CURRICULUM VITAE

Moses Onyeabor

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EDUCATION

Arizona State University, Tempe

Ph.D. Microbiology **December 2022 (expected)**

Dissertation: "Characterizing and releasing biological constraints for lignocellulosic bioconversion"

B.S. Biochemistry

Barrett, The Honors College at Arizona State University **May 2018**

Honors Thesis: "Exploration of Enzymatic Reactivity of Human Endonuclease Enzyme APE1 in Clustered DNA Damages Involving an Abasic Site"

ACADEMIC & TEACHING EXPERIENCE

Graduate Service Assistant - Arizona State University **Fall 2021**
Graduate Service Assistant - Arizona State University **Summer 2021**
Graduate Research Assistant - Arizona State University **Spring 2021**
Graduate Research Assistant - Arizona State University **Fall 2020**
Graduate Research Assistant - Arizona State University **Summer 2020**
Graduate Teaching Assistant - Arizona State University **Spring 2020**
Graduate Teaching Assistant - Arizona State University **Fall 2019**
BIO 340: General Genetics (online)
Graduate Teaching Assistant – Arizona State University **Summer 2019**
BIO 340: General Genetics (online)
Graduate Teaching Assistant – Arizona State University **Spring 2019**
BIO 181: General Biology I

INSTITUTIONAL AND PROFESSIONAL ACTIVITIES

- *Member, American Society for Microbiology* **December 2020 - present**
- *Member, University Hearing Board at Arizona State University* **August 2019 – present**
- *Undergraduate Student Research mentor* **July 2019 – present**
- *Member, National Society of Collegiate Scholars (NSCS)* **September 2015 - present**
- *Peer mentor for MasterCard Foundation Scholars program* **August 2015 – May 2018**

QUALIFICATIONS & SKILLS

Directed evolution, Adaptive laboratory evolution, Genome editing, Plasmid-based library construction and screening, Enzyme purification and characterization, Bioreactor Fermentation and optimization, SnapGene, GraphPad Prism, Microsoft Office, Microsoft Excel, Plasmid construction, DNA Extraction and purification, High-Performance Liquid Chromatography, et cetera.

AWARDS AND FUNDING

The Mastercard Foundations Scholarship ($40,000 annually for 4 years) ***August 2014 – May 2018***
Recipient, Graduate College Fellowship ($5,000 per semester) **Fall 2020 and Spring 2021**

PUBLICATIONS

Flores, A., Holland, S., Mhatre, A., Sarnaik, A., Godar, A., **Onyeabor, M**., Varman, A., Wang, X., Nielsen, D. (2021) A coculture-coproduction system designed for enhanced carbon conservation through inter-strain CO_2 recycling. **Metabolic Engineering**. **doi.org/10.1016/j.ymben.2021.08.001**

Flores, A., Choi, H., Martinez, R., **Onyeabor, M.**, Ayla, E.Z., Godar, A., Machas, M., Nielsen, D., Wang, X. (2020) Catabolic Division of Labor Enhances Production of D-Lactate and Succinate from Glucose-Xylose Mixtures in Engineered *Escherichia coli* Coculture Systems. ***Front. Bioeng. Biotechnol., doi: 10.3389/fbioe.2020.00329.***

Onyeabor, M., Martinez, R., Kurgan, G. and Wang, X. (2020) Engineering transport systems for microbial production. **Academic Press. doi: 10.1016/bs.aambs.2020.01.002**

Kurgan, G., Kurgan, L., Schneider, A., **Onyeabor, M.**, Rodriguez-Sanchez, Y., Taylor, E., Carbonell, P., Martinez, R., Shi, X., Gu, H. and Wang, X. (2019) Identification of major malate export systems in an engineered malate producing *Escherichia coli* aided by substrate similarity search. ***Appl Microbiol Biotechnol.*** doi**: 10.1007/s00253-019-10164-y**

RESEARCH PAPERS IN PREPARATION

Kurgan, G., **Onyeabor, M.**, Holland, S., Taylor, E., Schneider, A., Kurgan, L., Billings, T., Wang, X. (2021) Directed evolution of Zymomonas mobilis sugar facilitator Glf to overcome glucose inhibition. Submitted

Onyeabor, M., Nieves, L. M., Kurgan, G., Xiao, J., Kurgan, L., Retallack, B., Schneider, A., Wang, X. (2021) Releasing allosteric regulation to improve L-malate production in *Escherichia coli*. In preparation.

Onyeabor, M., Wang, X., (2021) Directed evolution of *Escherichia coli* efflux pump, MdtJI, for improved tolerance to lignocellulose-derived inhibitors. In preparation

BOOK CHAPTERS

Onyeabor, M., Martinez, R., Kurgan, G. and Wang, X. (2020) Engineering transport systems for microbial production. **Academic Press. doi: 10.1016/bs.aambs.2020.01.002**