Contribution ID: **13** Type: **not specified**

Researching the Effects of the Absence and Presence of Ionizing Radiation (REPAIR)

Tuesday 11 May 2021 11:20 (20 minutes)

Researching the Effects of the Absence and Presence of Ionizing Radiation (REPAIR) is a deep-underground radiobiology experiment investigating the effects of Natural Background Radiation (NBR) on biological systems. Utilizing a specialized experimental incubator that was designed and engineered to shield NBR below levels found at the surface, REPAIR is using several biological model systems to explore this novel field of radiobiological research. Past and current model systems that REPAIR utilizes include lake whitefish embryonic development, the CGL1 human hybrid cell culture system, the nematode worm C. elegans as well as S. cerevisiae yeast. Each of these model systems offers unique advantages at the molecular level in studying the effects sub-NBR. Utilizing novel infrastructure and the extremely unique research environment within SNOLAB, REPAIR aims to understand the role that this naturally occurring ionizing radiation plays in life at the surface of the planet.

Presenter: PIRKKANEN, Jake (Laurentian University)

Session Classification: Converging Scientific Programs