MAURICE BUKENYA

5 Lowden Ave Somerville MA 02144 | +1 617 710 2483

mauricebukenya@gmail.com

RESUME

EDUCATIONAL PREPARATION

09/17—08/18 **Master of Science,** Chemical Engineering | GPA: 3.83/4.00, *Tufts University – Medford MA*

09/13—05/17 **Bachelor of Science,** Chemical Engineering | GPA 3.40/4.00, *Tufts University – Medford MA*

Coursework (BS &MS)

- *Mathematics and Natural Sciences* – Calculus, Ordinary and Partial Differential Equations, Numerical Methods, Biology (Cells, Organisms and Populations), Organic Chemistry, Physical Chemistry, Physics, Surface & Colloidal Chemistry, Materials Science
- *Chemical Engineering* – Transport Phenomena, Thermodynamics, Reactor Design, Chemical & biological Separations, Process Dynamics & Control, Product & Process Design
- *Biotechnology* - Biotechnology Processing Lab Projects, Biomaterials & Regenerative Medicine

RESEARCH EXPERIENCE

09/18—Present *Engineer I,* **Biogen -** Medford, MA

Project Aim: To develop a platform for continuous production of AAV

- Design and execute experiments for upstream gene therapy process development cell
- Analyze cell growth and viral titer results and develop models as needed

11/15—09/18 *Research Assistant,* **Nanobiofabrication Laboratory (PI: Hyunmin Yi), Tufts University -** Medford, MA

Thesis Project: To devise a simple approach to synthesis of micropatterned opal-structured hydrogel films for biosensing

- Developed a novel and robust micromolding strategy for fabrication of optically functional micropatterned films for utilization in reagentless biosensing
- Conducted thorough characterization of structural, optical, dynamic and chemical properties of the films by SEM, darkfield microscopy and UV-Vis reflectance spectrometry

07/17—09/17 *Research Technician,* **Koch Institute, Massachusetts Institute of Technology –** Cambridge, MA

Project Aim: To examine the effect of sequencing depth on the quality of single cell RNA-seq data

- Prepared libraries for single cell RNA-sequencing using the Seqwell technique combined with PCR
- Utilized R and MATLAB to carryout in-depth analysis of gene data from peanut allergy patients to determine optimal sequencing depth or number of sequencing reads.
- Recommended a minimum practical sequencing depth of no less than 50 million sequencing reads

06/16—08/16 *Engineering Intern***, National Institutes of Health (NIH-NIBIB)** - Bethesda, MD

Project Aim: To optimize single cell and single bead capture using the dropseq technique

- Stabilized aqueous droplet coencapsulation of single cells and barcoded beads, a preparatory step for single cell RNA sequencing

LEADERSHIP ACTIVITIES

08/17—03/18 *Secretary,* **Biomedical and Chemical Engineering Society at Tufts University –** Medford MA

- Coordinated meetings and resource opportunities for the organization of over 50 members
- Created and maintained written records and communication channels including social media

08/15—11/16 *Resident Advisor***, Tufts University Residential Life** – Medford MA

- Planned and implemented community building programs for 47 student residents

TECHNICAL SKILLS

Laboratory
- Cell Culture, PCR, HPLC, Gel Electrophoresis, Bradford Assay, SDS-PAGE, ELISA, UV-Vis Spectrophotometry, Bioreactor Operation, AAV viral production

Computer
- MATLAB (Proficient), R (Proficient), python (intermediate)

Please contact me at mauricebukenya@gmail.com for an updated version of this resume.