karnataka

First class, GPA 6.0

## TEACHING AND MENTORSHIP EXPERIENCE

Teaching Faculty | **Manipal Academy of Higher Education (Manipal University), India** Nov 2015 to May 2021

Name of the Subject	Course Level	Course Name
Basic Virology	Postgraduate	MSc Clinical Virology
Systemic Virology	Postgraduate	MSc Clinical Virology
Concepts of Flowcytometry	Postgraduate	MSc Clinical Virology
Laboratory Designing	Postgraduate	MSc Clinical Virology
Cell Culture Techniques	Postgraduate	MSc Clinical Virology
Parasitology	Postgraduate	MSc Food and Nutrition
Classical Virology techniques	Bachelors/ Postgraduate/ Doctoral	Short term certificate courses
Diagnostic Virology	Bachelors/ Postgraduate/ Doctoral	Short term certificate courses
Advanced diagnostic Virology	Bachelors/ Postgraduate/ Doctoral	Short term certificate courses
Molecular diagnostics	Bachelors/ Postgraduate/ Doctoral	Short term certificate courses
Cell Culture and Virus Isolation Techniques	Bachelors/ Postgraduate/ Doctoral	Short term certificate courses

Guide and co-guide (MSc Clinical Virology students final year thesis) – 08 Students

## RESEARCH & CLINICAL EXPERIENCE

Laboratory Supervisor | **Hortman Stem Cell Laboratory, Dubai, UAE** Since April 2023

- ❖ Supervise the day-to-day operations of the laboratory.
- ❖ Scientific writing
- ❖ Validation of assays
- ❖ Mentoring the junior laboratory technologists

Senior Laboratory Researcher | **G42 Healthcare, Abu Dhabi, UAE** Apr 2021 to Mar 2023

Govt. of United Arab Emirates funded '*Emirati Genome Project*'

- ❖ Qualitative and quantitative analysis of nucleic acid
- ❖ Library preparation
- ❖ Sequencing on Illumina NovaSeq 6000, MGI T7 and T10 and Oxford Nanopore PromethION.
- ❖ Qualitative and quantitative analysis of the generated sequence data

**Senior Research Officer (Project coordinator)** | Manipal Academy of Higher Education, India **Jul 2019 to May 2021**

**Department of biotechnology (DBT), Govt. of India** funded '*Translational research consortium for Chikungunya virus*' (PI: Dr G Arunkumar)

- ❖ Managing a team of 40 members which included and not limited to medical doctors, nurses, laboratory technologists, data managers.
- ❖ Enrolment and collection of biological samples of Chikungunya suspected symptomatic cases from diverse geographical areas of India.
- ❖ Diagnosis by Real-time PCR and ELISA based assays.
- ❖ Establish a viral isolates repository with characterized and phylogenetically mapped viral isolates
- ❖ FACS and Luminex based immunopathological study of the infected individuals.
- ❖ Animal models for testing in vivo immunogenicity and protection.

**Senior Research Officer (Project coordinator)** | Manipal Academy of Higher Education, India **Jul 2019 to May 2021**

**Department of biotechnology (DBT), Govt. of India** funded '*Translational Research Consortium for Establishing Platform Technologies to Support Prophylactic and Therapeutic Strategies for Dengue Discovery to Proof-of-Concept*'. (PI: Dr G Arunkumar)

- ❖ Managing a team of 08 members which included and not limited to medical doctors, nurses, laboratory technologists, data managers.
- ❖ Enrolment and collection of biological samples of Dengue suspected symptomatic and asymptomatic cases from diverse geographical areas of India.
- ❖ Diagnosis by Real-time PCR and ELISA based assays.
- ❖ Establish a viral isolates repository with characterized and phylogenetically mapped viral isolates.
- ❖ Development of mAb and relevant immunological assays
- ❖ Animal models for testing in vivo immunogenicity and protection.

