



**Louis A. Sherman, Purdue University**

Professor

Department of Biological Sciences

LILY G-235

West Lafayette, IN 47907

(W) 765-494-8106

<https://www.bio.purdue.edu/lab/sherman/>

[https://www.bio.purdue.edu/People/faculty\\_dm/directory.php?refID=90](https://www.bio.purdue.edu/People/faculty_dm/directory.php?refID=90)

Dr. Sherman's research interests center on cyanobacteria and he has studied the processes of photosynthesis, nitrogen fixation and gene regulation. He has been particularly interested in the impact of environmental changes on gene transcription and the corresponding impact on cyanobacterial physiology. His lab has devoted considerable time to developing genetic tools in unicellular strains such as *Synechococcus* sp. PCC 7942, *Synechocystis* sp. PCC 6803 and, more recently, on the unicellular, diazotrophic strains of the genus *Cyanothece*. Sherman has also been involved with the development of microarrays to be used for differential transcription analysis in *Synechocystis* and in two of the *Cyanothece* strains. His research has involved a great many different instruments and procedures and have included: high-resolution electron and light microscopy, fluorescence and absorption spectroscopy, and a slew of omics technologies (genomics, transcriptomics and proteomics). In recent years, many of these procedures have been done in conjunction with EMSL personnel, first as part of a Grand Challenge in Membrane Dynamics and then as part of an ongoing User grant. Most notably, work with RNA-Seq and proteomics have led to many new insights into cyanobacterial regulation. Sherman's research has resulted in over 150 publications and 200 presentations. He is a Fellow of the American Society of Microbiology and of AAAS, and has been a visiting Fulbright fellow at the University of Leiden and a Lady David Fellow at the Hebrew University of Jerusalem.