Research Tools

Bacterial Genomic Libraries from Alaskan Soils (AK 19, 20 and 21)

WARF: P06160US

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in three libraries of bacterial genomic DNA isolated directly from non-permafrost soils in an extremely cold and phosphorus-poor environment.

Overview

Cultured microorganisms produce an extraordinary array of structurally diverse and valuable organic compounds; however, microbes that can be cultured using standard techniques represent only a small fraction of the microbial diversity present in any natural environment. To more fully tap this vast reservoir, large amounts of microbial DNA can be isolated directly from soil and screened for useful genes and gene products.

The Invention

UW-Madison researchers have compiled three libraries of bacterial genomic DNA isolated directly from non-permafrost soils in the floodplain of the Tanana River, an extremely cold and phosphorus-poor environment near Fairbanks, Alaska. This collection of genomic DNA complements a collection of more than 1,000 bacterial cultures and 18 additional libraries of bacterial genomic DNA isolated from the same Alaskan soils.

Applications

- Provides additional, potentially valuable sources 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 promising source of novel metabolic processes, antibiotics, enzymes and other proteins.

Additional Information

For More Information About the Inventors

- Jo Handelsman

Related Technologies

- For information on collections of bacterial cultures from Alaskan soils, see WARF reference numbers:
- P03154US
- P06058US
- P06059US
- P04104US
- P05158US

- P07199US

Tech Fields

- Research Tools : Genomics & proteomics
- Research Tools : Microbial technologies

For current licensing status, please contact Mark Staudt at mstaudt@warf.org or 608-960-9845