



Question(s) and Answer(s) 4

Q1. We would like to submit a bid to generate transgenic strains of *C. elegans* with genetically-encoded fluorescent markers of tissue and DNA damage. We would validate the markers by correlating radiation-induced fluorescence with independent biochemical assays of tissue damage and with DNA sequencing to determine the degree and type of DNA damage. The deliverable would be a strain(s) of *C. elegans* that could be sent into deep space and the degree of tissue/DNA damage interrogated remotely via fluorescence imaging.

Does a deliverable of this sort meet the requirements of the RFP?

A1. A proposal to develop and use such nematode strain in a future space experiment to remotely monitor DNA damage would be an appropriate deliverable for this RFP, as long as it includes clear scientific requirements and methods applied to obtain the desired results on Earth and in space.