Astrobiology Initiatives in Canada: The CIFAR Astrobiology Workshop G.F. Slater[1], B. Sherwood Lollar[2], R. Pudritz[1], C. A. Suttle[3], and L. Whyte[4], [1]McMaster University, Hamilton, ON, Canada, [2]University of Toronto, Toronto, ON, Canada; [3]University of British Columbia, Vancouver, BC, Canada; [4]McGill University, Montreal, QC, Canada

Introduction: In addition to ongoing strength in astronomy, astrobiology has brought together researchers from a wide range of discipilines in Canada. This includes a wide array of terrestrial analogue research that capitalizes on the range of microbial environments in Canada that stretches from the Arctic to the deep terrestrial subsurface. Much of this research has been stimulated and supported by the Canadian Space Agencies Canadian Analogue Research Network (CARN) and the recent establishement of the Canadian Astrobiology Training Program (CATP). In addition to supporting research, these programs and the CSA Discipline Working have brought together researchers and established new collaborations on a wide range of topics.

This growing community led the Canadian Institute for Advanced Research (CIFAR). to hold its first astrobiology workshop in April 2009. This workshop brought together leading researchers from the Canadian and Interational astrobiology research communities for integrated discussions across the wide range of disciplines that approach astrobiology from different perspectives, but with the same goal. Participants included astrophysicists, astrochemists and meteoriticists who are studying planet formation and the pre-biotic organic compounds that are precursors to life; planetary and atmospheric scientists studying the properties and histories of solar system planets and moons; geochemists investigating and characterizing the signatures of extinct and extant life; and microbiologists researching the capabilities and limits of microbial life. Bringing these diverse groups together informed researchers of the activities and questions of interest in fields outside of their own as well as rapidly identified several compelling scientific questions that combined interdisciplinary expertise can be harnessed to answer.

The outcome of the workshop was the identification of three theme areas for further discussion. These were environments of life, signatures of life, capabilities of life and underlying all of these, the question of a universal concept of life. While not unique formulations, the strength of this workshop was the ability to have discussions across discipline boundaries from astrochemistry to planetary chacteristics to biosignatures, for instance, and to enable identification of research questions and directions that would otherwise not have been the focus of discussion in a more restricted discipline specific meeting.

This presentation will outline the make up of this workshop and the current astrobiology research in Canada that was represented. A further workshop is planned for 2010 that will build on the themes and successes of this initial workshop and provides the opportunity for integrated interactions through and across disciplines both within Canada and with international partners in astrobiological research.