



Collection of Genomic Fragments That Affect Quorum Sensing

WARF: P06060US

Inventors: Jo Handelsman, Heather Allen, Lynn Williamson

The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in large genomic fragments that affect quorum sensing.

Overview

Quorum sensing is a process used by some bacteria to coordinate behavior based on local population density. To communicate, bacteria release signaling molecules into the environment. When a certain number of signaling molecules accumulates and the population reaches a sufficient density, the bacteria change their behavior to work together for a common goal. For example, they may adapt to the nutrients that are currently available, defend against other microorganisms or protect themselves from toxic compounds.

Agents that interfere with quorum sensing may reduce the virulence of certain types of pathogenic bacteria. When bacteria cannot work together to coordinate their attack, the likelihood of infection decreases.

The Invention

This technology describes large genomic fragments cloned from Alaskan soil bacterial isolates that affect quorum sensing. A team of UW-Madison researchers collected bacterial isolates from non-permafrost soil in the floodplain of the Tanana River—an extremely cold and mineral poor environment near Fairbanks, Alaska. Large amounts of microbial DNA were isolated directly from the soil and then screened using a high throughput quorum sensing assay.

Key Benefits

- Provides a potentially valuable source of novel antibiotics

Additional Information

For More Information About the Inventors

- [Jo Handelsman](#)

Tech Fields

- [Research Tools : Genomics & proteomics](#)
- [Research Tools : Microbial technologies](#)

For current licensing status, please contact Jennifer Gottwald at jennifer@warf.org or 608-960-9854

