BLaST
BIOMEDICAL LEARNING and STUDENT TRAINING

Scientist of the Month

January 2016

Anne-Lise Ducluzeau

Anne-Lise specialized in the evolution of microorganisms and the origin of life as a student in Marseille, France. Today, as a BLaST post-doc, she continues this research in Alaska investigating microbes in the Arctic Ocean and sea ice.

Research

Anne-Lise studies quinones (molecules that function in photosynthesis and production of ATP). She discovered Arctic microbe strains that change their metabolism in response to increases in temperature and could dramatically impact ocean chemistry as they respond to climate change. These microbes are part of her newly created collection of nearly 450 strains of sea ice microbes. The collection will be used to gain insight into genetics and metabolism, as well as identify new pharmaceutical compounds.

Anne-Lise documents her life and work in the Arctic in a blog (www.aldinak.com) and website showcasing her photography, (www.anneliseducluzeau.com).

Teaching

Anne-Lise has been a guest lecturer in several courses such as Genomic Evolution at the University of Nebraska-Lincoln and UAF's MSL 194 Astrobiology: Planets, Oceans, and Life.

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Mentoring

As part of BLaST Anne-Lise will involve undergraduate students in a new project investigating the evolution of quinones. Interested students are invited to join her team and help discover new targets for antibiotic treatment and crucial evidence about molecular processes that allowed life to adapt to increases in atmospheric and environmental O_2 , 2.4 Gy ago.

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