**Abrar A. Aljiboury, PhD**

Professor of Practice

Manager of the BioImaging Center

Syracuse University

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**EDUCATION**

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| August 2019—  ongoing | Ph.D. student—Biology  Syracuse University, College of Arts and Sciences, Syracuse, NY |
| August 2016—August 2019 | Masters of Science-Biology  Syracuse University, College of Arts and Sciences, Syracuse, NY |
| July 2011—  May 2016 | Bachelors of Science-Biology- Cum Laude GPA: 3.526,  Syracuse University, College of Arts and Sciences, Syracuse, NY |

**PROFESSIONAL STATEMENT**

My experience provides me with an excellent background to use various microscopy techniques to image samples ranging from yeast to single cells up to multicellular organisms such as plants, *C. elegans,* and Zebrafish. I plan on obtaining my Ph.D. in February 2023. During my Ph.D. I became very proficient in Laser Scanning Confocal Microscopy (Leica SP8 with Digital Lightsheet, Zeiss 980 Airyscan), Spinning Disk Confocal Microscopy (Leica DMI8 with X-Light V3, laser ablation, and FRAP capabilities), Widefield Fluorescence Microscopy with deconvolution (AutoQuant coupled with Imaris), Live Cell Four-Dimensional microscopy (3-Dimensonal imaging across time), and analysis of Fluorescence Recovery After Photobleaching (FRAP) and Laser Ablation. I optimized Expansion Microscopy (ExM) in the Hehnly Lab to study the intricate details of structures within a singular cell (published in (Aljiboury et al. 2022), then expanded upon that by applying it to a whole larvae zebrafish. I have helped maintain and manage Hehnly Lab’s two confocal microscopes, 2 fluorescent and automated stereoscopes, and 2 injection systems coupled to stereoscopes. I’ve worked with NCI and Leica closely in upgrading, purchasing, and maintaining these systems. I am experienced in running various imaging software including LASX, ZEN and VisiView, and in analysis software such as FIJI/ImageJ, Prism and Imaris. Additionally, I am proficient in wet lab techniques including human cell culture, Zebrafish, Gibson cloning, Immunohistochemistry, genetic engineering of Transgenic animals and cell lines using CRISPR/Cas9 technology, Immunoprecipitation, Western Blot, and Microinjection. Besides lab and imaging skills, I am actively committed to cultivating and promoting diversity and inclusion at the classroom and the university levels. I have worked with other graduate students and Faculty in the Department of Biology to establish an IDEA committee to promote diversity and inclusion within the department and university. Moving forward, I remain committed to enhancing diversity and inclusion by attending workshops and participating is diversity and inclusion committees.

**AWARDS**

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| March 2020 | Poster competition award from the Stevenson Biomaterials lecture Series and Poster session ($250.00). |
| February 2018 | Syracuse University Department of Biology Travel Award ($350.00).  Syracuse University’s Graduate Student Organization Travel Award ($350.00).  President Symposium registration award. The American Genetics Association ($50.00). |
| April 2018 | Graduate Excellence Research Award: R.C. Lewontin Early Award. Society for the Study of Evolution ($2,500.00) |

**RESEARCH EXPERIENCE**

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| August 2019— Ongoing | Graduate researcher-Syracuse U. Advisor: H. Hehnly  The role of Polo-like Kinase (PLK) 1, and its scaffold protein, cenexin, in PCM organization |
| July 2017—August 2019 | Graduate researcher-Syracuse U. Advisor: J. Friedman  Sex Allocation and Reproductive Strategies in a Wind Pollinated Plant |
| April—June 2017 | Ph.D. rotation-Syracuse U. Advisor: R. Welch  Experimental evolution in *Myxococcus xanthus* |
| December—April 2017 | Ph.D. rotation- Syracuse U. Advisor: E. Maine  Screening for *smrc-1 (om 138)* sterile phenotype enhancers in *Caenorhabditis elegans* |
| July—December 2017 | Ph.D. rotation- Syracuse U. Advisor: J. Friedman  The effect of drought stress and anthocyanin on the fitness of the monkey flower *Mimulus guttatus* |
| August 2014—June 2016 | Undergraduate Researcher- Syracuse U. Advisor: R. Welch  Creating knockouts of *Myxococcus xanthus* genome |

