

POSTER PRESENTATION

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Sub-lethal ionizing radiation alters Foxp3 expression in CD4+ T regulatory (Treg) cells *in vitro* and *in vivo*

Anita Kumari, Samantha Simon, Charlie Garnett-Benson*

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The use of sub-lethal radiation has been shown to alter cell phenotype and gene expression. T regulatory (Treg) cells are phenotypically defined as being CD4+CD25+ Foxp3+ T cells and are known to suppress the function of CD8+ cytotoxic T lymphocytes (CTLs). Inhibiting the suppressive function of Treg cells allows for activation and proliferation of CD8+ CTLs. We examined the effects of sub-lethal radiation on Tregs 24- to 72-hrs post-treatment. We found that radiation treatment decreased the number of Treg cells however the total CD4+ T cell fraction remained unaltered. Our data suggests that the use of sub-lethal radiation can modulate the expression of Foxp3 in CD4+ Treg cells *in vitro* and *in vivo*. Moreover, the loss of Foxp3-mediated suppressive functions may be linked to increased CTL activity.

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