SREL's Low Dose Irradiation Facility (LoDIF)

Unique in the World For Aquatic Organisms

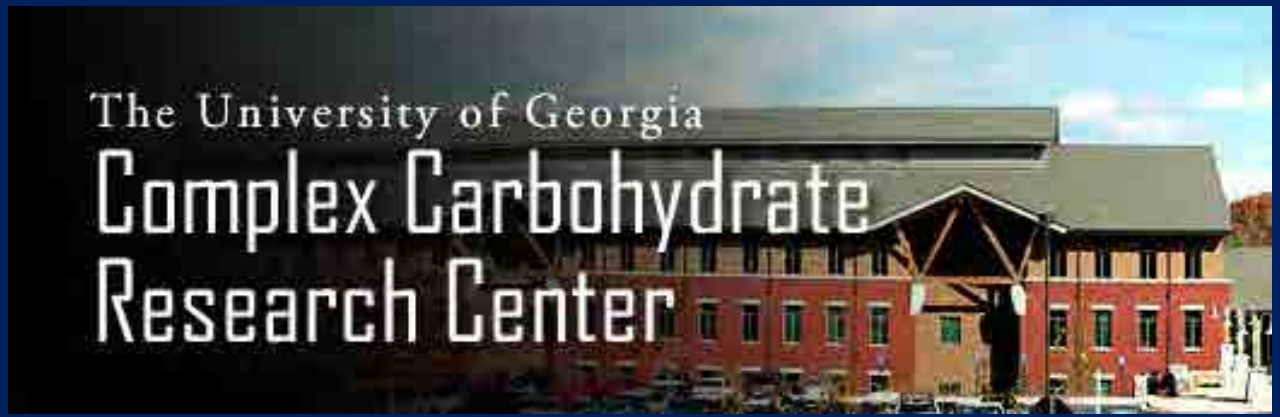
LoDIF

- 40 mesocosms
- 8 pads of 5 mesocosms
- Each pad has
  - 2 controls
  - 1 - ~2mGy/day
  - 1 - ~20mGy/day
  - 1 - ~200mGy/day
- 3-4 buckets/mesocosm

* Doses can be modified

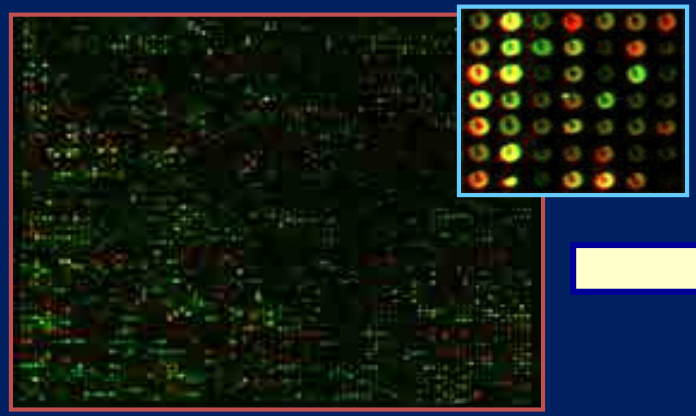
- **Proteomics, Glycomics, and Epigentics of Radiation Exposure in Medaka**

Collaborating with UGA faculty from the:

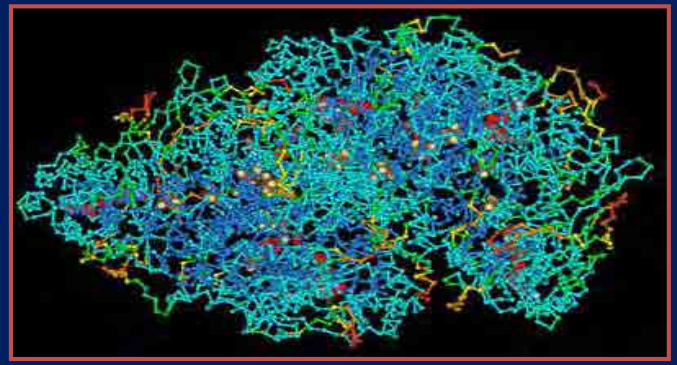


Low Dose Radiation Surveillance and Monitoring Research and Development

DNA molecule



DNA micro array



protein

organisms

ecosystem

methods and protocols
MDPI

Protocol

An Effective Protocol for Proteome Analysis of Medaka (*Oryzias latipes*) after Acute Exposure to Ionizing Radiation

Yeni Pérez-Gálvez, Shaw Unger, Gerardo Gutiérrez-Sánchez, Robert Bridger, Olin E. Rhodes, Jr. and Carl Bergmann

Abstract: All terrestrial organisms are subject to evolutionary pressures associated with natural sources of ionizing radiation (IR).