**PUBLICATIONS AND PREPRINTS**

1. **Abrar A**. **Aljiboury,** Eric Ingram, Nikhila Krishnan, Favour Ononiwu, Debadrita Pal, Julie Manikas, Christopher Taveras, Nicole A. Hall, Jonah Da Silva, Judy Freshour, and Heidi Hehnly. 2023. “Rab8, Rab11, and Rab35 Coordinate Lumen and Cilia Formation during Zebrafish Left-Right Organizer Development”. PLOS Genetics 19(5): e1010765. **\*\*Awarded Cover**
2. **Abrar A. Aljiboury**, and Jannice Friedman. 2022. "Mating and fitness consequences of variation in male allocation in a wind-pollinated plant". Evolution (N Y) 76, 1762–1775.
3. **Abrar A. Aljiboury,** Amra Mujcic, Erin Curtis, Thomas Cammerino, Denise Magny, Yiling Lan, Michael Bates, Judy Freshour, Yasir H. Ahmed-Braimah, and Heidi Hehnly. 2022. “Pericentriolar Matrix (PCM) Integrity Relies on Cenexin and Polo-like Kinase (PLK)1.” Molecular Biology of the Cell 33(9):br14.**\*\*Awarded Cover**
4. **Abrar A. Aljiboury,** Amra Mujcic, Thomas Cammerino, Lindsay I. Rathbun, and Heidi Hehnly. 2021. “Imaging the Early Zebrafish Embryo Centrosomes Following Injection of Small-Molecule Inhibitors to Understand Spindle Formation.” STAR Protocols 2(1):100293.
5. Rathbun, Lindsay I., **Abrar A. Aljiboury,** Xiaofei Bai, Nicole A. Hall, Julie Manikas, Jeffrey D. Amack, Joshua N. Bembenek, and Heidi Hehnly. 2020. “PLK1- and PLK4-Mediated Asymmetric Mitotic Centrosome Size and Positioning in the Early Zebrafish Embryo.” Current Biology 30 (22): 4519-4527.e3.

**TEACHING EXPERIENCE**

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| January—April 2020 | Teaching Assistant  Integrative Biology Lab, BIO 305  Lab instruction and introduction to important concepts. Grade students Lab notebooks. Prepare materials for labs of one of course module. Proctor and grade exams. |
| January—May 2019 | Teaching Assistant  Integrative Biology Lab, BIO 305  Lab instruction and introduction to important concepts. Grade students Lab notebooks. Prepare materials for labs of one of course module. Proctor and grade exams. |
| August—December 2018 | Teaching Assistant  Ecology and Evolution, BIO 345  Responsibilities: Hold two review sessions per exam (4 exams), proctor and grade exams and assignments, and hold weekly office hours. |
| January—May 2018 | Teaching Assistant  Applied Biotechnology, BIO 464  Responsibilities: Small class instruction, mentor students, hold office hours, prepare lab materials, grade and provide feedback on students’ lab reports |
| August—December 2017 | Teaching Assistant  Ecology and Evolution, BIO 345  Responsibilities: Hold two review sessions per exam (4 exams), proctor and grade exams, hold office hours. |
| August 2016—  April 2017 | Teaching Assistant  General Biology, BIO 121 and 124  Teach two lab sections, 48 students. Responsibilities include: Small class instruction, grading course materials, create new quizzes, mentor students, develop and administer lab practical, proctor exams. |
| August 2013—  April 2014 | Student Teacher, Fowler High School; Grant Middle School  Teach a student individually. Responsibilities include developing lesson plans, giving lesson instruction, assessment of student learning |

