



## *Janthinobacterium lividium* Isolates from Alaskan Soil

**WARF: P06058US**

Inventors: Jo Handelsman, Patrick Schloss, Amy Klimowicz

**The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing bacterial isolates that have antibacterial activity against Gram-positive bacteria.**

### Overview

Microorganisms adapted to grow in exceptionally harsh environments, such as hot springs and arctic soils, are a potentially vast source of novel metabolic processes, antibiotics, enzymes and other proteins. Due to the difficulties involved in culturing these microbes, which by definition possess highly unusual growth requirements, this resource today remains largely untapped.

### The Invention

UW-Madison researchers have identified red- and purple-pigmented *Janthinobacterium lividium* isolates that have antibacterial activity against Gram-positive bacteria. These bacteria were isolated from non-permafrost soil in the floodplain of the Tanana River – an extremely cold and mineral poor environment near Fairbanks, Alaska. The red and purple pigments, which are only produced at temperatures below 28° C, may play a role in the antibacterial activity. This collection of bacteria complements a collection of more than 1,000 bacterial cultures and 16 libraries of bacterial genomic DNA isolated from the same Alaskan soils (see links below).

### Applications

- May be useful to treat subjects infected with Gram-positive bacteria
- Provides a potentially valuable source of new genes, antibiotics, metabolic processes and cold-adapted enzymes for food processing, medical and industrial applications

### Key Benefits

- Microorganisms adapted to exceptionally harsh environments are a potentially vast source of novel metabolic processes, antibiotics, enzymes and other proteins.

### Additional Information

#### For More Information About the Inventors

- [Jo Handelsman](#)

#### Related Technologies

- [See WARF reference number P03154US for information on a bacterial culture collection from Alaskan soils.](#)
- [See WARF reference number P04104US for information on 10 libraries of bacterial genomic DNA isolated directly from the Tanana River floodplain in Alaska.](#)

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- [See WARF reference number P05150US for information on bacterial isolates that do not grow at temperatures above 37°C.](#)

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## Tech Fields

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

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