

# SHAN P THOMAS

Next Generation Sequencing Professional with 9 years of experience.

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## SKILLS

- DNA / RNA Extraction from soil, water, bacteria, fungi, Insects, human blood, human tissue (FFPE)
- PCR, qPCR, RT-PCR • NGS Library preparation (Whole genome, Whole Exome, Amplicon) • LIMS
- Sanger Sequencing (GA 3730) • NGS (Illumina HiseqX, Hiseq4500, Hiseq2000, Nextseq550, MiSeq)
- Oxford Nanopore MinION • Liquid handlers and automation (Hamilton, Mosquito, Integra, Opentron)
- Team management • Technical sales • Technical support • Data analysis and visualization (R language)

## PROFESSIONAL EXPERIENCE

**Specialized Scientific Solutions**, Riyadh, Saudi Arabia • Technical Sales Specialist 12/2020 - 05/2021

- I was responsible for introducing and explaining Illumina and MGI instruments and products to potential customers in this remote job.
- Duties also included attending training offered by Illumina and MGI, writing contents for brochures and leaflets to explain the services offered by the company.

**LifeCell International** (CAP accredited), Chennai, India • Assistant Manager-MB 04/2020 - 11/2020

- At LifeCell International, I performed and managed various sequencing runs including Whole Exome Sequencing, Whole Genome Sequencing and HLA on NextSeq 550 Instrument. The job included library preparations, setting up and carrying out sequencing runs and machine maintenance.

**MedGenome Labs Ltd** (CAP accredited), Bangalore, India • Research Associate 12/2017 - 03/2020

- Initially responsible for PCR based molecular diagnostics.
- Later moved to Sanger Sequencing and was responsible for performing all the Sanger Sequencing runs (on 48 capillary -ABI 3730xl) (Cochin, Kerala) and the maintenance/troubleshooting of the sequencing Instrument.
- My duties also included maintaining DNA and primer inventories and checking result reports for sanger-based tests.
- In 2018, I was transferred to the main lab at Bangalore as a member of NGS Team, where I prepared NGS runs for Illumina Miseq, Illumina NextSeq 550, Illumina HiSeq 2500, Illumina HiSeq 4000 and Illumina HiSeq X.
- I was also responsible for the routine maintenance of these instruments.
- I gained experience in performing experiments according to CAP guidelines and documentation during my tenure at Medgenome Labs Ltd.

**Geobiotechnology Lab**, Trichy, India • Researcher

11/2015 - 11/2017

- Worked in a Ministry of Environment Sciences (Govt of India) funded project which explored the possibility of utilizing paleo-environmental DNA as a paleo sea level indicator.
- Participated in sample collection, analysis, and publication of results
- I published 2 research papers (Cite score 4.5 and 8.9) as the first author during my 2-year tenure.
- I was selected as one among 25 students to participate in a 10 days' workshop on aquatic microbiology and bioinformatics sponsored by Govt of India and INRI France, at Andaman Nicobar Islands, India.
- Selected for an oral presentation of my research on *Metabarcoding of PalEnDNA* at Open Science Meeting- Past Global Changes 2017 held at Zaragoza, Spain.

**Indian Agricultural Research Institute**, New Delhi, India • Senior Research Fellow      12/2013 - 10/2015

- I started as a trainee responsible for DNA/RNA isolations and molecular barcoding of bacteria, fungi and insects.
- Moved to the position of SRF after 1 year working on different govt funded projects dealing with molecular barcoding and been a co-author of one scientific paper.

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## EDUCATION

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**PhD in Biology** • University of Toledo, Toledo, Ohio • Graduate Research Assistant      01/2022 - Present

I took a break from my career to pursue my education. I am currently pursuing a doctorate along with working as a research assistant in a DOE, US funded project that explores the changes in wetlands due to climate changes and I focus on the changes in microbial communities due to water level changes and other stresses induced by climate change using NGS (Illumina and Oxford Nanopore) tools.

**GPA-3.9. Expected Completion date: Summer 2025**

**Master of Science** • Bharathidasan University, Trichy India

Graduation Year (2014) -75%

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## PUBLICATIONS

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**Thomas, S. P.**, Shanmuganathan, B., Krishnan, S., Goswami, K., Dev, M., Jaiswal, M. K., Sadasivam, S. K. **(2018)**. Metabarcoding of PalEnDNA as An Efficient Tool to Recover Ancient Bacterial Diversity.

Geomicrobiology Journal, 35(9), 798–803. (IF-2.2)

**Thomas, S. P.**, Shanmuganathan, B., Jaiswal, M. K., Kumaresan, A., & Sadasivam, S. K. **(2019)**. Legacy of a Pleistocene bacterial community: Patterns in community dynamics through changing ecosystems.

Microbiological Research, 226, 65–73. (IF-6.1).

Machado-Silva, F., Weintraub, M. N., Ward, N. D., Doro, K. O., Regier, P. J., Ehosioko, **Thomas, S.P.**, S., Peixoto, R. B., Sandoval, L., Forbrich, I., Kemner, K. M., O'Loughlin, E. J., Stetten, L., Spanbauer, T., Bridgeman, T. B., O'Meara, T., Rod, K. A., Patel, K., McDowell, N. G., Megonigal, J. P., Rich, R. L., & Bailey, V. L. **(2024)**. Short-term groundwater level fluctuations drive subsurface redox variability. Environmental Science & Technology, 58(33). (IF -11.4)

Citations: 81, h- index -4 (as of 14<sup>th</sup> April 2025)

\*Full list available at <https://scholar.google.co.in/citations?user=9EslZrgAAAAJ&hl>.