**CONFERENCES AND PRESENTATIONS**

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| December 2021 | **A. Aljiboury,** A. Mujcic, E. Curtis, T. Cammerino, Y. Lan, M. Bates, J. Freshour, H. Hehnly. Pericentriolar matrix biophysical integrity relies on cenexin and PLK1. **Poster presentation** at the Cell Bio (ASCB) meeting. Syracuse, NY. |
| October 2021 | **A. Aljiboury,** A. Mujcic, E. Curtis, T. Cammerino, Y. Lan, M. Bates, J. Freshour, H. Hehnly. Pericentriolar matrix biophysical integrity relies on cenexin and PLK1. **Poster presentation** at the Centrosome and spindle Bodies meeting. Copenhagen, DK. |
| March 2021 | **A. Aljiboury,** H. Hehnly. The role of Polo-like Kinase 1, in modulating the structural organization of the PCM. **Virtual talk** at the Cell and Developmental Biology Interest Group (CDBIG). Syracuse, NY. |
| December 2020 | **A. Aljiboury,** L. Rathbun, X. Bai, N. Hall, J. Manikas, J. Amack, J. BembeneK, H. Hehnly. PLK1- and PLK4-mediated asymmetric mitotic centrosome size and positioning in the early zebrafish embryo. **Virtual poster presentation** at the Cell Bio (ASCB) meeting. Syracuse, NY. |
| November 2020 | **A. Aljiboury,** A. Mujcic, H. Hehnly. The role of Polo-like Kinase 1, in modulating the structural organization of the PCM. **Virtual talk** at the Developmental Biology New York (DBNY) meeting. Syracuse, NY. |
| April 2020 | **A. Aljiboury,** L. Rathbun and H. Hehnly. PLK1- and PLK4-mediated asymmetric mitotic centrosome size and positioning in the early zebrafish embryo. **Virtual talk** at the Cytoskeleton in Tissue Morphogenesis meeting. Syracuse, NY. |
| March 2020 | **A. Aljiboury,** L. Rathbun and H. Hehnly. The mitotic centrosome: A sensor for spindle placement? **Poster presentation** at the Stevenson Biomaterials lecture Series and Poster session. Syracuse, NY. |
| January 2020 | **A. Aljiboury,** L. Rathbun and H. Hehnly. The mitotic centrosome: A sensor for spindle placement? **Poster presentation** at the Syracuse University graduate recruitment poster session. Syracuse, NY. |
| November 2019 | **A. Aljiboury,** L. Rathbun and H. Hehnly. The mitotic centrosome: A sensor for spindle placement? **Talk** at the Developmental Biology New York (DBNY) conference. Ithaca, NY. |
| October 2018 | **A. Aljiboury** and J. Friedman. Allocation to male function and its effect on fitness returns in the wind pollinated herb, *Ambrosia artemisiifolia.* **Poster presentation** at the Biology Graduate Student Seminar Series. Syracuse, NY. |
| June 2019 | **A. Aljiboury** and J. Friedman. Allocation to male function and fitness returns in the wind pollinated herb, *Ambrosia artemisiifolia.*  **Talk** at Evolution 2019. Providence, RI. |
| April 2018 | **A. Aljiboury** and J. Friedman. Allocation to male function and fitness returns in the wind pollinated herb, *Ambrosia artemisiifolia.*  **Poster presentation** at Life Sciences Symposium Poster session. |
| March 2018 | **A. Aljiboury** and J. Friedman. Allocation to male function and its effect on fitness returns in the wind pollinated herb, *Ambrosia artemisiifolia.* **Poster presentation** at Wild Quantitative Genetics symposium. Toronto, Canada. |
| March 2018 | **A. Aljiboury** and J. Friedman. Allocation to male function and its effect on fitness returns in the wind pollinated herb, *Ambrosia artemisiifolia.* **Talk** in the Biology Graduate Student Seminar Series. Syracuse, NY. |
| February 2017 | **A. Aljiboury** and J. Friedman. The effect of drought stress and anthocyanin on the fitness of the monkey flower *Mimulus guttatus.* **Talk** in the Biology Graduate Student Seminar Series. Syracuse, NY. |

**PROFESSIONAL ACTIVITIES**

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| August 2020—  May2022 | IDEA committee graduate student representative, Biology Graduate Student Organization (BGSO) |
| August 2018—  May 2020 | Career Development Chair, Biology Graduate Student Organization (BGSO) |
| January—  March 2018 | Society for the Study of Evolution (SSE) Science Policy Workshop |
| January—May 2018 | Plant Ecology and Evolutionary Systematics (PEES) discussion group |
| August 2017—  Ongoing | Evolution Discussion Group (EDG). SUN-ESF. |
| May 2017 | Evo-Day Phylogenomics symposium at Cornell University |
| January 2017—  Ongoing | Outreach volunteer at Westcott After School Program |
| August 2016—  August 2019 | Center for Reproductive Evolution Discussion Group. SU. |
| September 2013—  May 2014 | Student tutor— tutored biology and mathematics at Fowler High School |

**SOCIETY MEMBERSHIP**

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| September 2020—Onging | America Society for Cevelopmental Biology (ASCB) |
| February 2020—Onging | Society for Developmental Biology (SBD) |
| January 2018—  January 2020 | Society for the Study of Evolution (SSE) |
| December 2017—  January 2020 | The American Genetics Association |
| November 2017—  January 2020 | The Botanical Society of America |
| October 2017—  May 2019 | WiSE-FPP Scholar- Women in Science and Engineering Future Professionals Program |
| January 2012— Ongoing | The National Society of Collegiate Scholars |