**Research Officer** | Manipal Academy of Higher Education, India **Oct 2018 to Jun 2019**

**Centers for Disease Control and Prevention (CDC), Atlanta, USA** funded '*Burden and Risk of Emerging Infectious Diseases in Geographical Zones of India (BRIDGE)*'. (PI: Dr G Arunkumar)

- ❖ Managing a team of 120 members which included and not limited to medical doctors, nurses, laboratory technologists, data managers.
- ❖ Surveillance of emerging and reemerging diseases in 25 clinical cohorts across India
- ❖ Diagnosis by Real-time PCR, ELISA based assays and classical cell culture-based assays (More than 100 pathogens).
- ❖ Working with public health system coordinating the findings and developing national policies and guidelines for diagnosis, prevention, and control of most common febrile infections.

**Laboratory Manager** | Manipal Academy of Higher Education, India **Mar 2018 to Sep 2018**

**World Health Organization - Southeast Asia Regional Office (WHO-SEARO)** funded '*Comprehensive sentinel surveillance for Influenza A (H7N9) in India*'. (PI: Dr. G Arunkumar)

- ❖ Cohort based surveillance of Avian Influenza in India as part of WHO working group on pandemic influenza special studies.
- ❖ Diagnosis by Real-time PCR, ELISA based assays and classical cell culture-based assays.
- ❖ Working with public health system coordinating the findings and developing national policies and guidelines for diagnosis, prevention, and control of emerging strains of Influenza viruses.

**Study Manager** | Manipal Academy of Higher Education, India **Feb 2016 to Feb 2018**

**Centers for Disease Control, Atlanta, USA (CDC)** funded '*Hospital Based Acute Febrile Illness Surveillance (AFI) in India*'. (PI: Dr. G Arunkumar)

- ❖ Fever surveillance in the age group of 5 – 70 years in 33 clinical cohorts across India
- ❖ Managing a team of 180 members which included and not limited to medical doctors, nurses, laboratory technologists, data managers.

- ❖ Surveillance of emerging and reemerging diseases in 25 clinical cohorts across India
- ❖ Diagnosis by Real-time PCR, ELISA based assays and classical cell culture-based assays (More than 100 pathogens).
- ❖ Working with public health system coordinating the findings and developing national policies and guidelines for diagnosis, prevention, and control of most common febrile infections.

**Research Assistant** | Manipal Academy of Higher Education, India

**Nov 2015 to Jan 2016**

**Centers for Disease Control, Atlanta, USA (CDC)** funded '*Hospital Based Acute Febrile Illness Surveillance (AFI) in India*'. (PI: Dr. G Arunkumar)

- ❖ Fever surveillance in the age group of 5 – 70 years in 33 clinical cohorts across India
- ❖ Surveillance of emerging and reemerging diseases in 25 clinical cohorts across India
- ❖ Diagnosis by Real-time PCR, ELISA based assays and classical cell culture-based assays (More than 100 pathogens).

## WET LABORATORY SKILLS

### Molecular and Genomic Assays

Nucleic acid extraction (DNA/ RNA)	QiaAmp column based manual nucleic acid extraction. QIAasymphony® and MagNA Pure® automated extraction system
Conventional PCR	Veriti® Thermal Cycler Agarose gel electrophoresis
Real-time qPCR	Applied biosystems QuantStudio 7® Applied biosystems QuantStudio 6® Applied biosystems QuantStudio 5® Applied biosystems 7500®
Sequencing	Applied biosystems StepOne® Illumina NovaSeq 6000® Illumina MiSeq® Oxford nanopore PromethION® MGI T7® MGI T10® ABI 3500® XL

### Virology Techniques, Cell Culture, and Immunological Assays

Virus isolation and quantification assays	Transfection of viruses in BSL 2 and BSL 3 laboratory Study of cytopathic effect TCID50 Hemagglutination Inhibition Assay (HAI) Cell culture media preparation Cell line maintenance
Immunological assays	Neutralization Assay (NA) Plaque assay and plaque reduction assay (PRNT) Hemagglutination (HA) Immunofluorescence ELISA ELISPOT Immunopathological work on BD Accuri 6 Plus® flow cytometer. Cytokine and chemokine assays on Luminex MAGPIX® TaqMan array

