

Bacterial Contaminants of Fuel Ethanol Facilities

What is this technology?

A collection of lactic acid bacteria from fuel ethanol plants are available for modeling bacterial contamination and for testing new antibacterial agents.



What problem does it address?

- We lack a fundamental understanding of acute and chronic bacterial contamination of commercial fuel ethanol plants.
- The emergence of drug-resistant strains and regulatory concerns over drug residues in distillers grains may limit future use of antibiotics to treat contamination.
- New methods to control bacterial infections are needed.

How is the project different from or how does it enhance other projects?

There are few published studies on bacterial contaminants of fuel ethanol plants. This work provides a select collection of strains characterized at the genotypic and phenotypic levels.

What are the potential benefits of partnering with ARS on this research?

- ARS provides scientific expertise in fermentation microbiology.
- Partners will have access to our unique strain collection.
- Partners will have access to methods for modeling “stuck” fermentations and biofilms.

Who are the potential customers?

Ethanol producers and researchers attempting to develop new intervention strategies that control bacterial contamination.

Stage of Development

- Genotypic and phenotypic characterizations of these strains with respect to species identification, antibiotic susceptibility, and biofilm formation have been published.
- We have incorporated our strains into laboratory models of “stuck” fermentations and developed methods for measuring biofilms.

Moving Forward

We are interested in using our strains and laboratory models to develop new methods that will prevent or control bacterial contamination in commercial fuel ethanol fermentations.

Contact Information

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