

Dearest Readers,

After a year filled with challenges and transitions, I am thrilled to present the 21st edition of Eukaryon. As you read through this journal, I hope you recognize that you are holding something truly special—a collection of exceptional work shaped by the dedication, creativity, and perseverance of Lake Forest College students. Their curiosity, research, and hard work have made this edition possible, and I could not be more excited to share it with you.

Our featured speaker this year is Dr. Karen Kirk, Professor of Biology and Professor and co-Chair of Biochemistry & Molecular Biology at Lake Forest College. She specialized in Molecular Genetics and Cell Biology, with a focus on Infectious Diseases, Genetics, Genomics, and Cancer. Dr. Kirk's research explores how telomeres, the protective ends of chromosomes, are maintained and their role in cellular aging. Her work investigates telomerase RNA, which regulates telomere length, a crucial process for genetic stability and longevity. She conducts her research using model organisms such as *Aspergillus*, which reproduce quickly and serve as valuable tools for undergraduate research. Dr. Kirk earned her bachelor's degree in Chemistry from the University of Delaware, followed by a Ph.D. in Molecular Genetics from Rutgers University. She then completed a postdoctoral fellowship at the University of California, San Francisco.

At the inauguration of the 21st edition of Eukaryon, she will present her talk, "Decoding Life's Blueprint," in alignment with this year's theme. Her lecture will delve into the molecular mechanisms that shape our genetic code and how these discoveries impact medicine, aging, and biotechnology. As an accomplished scientist, Dr. Kirk has published numerous articles, contributed significantly to her field, and mentored students in cutting-edge research on genome stability and aging.

I would like to extend my heartfelt thanks to Dr. Shubhik DebBurman, Disque D. and Carol Gram Deane Professor of Life Sciences, for his invaluable guidance as the journal advisor and to Ian Schappe, Lake Forest College Web Manager, for his assistance in setting up the website and for generously taking the time to train our students. A special thank you to Dr. Dawn Abt-Perkins, Professor of Education, for her time and for contributing to the selection of the best-written feature article. I am also deeply grateful to my fellow Eukaryon members, whose dedication and hard work at every stage of the process have been instrumental in ensuring the success of the 21st edition.

To everyone who has contributed to this journal and to those who will be part of future editions, remember that this is one of the greatest legacies you are leaving at Lake Forest College, one that is celebrated through Eukaryon.

Plot Dashni,

Lira Zajmi (A woman in STEM full of hope )

Editor-in-Chief, Eukaryon, 2024-2025