## CERTIFICATE COURSES

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- ❖ Research methodology and bio statistics, Manipal Academy of Higher Education, Manipal, India
- ❖ BSL3 containment laboratory commissioning, RISKREN, Singapore
- ❖ NABL assessor for the ISO 15189 standards

## RESEARCH PUBLICATIONS

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- ❖ Ramachandran Erathodi Sanjay, Joseph Josmi, Sasidharanpillai Sarita, Sheik Shahin et al. *Molecular Epidemiology of Enteroviruses Associated with Hand, Foot and Mouth Disease in South India during 2015 to 2017* - DOI: <https://doi.org/10.21203/rs.3.rs-1635954/v1> (2022)
- ❖ Anitha Jagadesh, Anup Jayaram, Shahin Sheik et al. *Current status of Chikungunya in India* – doi <https://10.3389/fmicb.2021.695173> (2021)
- ❖ Ramachandran Erathodi Sanjay, Sasidharanpillai Sabeena, Sheik Shahin et al. *Genetic analysis of Enterovirus D68 associated with pneumonia in children from South India* - <https://doi.org/10.1099/jmm.0.001356> (2021)
- ❖ Arunkumar G, Santhosha Devadiga, Anita K McElroy, Shahin Sheik et al. *Adaptive immune responses in humans during Nipah virus acute and convalescent phases of infection* *Clinical Infectious Diseases* - <https://doi.org/10.1093/cid/ciz010> (2019)
- ❖ Arunkumar G, Chandni R, Mourya DT, Singh SK, Sadanandan R, Sudan P, Bhargava B, Shahin Sheik et al. *Outbreak investigation of Nipah Virus Disease in Kerala, India, 2018*. *The Journal of infectious diseases* 2018 Oct 26. <http://dx.doi.org/10.1093/infdis/jiy612> (2019)
- ❖ S Shahin, H S Shah, Anup J, A Jazeel, G Arunkumar, et al, "Hepatitis A outbreak traced back to ice used in fruit juice in Nellikuzhi panchayat, Ernakulam district, Kerala state". 26th National Conference of Indian Virological Society (IVS) on December 7- 9, 2017

## BOOKS AND CHAPTERS

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COVID-19: A Multidimensional Response - Community Spread and Public Health Prevention. Anitha Jagadesh, Anup Jayaram, Shahin Sheik, Chiranjay Mukhopadhyay (Page 41 to 65) (2021)

## SCIENTIFIC REPORTS

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- ❖ Report of hospital based surveillance of acute febrile illness in India 30 November, 2016  
<https://manipal.edu/content/dam/manipal/mu/dovr/Documents/AFI/AFI%202016%20Brochure%20%2030th%20November.pdf>
- ❖ Report of hospital based surveillance of acute febrile illness in India 12 December, 2017  
[https://manipal.edu/content/dam/manipal/mu/dovr/Documents/AFI/MCVR\\_AFI%20Brochure%20final.pdf](https://manipal.edu/content/dam/manipal/mu/dovr/Documents/AFI/MCVR_AFI%20Brochure%20final.pdf)

## AWARDS AND HONOURS

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Chief Minister, Government of Kerala award for the commendable work on the Nipah Virus 2018 outbreak.

## CURRENT VISA STATUS

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Golden Visa – 10 years

## REFERENCES

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### Dr. G Arunkumar

National Laboratory Consultant  
World Health Organization (WHO), Nepal  
Email: [govindakarnavara@who.int](mailto:govindakarnavara@who.int)  
Phone No: +977 9803122096

### Dr. Chiranjay Mukhopadhyay

Director  
Manipal Institute of Virology  
Manipal Academy of Higher Education (MAHE)  
Email: [chiranjay.m@manipal.edu](mailto:chiranjay.m@manipal.edu)  
Phone No: +91 9845513057