



**NAME:** Mark R. Liles

**INTITUTION / FUNCTION:**

**Auburn University**

**Professor of Microbiology**

**Department of Biological Sciences**

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**More information:**

<https://www.auburn.edu/cosam/departments/biology/biology-faculty/liles/index.htm>

**Short Professional Biography:**

**Current Position:** Associate Dean for Research and Graduate Studies, College of Sciences and Mathematics, Auburn University

Postdoc: University of Wisconsin-Madison, mentors Prof. Jo Handelsman and Prof. Robert Goodman

**Studies:**

PhD in Microbiology at Northwestern University

BS in Biology at Tulane University

**Research interests**

My research group has an interest in three primary areas: **1) Metagenomic Analysis of Microbial Assemblages.** We use a metagenomic approach to study complex microbial assemblages in different environments, especially for natural products (enzymes, metabolites) encoded by environmental metagenomes. **2) Biological control of disease using beneficial microorganisms.** We have identified probiotic bacteria, particularly within the genus *Bacillus*, that can prevent and control disease in aquaculture farmed fish and in agriculturally important plants. We are investigating the natural products produced by these probiotics that can enhance growth performance of the animal or plant host, or inhibit the growth of pathogenic microorganisms. **3) Pathogenesis and control of virulent *Aeromonas hydrophila*.** Our studies have led to the development of diagnostic methods and a vaccine for a virulent strain of *Aeromonas hydrophila* that is responsible for severe epidemic outbreaks of disease in farmed fish in the United States, China and other countries. Our lab studies the pathogenesis of disease and the control of disease using both biological control agents and an attenuated vaccine. We are also helping the worldwide community of aquaculture researchers track the distribution and spread of virulent *Aeromonas hydrophila*.

**Relevant Publications:**

**133 peer-reviewed publications you can find on the [Google Scholar website](#)**