FARUK DUBE

Bioinformatician / Postdoc

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PROFESSIONAL EXPERIENCE

SCILIFELAB (UPPSALA UNIVERSITY) **Uppsala, Sweden**

Postdoc **2024-Present**

- Develop machine learning models to identify vaginal microbiome configurations linked to reproductive health.
- Utilize multi-locus phylogenomics to determine phylogenetic placement of key vaginal symbionts using metagenome-assembled genomes and diverse marker genes.
- Benchmark viral profiling tools to analyze virome-microbiome dynamics in vaginal and infant gut samples.

SWEDISH UNIVERSITY OF AGRICULTURAL SCIENCES **Uppsala, Sweden**

Bioinformatician **2024-present**

- Conduct differential gene expression analysis in Caco-2 and BAL cells post-parasitic larvae challenge from two species.
- Identify variants in seven beta-tubulin genes between susceptible and resistant parasitic populations, investigating potential resistance associations.

SWEDISH UNIVERSITY OF AGRICULTURAL SCIENCES **Uppsala, Sweden**

PhD student **2019-2024**

- Researched drug resistance in Ascarid roundworms using transcriptomics and gene networks from *C. elegans* and *P. univalens*.
- Developed and deployed bioinformatics pipelines with Nextflow, Docker, and Singularity for high-throughput transcriptomic data analysis on HPC systems.
- Contributed to academic conferences and peer-reviewed journals.
- Launched a free web app to assist PhD students in preparing for and managing PhD defense deadlines.

NORTHWESTERN UNIVERSITY **Chicago, USA**

Visiting scholar **2023-2023**

- Conducted Genome-Wide Association Studies (GWAS) and analyzed Quantitative Trait Loci (QTL) to test associations of high-impact variations in drug target genes across natural *C. elegans* populations.
- Collaborated with a multidisciplinary team to achieve research goals.

EDUCATION

SWEDISH UNIVERSITY OF AGRICULTURAL SCIENCES **Uppsala, Sweden**

PhD in Biomedical sciences **2019-2024**

UPPSALA UNIVERSITY **Uppsala, Sweden**

Masters of Medical Science in Infection Biology, Biological and Biomedical Sciences **2016-2018**

ADDITIONAL INFORMATION

- Technical Skills: R, Python, Bash, Nextflow, High-Performance Computing (HPC), Docker, Singularity, Git, Data visualization, Biostatistics.