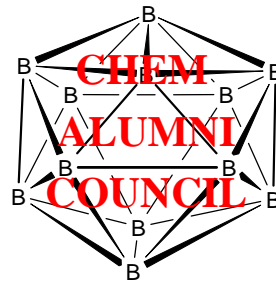




**Department of Chemistry & Biochemistry  
University of Missouri-St. Louis  
Special Colloquium – October 24, 2008**



**"Science in Antarctica:  
Studying the Historic Huts of the  
Heroic Era of Antarctic Exploration"**

**"To the Ice and back again, an UMSL Alumna's Holidays"**

**Professor Roberta L Farrell**  
Department of Biological Sciences  
The University of Waikato  
Hamilton, New Zealand

Dr. Farrell received a BS in chemistry from UM-St. Louis in 1975 and a Ph.D in biochemistry from the University of Illinois, Urbana, in 1980. She did postdoctoral research at the University of Chicago and MIT prior to an appointment, first as Associate Director of Research - Industrial Enzymes with Repligen Corporation, Cambridge, Massachusetts, in 1984 and then as Executive Vice President & Chief Operating Officer Sandoz Chemicals Biotech Research Corporation and Repligen Sandoz Research Corporation, a position she held from 1987-1996. From 1995 to 1996 she spent a sabbatical leave at PAPRO, Forest Research Institute in Rotorua, New Zealand and since 1996 she has been Professor of Biological Sciences at the University of Waikato.

**Abstract**

The historic huts and their contents of the Antarctic Heroic Period are a legacy of human exploration. When the expeditions ended and relief ships arrived, a rapid exodus allowed only essential items to be returned to England. The huts and thousands of items were left behind, including food stores and fuel depots. The extreme polar environment has protected them from rapid decay but not from significant deterioration, both non-biological and biological. The principal goal is to identify cause(s) of the deterioration of the historic huts of the Heroic Period. Non-biological deterioration includes ultraviolet (UV) light, iron corrosion products, salts and other caustic compounds. Biological deterioration has several manifestations, including the presence of cold tolerant filamentous fungi with the ability to produce extracellular cellulolytic enzymatic activity with the potential to degrade the Historic huts. An overall picture of biodiversity and capability of functioning in the Antarctic environment has now been discerned from the study of the Antarctic historic huts environment. This basic information is essential if conservation plans for the long-term preservation of the huts and artefacts are to be successful.

**Coffee: 3:00PM**

**Room 451 Benton Hall**

**Seminar: 3:30 PM**

**Reception to follow in the Alumni Center – All are welcome**