

# Shannon Manning

**Foundation Professor of Molecular Biology and Epidemiology at Michigan State University**

East Lansing, MI, US

Expert in E. coli outbreaks

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## Description

My laboratory studies the molecular epidemiology and evolutionary genetics of infectious diseases, namely those caused by diarrheagenic *Escherichia coli* and *Streptococcus agalactiae*. We apply molecular biology, epidemiological and evolutionary methods to answer questions about pathogenesis, emergence, virulence, evolution, and transmission of pathogens in human and animal populations. Our studies of both Shiga toxin-producing *E. coli* (STEC) O157:H7 and *S. agalactiae* are similar in that the phylogenetic analysis of genomic data and the subsequent epidemiological analysis identified specific strain types to be more important for disease. Most of our current and future research projects are associated with these key findings that will ultimately enhance our understanding of how genetic variation contributes to clinical illness.

We also manage and curate the STEC Center, which serves as a repository for STEC and other enteric pathogens.

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## Industry Expertise

Education/Learning, Laboratory Services, Research, Biotechnology

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## Topics

Molecular Biology, Epidemiology, Microbiology, E. Coli Outbreaks, Molecular Genetics, Agriculture and Natural Resources

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## Affiliations

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## Education

University of Michigan

Ph.D. Molecular Epidemiology

University of Michigan

M.P.H. Hospital and Molecular Epidemiology

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## Accomplishments

**Grant - E. Coli Research**  
From the U.S. Department of Agriculture

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