1. Title

Soil Microbial Ecology under Stress and Global Climate Change

2. Type

Inter-Divisional Symposium

3. Organizer(s) & Convener

Tongmin Sa
Department of Environmental & Biological Chemistry, chungbuk National University, Cheongju, Chungbuk - 361-763, South Korea (Republic of)
Tel: +82-43-261-3447 (Lab)
Office: +82-43-261-2561
Fax: +82-43-271-5921
Mobile: +82-10-6422-2282
E-mail: tomsa@chungbuk.ac.kr

4. Rationale

Soil microbial communities are integral in soil ecology and play a major role in soil functions such as nutrient cycling, carbon sequestration, and plant health. However, this soil microbial diversity varies on a global scale and is constantly influenced by human activities, environmental stress or changing global climate. Information on distribution and function of microbial communities in the soil is limited and current approaches to study soil microbial ecology makes use of several molecular techniques. Valuable insights gained through such studies can be used to develop sustainable agroeco systems for better crop productivity. Therefore, there is an imminent need to expand ecological knowledge on native microbial communities in soil, and their responses to global climate change as well as hazardous soil conditions.

5. Objectives

The main objective of this symposium is to assess the advancement in understanding of global changes effects on soils and related microbial communities. It will be a golden opportunity to validate findings of ecological studies in terms of novelty, effectiveness, economic feasibility and reliability. On such a platform, ecological data on soil microbiota from various regions can be pooled together to understand recent trends on a world scale. Moreover, awareness will be created on the impact of global carbon dioxide changes and environmental stress factors. And, future prospects soil biology with changing global scenario will be assessed.

6. Description

Renowned scientists and experts in the field of soil microbial ecology can help in discussion and evaluation of results from current researchers. A combined knowledge on soil microbial ecology and its changes with respect to climatic and environmental barriers can be obtained.

Critical and valuable insights on existing information and scope of research will be analyzed. New concepts, methodologies and instrumentation to effectively study soil microbial ecology shared by professionals would be very helpful for beginners. The symposium will offer opportunity to establish a network of national and international professionals in field who can interact and guide upcoming researchers.