

Sarah Ingabire

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EDUCATION

Millikin University- Undergraduate Education, Decatur, IL USA **Aug 2017- May 2021**

- Bachelor of Science: major in **Chemistry** with **Biochemistry Emphasis**
- Research Areas: Examined the effect of tryptophan peptides using *C.elegans* model in the hope of reducing A β accumulation/ tau neurofibrillary tangles in Alzheimer's disease.

Harvard Medical School- Office of Learning, External Education, Cambridge, MA **June 24th, 2022**

- Certificate of Achievement: **Immunology**

EXPERIENCE

Shalek Lab, Broad Institute of MIT and Harvard (Cambridge, MA)

Sept 2021- Now

Research Associate II- Klarman Cell Observatory Department

- Systematically process biological samples for multiple projects using cutting edge genomic technologies
- Studying the cell-to-cell interactions to understand the tumor microenvironment in PDAC cancer
- Conducting an independent research project using PDAC cell lines by testing different ligands on them to understand how much drug inhibit the proteins and what drives their cell state.
- Generated a library of more than 200 patient specimens for Single Cell RNA Seq using Seq-Well and 10x protocols
- Analyze experimental data and identify methodological problems/challenges. Adjust experimental protocols to ensure best outcomes and project completion in a timely manner
- Analyze single-cell data using R language for Statistical computing
- Attend team meetings to share results, plan projects and experiments, ensure that projects support current team goals in a dynamic environment
- Consult with other senior scientists or scientific literature as needed
- Train new lab members, students, interns, and collaborators

Northwestern Medicine (Chicago, IL)

June 2021- Aug 2021

Laboratory Technician I- Microbiology

- Performed all aspects of pre-analytic workflow appropriate for the specific laboratory section to ensure orders are entered correctly, specimens collected are appropriate for the test ordered and are correctly processed/transported
- Set up specimens according to SOPs
- Recognized test system performance problems and takes necessary corrective actions
- Recognized when unresolved problems need to be escalated and takes necessary follow-up action
- Verified non-patient information (e.g., collection time) according to established protocol
- Handled unresolved orders, troubleshoots where needed
- Verified with physicians and/or nurses prior to laboratory information system (LIS) order entry to resolve unclear, duplicate or otherwise ambiguous orders
- Performed all aspects of the post-analytical workflow appropriate for the specific laboratory section to ensure accurate results are reported within established time frames, specimens are retained appropriately, test results and/or current status are available upon inquiry, and billed charges are correct for testing performed

Archer Daniels Midland Company (Decatur, IL)

Jan 2021- May 2021

Research Lab Technician- Microbiology

- Assist and collaborate with team members regarding execution of experiments in area of expertise
- Perform microscopic examination, staining and interpretation of samples using the VITEK compact 2
- Perform molecular diagnostic and analysis techniques using PCR and MINION sequencer
- Use problem-solving skill to handle difficult or unexpected situations regarding contamination and microbial growth in different fermentations
- Contribute to generation of SOPs and data sheet that capture all necessary technical and experimental details
- Maintain Lab hygiene and safety standards

Millikin University (Decatur, IL)

Student Assistant- Saliva Based COVID-19 Testing site

Jan 2021- March 2021

- Assisted with testee registration
- Instructed and monitored testees during saliva collection
- Evaluated quality of saliva samples through visual inspection
- Ensured that confidentiality was maintained during the collection process

Undergraduate Researcher- Prof. Anne Rodriguez

Aug 2020 – May 2021

- Developed a logical and independent mindset by evaluating effective ways of stopping or reducing A β accumulation or tau neurofibrillary tangles
- Determined the presence or absence of A β antibodies related to certain infectious conditions using ELISA assay
- Synthesized short peptides using the Solid Phase Peptide Synthesis (SPPS) methodology to block the formation of plaques and/or tangles
- Performed a touch habituation test in the control APL-1 and mutant APL-1 *C. elegans* strains in the absence and presence of WW and WWWW peptides to measure the tryptophan's ability of crossing membranes such as the blood brain barrier
- Discovered a significant improvement in learning for both control and mutant APL-1 after WWWW exposure.
- Participated in the Poster Symposium at the Celebration of Scholarships to present my scholarly work in front of judge

SA. SAVONOR (Bujumbura, Burundi)

May 2018 - July 2018

Laboratory Assistant

- Acquired technical skills in one of the biggest private manufacturing companies specialized in edible oil & red palm olein refining, soaps, hygiene, food and cosmetics products.
- Learned about oil purification, recycling soap scraps and manufacturing waste.
- Performed various chemical assays, alongside several quality assurance tests for cooking oil
- Performed various maintenance tasks on the testing equipment

SKILLS

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- **Wet Lab Techniques:** PCR Techniques, MINION Nanopore Technology, HPLC, Mass spectrometer, UV- Vis spectrophotometer, CRISPR-Cas9 system, 10x, Seq Well, Smart-seq 2
 - **Programming:** R language for Statistical computing (Seurat tools)
 - **Languages:** Fully proficient in English, French and Kirundi

AWARD

- Chemistry Honor Award: Outstanding student for achieving Excellence in Chemistry (April 2021)

LEADERSHIP

Human Cell Atlas Asia, Massachusetts Institute of Technology, USA **Jan 2021**

- Led the international online training workshop on single cell transcriptomics

Human Cell Atlas Africa, Broad Institute of MIT and Harvard, USA **Oct 2022- Nov 2022**

- Led the online training workshop for over 100 participants from Ghana on different computational and experimental methods using Single Cell RNA Seq

Human Cell Atlas Africa, Accra/ Ghana **March 7th- March 10th 2023**

- Currently planning an in-person training workshop in Ghana on advanced computational and experimental methods using Single Cell RNA Seq technologies

ACTIVITIES

Conferences:

- Hallmarks of Cancer 2022- Cell Symposia (Oct 30th – Nov 1st, 2022) ~ San Diego, CA

Volunteering:

- Volunteered for First Christian Church at Mosaic Cafe every week (Feb 2021- May 2021) ~ Decatur, IL
- Volunteered in plastic cleaning in order to reduce the pollution ~Decatur, IL