

ZACH LONERGAN

Zach Lonergan graduated from West Virginia Wesleyan College in 2014 with a B.S. in biology. He had broad scientific interests during his undergraduate career and hoped to gain diverse research experiences with hopes of pursuing a research career. While at WV Wesleyan, Zach worked with Dr. Melanie Sal to characterize shape-determining genes in *Borrelia burgdorferi*, the causative agent of Lyme disease. He participated in the 2012 WV-INBRE summer research program at West Virginia University in the lab of Dr. Laura Gibson. In the Gibson lab, Zach's project focused on understanding how leukemic cells are able to survive despite treatment with harsh chemotherapeutic drugs. Zach returned to WVU in the summer of 2013 through the National



Science Foundation Research Experiences for Undergraduates (NSF-REU) program to work in the lab of Dr. Jennifer Gallagher, where he studied genetic diversity in yeast and mechanisms for surviving in toxic metal environments. Following graduation, Zach entered graduate school at Vanderbilt University through the Interdisciplinary Graduate Program (IGP). After completing his first year coursework and rotations, Zach joined the Department of Pathology, Microbiology, and Immunology to gain a Ph.D. in microbiology and immunology. He is completing his doctoral thesis under the guidance of Dr. Eric Skaar. His research in the Skaar lab focuses on how bacterial pathogens are able to acquire nutrients during infection, particularly nutrient metals such as zinc and manganese. He works primarily with the Gram negative pathogen *Acinetobacter baumannii* and hopes to uncover bacterial factors that are necessary for *A. baumannii* to adapt to changing nutrient metal availability, and important aspect of *A. baumannii* pathogenesis. His long-term career goal is to remain in academia as a faculty member at a research-oriented institution.