Keywords: in-gel digestion; ionizing radiation; medaka; *Oryzias latipes*; proteome

1. Introduction

Ionizing radiation (IR), from other than natural sources, has become an aspect of daily life over the course of the last century.

cells
MDPI

Article

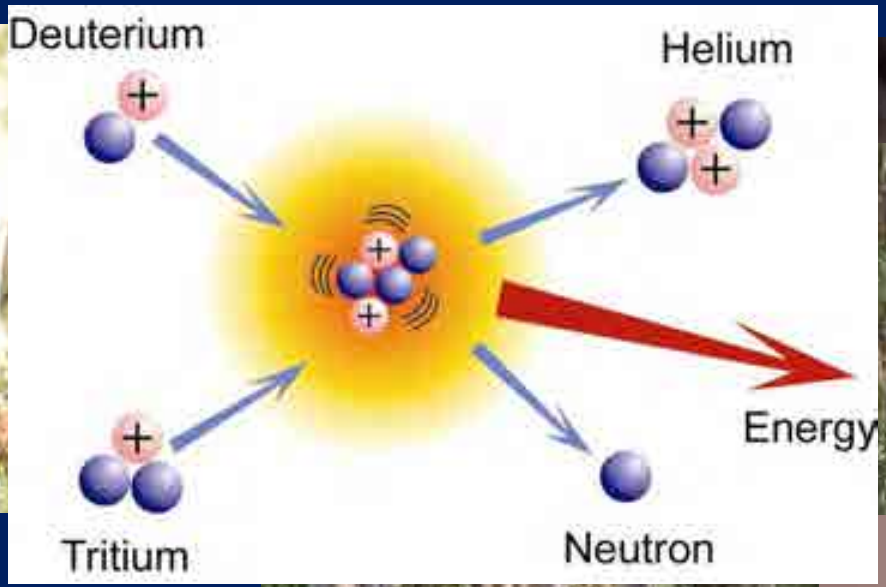
Proteogenomic Analysis of *Burkholderia* Species Strains 25 and 46 Isolated from Uraniferous Soils Reveals Multiple Mechanisms to Cope with Uranium Stress

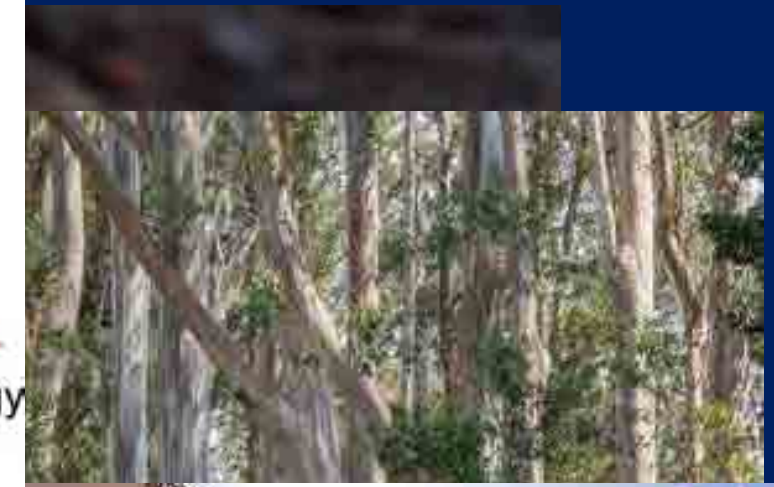
Meenakshi Agarwal, Ashish Pathak, Rajesh Singh Rathore, Om Prakash, Rakesh Singh, Rajneesh Jaswal, John Seaman and Ashvini Chauhan

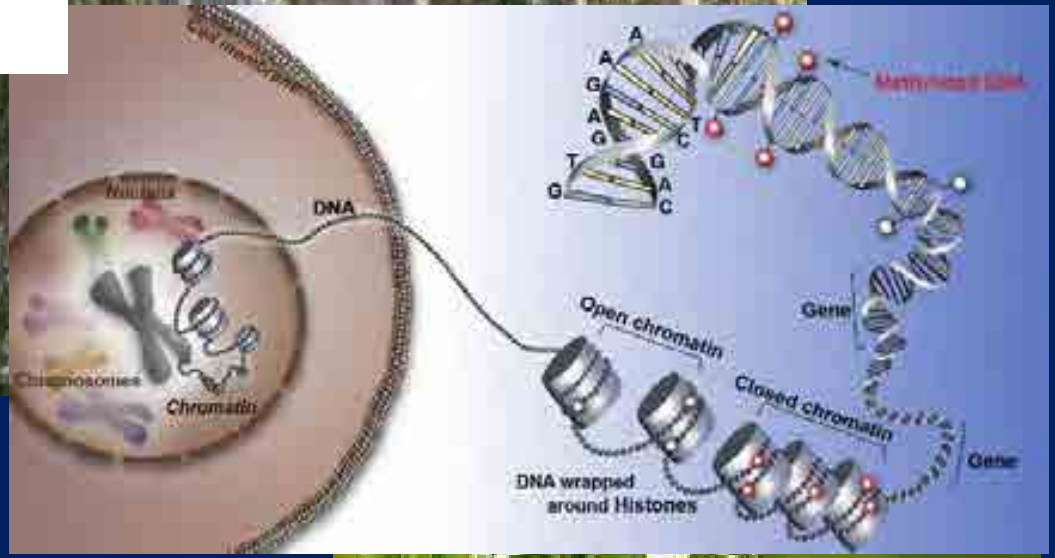
Abstract: Two *Burkholderia* spp. (strains SRS-25 and SRS-46) were isolated from high concentrations of uranium (U) from the U.S. Department of Energy (DOE)-managed Savannah River Site (SRS).

Keywords: genomics; proteomics; uranium; *Burkholderia*

Other Relevant Externally Funded Research







THANK YOU