

Wajiha Mumtaj KHALID

PERSONAL

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SUMMARY

- Excellent team-player, ambitious personality, quick learner, has confident communication and analytical skills.
- Strong communication skills developed through university, regional, and invited presentations.
- Over 5 years of experience in problem solving and strategizing in the area of quantitative systems biology and the relevant industry applications
- Forward-thinking and passionate biochemist with a strong background in cancer biology, cancer heterogeneity, systems biology, and immunofluorescence.

EDUCATION

2018–CURRENT	MA Candidate in BIOLOGICAL SCIENCES, Fisk University , Nashville, TN. Expected graduation Summer 2020 Advisor: Dr. Darren TYSON, Ph.D., Prof. of Biochemistry & Cancer Biology. Vanderbilt University , Nashville, TN
2013–2018	Bachelors of Science in BIOCHEMISTRY with a Minor in BIOLOGY The Florida State University , Tallahassee, FL

RESEARCH EXPERIENCE

2018–CURRENT	Graduate Researcher, VANDERBILT UNIVERSITY, Nashville, TN <i>Thesis Laboratory</i>
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- Computationally and experimentally studied Small Cell Lung Cancer heterogeneity at the single-cell level
- Used human derived small cell lung cancer cell lines to conduct immunofluorescence assays in order to see subtypes present at the single cell level*
- Conducted time-dependent drug-response assays using fluorescence microscopic image-based quantification of cell counts in multi-well plates
- Monthly presentation to 30+ scientists consisting of data visualization
- Proficient in Cellavista imaging, and BioTek Gen5 software
- Experienced in oral presentation to 50+ scientists in the Cancer biology department at Vanderbilt University

- Experience in R and Python for data analysis: R for producing and evaluating dose–response curves; Anaconda (as a Python Jupyter Notebook) for analysis of single-cell RNA-seq
- Performed cell tumor implementation on mice
- Worked independently to learn computational methods: hierarchical and heat-map clustering

* *Experiments on pause due to COVID-19 shutdowns*

2016–2018 | Undergraduate Researcher, FLORIDA STATE UNIVERSITY College of Medicine, Tallahassee, FL

- Project focused on the microtubule regulator, Dim Gamma Tubulin 4 (Dgt4), and understanding its involvement in microtubule organization at the mitotic spindle and kinetochores
- Performed Western Blotting to illustrate the type of mutant that was being researched
- Generated Drosophila CRISPR/Cas9 mutant alleles of Dgt4. Prepped slides and used confocal fluorescent microscopy to analyze the histology of cytoskeleton and cell division of neural stem cells. Evaluation of mutant phenotypes discovered that Dgt4 mutant Drosophila neuroblasts have lost centrosome asymmetry
- Screened mutants looking at expression driven only in drosophila eyes to determine the possible developmental consequences of mutation in dgt4, which led to identifying various phenotypes of the eye and head shape
- Conducted PCR, DNA sampling, electrophoresis, and sequencing on mutant samples

WORK AND MENTORING EXPERIENCE

2017-2018 | International Rescue Committee (IRC) and Migrant + Refugee Education Alliance (MREA), FLORIDA STATE UNIVERSITY

- Mentored in English to Syrian and Ugandan refugee children in Tallahassee, FL. Went to their house and spent about six hours a week. Teaching included learning the sound of the alphabet, reading, writing, numbers, addition, subtraction, and multiplication.

2015-2016 | Equipment Inventory Management System, FLORIDA STATE UNIVERSITY

- Collected scientific equipment data for FSU-wide inventory management system and grouped them into categories using excel Data Sorting. Sorting included assessed Documentation, pictured 5000+ laboratory equipment items, in all departments at FSU.

TECHNIQUES AND SOFTWARE

Computer Programming: Python, R.

PUBLICATIONS

M. M. Tillery, B. A. Dietrick, C. Zheng, C. N. Blake-Hedges, R. A. Buchwalter, L. Kao, Y. Zheng, **W. M. Khalid**, K. E. Huetteman, B. J. Whitehead, T. L. Megraw. Genetic Screen for Centrosomin Synthetic Lethality Reveals Novel Proteins Required for Acentrosomal Cell Division *Molecular Biology of the Cell*, **28**, (2017).

INVITED TALKS

NOVEMBER 2019 | Characterization of Small Cell Lung Cancer (SCLC) subtypes
Cancer biology Science Hour, VANDERBILT UNIVERSITY, TN

POSTER PRESENTATIONS WITH Q + A

SEPTEMBER 2019 | 7th Annual Bridge Research Celebration Day,
NASHVILLE, TN

APRIL 2019 | Fisk University Research Symposium 2019,
NASHVILLE, TN

APRIL 2018 | ACC Meeting of the Minds Boston College 2018,
CHESTNUT HILL, MA

APRIL 2018 | Florida State University Spring Symposium 2018,,
TALLAHASSEE, FL

NOVEMBER 2017 | Annual Biomedical Research Conference for Minority Students (ABRCMS),
PHOENIX, AZ

MARCH 2017 | Florida State University Spring Symposium 2017,
TALLAHASSEE, FL

FEBRUARY 2017 | Florida Undergraduate Research Conference (FURC) 2017,
BOCA RATON, FL

REFERENCES

Prof. Darren Tyson
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