

# ADON CHAWE

*Biomedical Scientist*

*St Francis Mission Hospital*

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## SUMMARY

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A Biomedical Scientist, in the field over three years with comprehensive background in medical laboratory sciences. Competent working with office software packages such as Microsoft office suite and Google's Workspace packages. Skilled in large scale data analysis, machine learning, and bioinformatics. Strong background in TB diagnosis, Malaria diagnosis, and HIV diagnosis and monitoring. Strong collaborator with experience working in interdisciplinary and remotely. Interested in applying cutting edge technology to improve global health outcomes.

Personal Website: <https://adonc.github.io/>

LinkedIn: <https://www.linkedin.com/in/adon-chawe-14459562/>

GitHub: <https://github.com/Adonc>

## SKILLS

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- **Programming Languages:** R, Python, Bash
- **Tools & Software:** GATK, bcftools, samtools, Kallisto, RShiny, VEP, Docker, Galaxy, Git
- **Methods & concepts:** set enrichment analysis (GSEA), Gene Ontology enrichment analysis (Enrichr), Differential Gene expression analysis (DESeq2, EdgeR), Dimensionality reduction methods (PCA, hierarchical clustering), Sequence Assembly & Alignment (BWA/BowTie), Calling and Annotating mutations and genetic aberrations (VarScan2, ClinVar), Statistical Analysis (Pearson/Spearman correlation, Student t-test, Wilcoxon rank sum test, ANOVA, Kruskal-Wallis)

## PROFESSIONAL EXPERIENCE

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*St Francis Mission Hospital, Katete • Medical Laboratory Technologist 01/2017 - Present*

*Key Qualifications and Responsibilities:*

- Assisting clinicians in the diagnosis and treatment of illness, injuries and medical conditions by conducting laboratory analysis on submitted specimens
- Implementing the Quality management system, through development of standard operating procedures, conducting internal audits, and chairing Quality management meetings.
- Assisting clinicians in the management of TB, through collection and preparation of Sputum samples for GeneXpert, Ziehl Neelsen and auramine o stain.
- Processing of specimen for HIV Viral load, by updating the Laboratory information system, aliquoting specimen, and shipping to provincial testing laboratory.
- Conduction Competency assessment on laboratory personnel.
- Participating in TB EQA program, by running and reporting results.
- Ensuring effective use of laboratory commodities through supervision and undertaking timely ordering of reagents and consumables using the electronic Laboratory Management information system.
- Monitoring and Evaluation of laboratory activities by keeping track of Quality indicators

- Supervising and developing capacity building interventions through teaching of Students, and presentation to colleagues on science, laboratory management and research.
- Participating and contributing to the timely preparation of departmental budget to facilitate acquisition of financial resources to support laboratory activities.

*Centre for Infectious Disease Research in Zambia, Central Laboratory, Lusaka • Intern 04/2022 – 07/2022*

*Key Qualifications and Responsibilities:*

- Was involved in the sequencing of HIV Pol gene from samples of patients not responding to Therapy, in order to detect drug resistance mutations.
- Conducted SARS-CoV-2 sample collection, preparation for testing, and Testing using Aptima SARS-CoV-2 Assay on the Hologic Panther. I was also involved in the SARS-CoV-2 Antibody testing using Rapid diagnostic Kits.
- Was involved in the preparation of SARS-CoV-2 positive samples for Sequencing on the Illumina MiSeq, a high throughput sequencer.
- Participated in Primary isolation of Mycobacteria, from specimen reception, decontamination, and culture using the BACTEC MGIT 960, and L-J Media, while working in Biosafety level 3 Laboratory.
- Conducted drug susceptibility testing on Isolated *M. tuberculosis* using SIRE.
- Utilized the Determine TB LAM Ag test to detect the Lipoarabinomannan (LAM) antigen of the Mycobacterium in Submitted urine samples to aid the diagnosis of active mycobacterium infection in HIV positive individuals.
- Participated in the Good Clinical laboratory practice training offered online by DAIDS
- Was involved in the review of Results before they are authorized by the supervisor.
- Conducted HIV Treatment Response monitoring by carrying CD4 Testing using Flow Cytometry, Used PCR Assays as well as Transcription Mediated Amplification on the Hologic Panther to Measure Viral load on Patient samples.
- Participated in Equipment verification procedure on newly acquired equipment so as to check if it conforms to laboratory standards as well as manufacturer claims.
- Utilized QuantiFERON-TB GOLD IN-TUBE (QFT-PLUS) Assay to Indirectly detect TB Infection.
- Was involved in the Discrimination of Mycobacteria into *M. tuberculosis* complex and other mycobacteria using the HAIN Line-Probe assay.

## EDUCATION

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*BSc Biomedical Sciences • The University of Zambia*  
*Graduation Year (2020 - 2022)*

*Diploma Biomedical Sciences • Ndola College of Biomedical Sciences*  
*Graduation Year (2013 - 2015)*

## PROJECTS

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I am currently participating in the following project Analysing genomic variants in schwannomatosis, that aims to characterize and prioritise genomic variants in schwannomatosis.

- [Analysis of genomic variants in Schwannomatosis](#)

## PUBLICATIONS

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### 2021

- Chawe, A., Mfuno, R.L., Syapiila, P.M., Zimba, S.D., Vlahakis, P.A., Mwale, S., Mwape, K., Kalolekesha, M.C., Chileshe, M., Mutale, J. and Mudenda, T., 2021. Knowledge, attitude and practices of COVID-19 among medical laboratory professionals in Zambia. African journal of laboratory medicine, 10(1), pp.1-7

### 2019

- Alcheikh, A., Chawe, A., Kowa, S.F. and Banda, I., 2019. A comprehensive approach to improving laboratory services in rural Zambia. Blood Advances, 3(Supplement 1), pp.11-15.

## PROFESSIONAL ACTIVITIES

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- Member of the Biomedical Society of Zambia
- Member of Bioinformatics Research Network

## POSTERS/ABSTRACTS

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**Poster Title:** Completeness and appropriateness of patient request forms received at the laboratory From OPD Patients at St. Francis Mission Hospital in Katete, Zambia

**Conference:** IFCC World Lab Durban

**Year:** 2017

**Poster Title:** Predicting erythrocyte sedimentation rate from full blood count data

**Conference:** IFCC WorldLab Congress, Seoul

**Year:** 2022

## PRESENTATIONS

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- **Presentation: 2021 Laboratory Professional Week Scientific Webinar – Biomedical Society of Zambia**  
*knowledge, practices and attitudes towards COVID-19*
- **Presentation: 2017 Annual general meeting – Biomedical Society of Zambia, Eastern Province**  
*Completeness and appropriateness of patient request forms received at the laboratory From OPD Patients at St. Francis Mission Hospital in Katete, Zambia*