

## **Leveraging multi-omics based technologies based biomarker development for predicting radiation late effects**

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Delayed radiation injuries are a significant concern in both clinical and non-clinical radiation exposure scenarios. Leveraging multi-omics-based biomarker assays to predict organ injuries is crucial for timely intervention and management of susceptible sub-populations. We have used rodent models exposed to different doses of X-ray radiation in order to investigate the potential of plasma-based lipidomics and metabolomics biomarkers as early indicators of radiation-induced cardiac dysfunction. Establishing translational efficacy using higher model systems is ongoing.