

Chaos and Equilibrium



About the Editor

Aasimah Tanveer '18 is a double major in Computer Science and Neuroscience with a pre-medical concentration. In addition to being the current editor-in-chief of Eukaryon, she is a member of Nu Rho Psi, Synapse, Computer Science Club, and the MSA. She is conducting thesis research in the lab of Dr. Sugata Banerji in the area of computer vision at Lake Forest College. Her work involves designing artificially intelligent convolutional neural networks to identify human emotions from body language in images. Aasimah is from Libertyville, Illinois and hopes to pursue medical school in the future.

Dear readers,

On behalf of the Eukaryon editorial board, I would like to thank you for your continued support as we publish our 14th year of outstanding work here at Lake Forest College. This issue highlights another year of the best research, academic scholarship, and thought-provoking features from the efforts of our talented peers. The editorial board worked tirelessly, demonstrating a remarkable amount of dedication in order to best showcase such hard work. In doing so, we chose the theme of "Chaos and Equilibrium" to embody both a key relationship in life-science and the process through which this issue of our journal came together.

Chaos is usually seen as something disruptive, confusing, and stress-inducing. As people, we strive to avoid chaos so as not to deteriorate into a state in which we have no control. However, chaos has a far more important role in life, from a macro level down to the smallest atomic one. Comfort is unhinged by chaos, allowing one to step outside monotony and think of solutions to restore balance back into a situation. This instability encourages innovation that leads to an evolution of thought, as evidenced by the inception of the theory of relativity and the creation of the internet. Boundaries cannot be pushed and knowledge cannot expand without upsetting a natural order.

Nonetheless, the maintenance of an equilibrium is equally vital to the functioning of any system. A change in homeostatic regulation of the human body can cause anything from a fever to a malignant spread of cancer. Equilibrium is needed to delicately balance neurotransmitter levels in the brain, where even a slight irregularity can affect an organism's mood and behavior. Materials must be sustained in measured ranges for a system to work harmoniously. Systems must function yet still be challenged to advance forward, which is why the interplay of both chaos and equilibrium is critical to recognize.

This year, we have the honor of hosting esteemed professor Dr. Anna Trumbore Jones, who will be speaking to this phenomenon at inauguration. Dr. Jones is a professor and chair of the Department of History at Lake Forest College. She is a recipient of many awards and distinctions, such as the Trustee Award for Teaching Excellence and Campus Leadership and the William L. Dunn Award for Outstanding Teaching and Scholarly Promise. Being a journal of life-sciences, this is the first year that we are hosting a professor of history. When we heard that Dr. Jones instructs a course called "Epidemic Disease in the Western World," our board felt that this was an excellent opportunity to showcase the interdisciplinary, liberal-arts spirit of the journal. Dr. Jones's talk, "Medicine is a Social Science: Epidemics and the History of Inequality in the West," will speak to the chaos of disease throughout history and the equilibrium that accompanies it.

I would like to thank the Eukaryon editorial board for their tireless commitment to the journal. Without the talented members in our organization, it would be impossible to output this edition. Although this board faced many challenges, witnessing the members and executive leaders confront and resolve these problems was a profound experience. Whether at chaos or equilibrium, the board showed commendable collaboration, dependability, and a deep dedication to creating an exemplary product. Because of the solid foundations set by our predecessors, we were able to better streamline the editing process by improving guidelines and ensuring uniformity in layout throughout the journal. We also expanded our submission pool by reaching out to interdisciplinary courses related to the life-sciences. As a team, we worked to make the flow of articles through review, copy-edit, and publications more fluid and enhance communication to minimize errors.

This journal could not have prevailed had it not been for the continuous support of the superb faculty and staff of Lake Forest College. Our advisor, Dr. Ann Maine, was a constant source of guidance who gave us strategies for effective problem-solving. Her invaluable encouragement allowed our student-run journal to accomplish so large of a task. I would like to acknowledge Dr. Shubhik DebBurman for his continued input and advocacy of Eukaryon. His seasoned insight has remained a great asset for the success of our journal. I would like to thank Dr. Dawn Abt-Perkins, Director of Writing Programs and Professor of Education, for her continued motivation and enthusiasm. I would also like to thank Cory Stevens, Head of Public Services and Collection Development, Allen Olson, Assistant Director of Visual Communications, and Patti Headley, Department Assistant for all of their instrumental assistance. I would also like to thank Lake Forest College for their continued investment in our journal. Finally, I would like to thank all faculty and students that submitted to Eukaryon. Your outstanding submissions are the core of our journal. Thank you for allowing us to publish your wonderful work and we hope you enjoy this year's edition.

Sincerely,
Aasimah Tanveer

Editor-in-Chief, Eukaryon, 2017-2018