

Dr. Michael J. Monument (Calgary, AB)

“Sting Activation as an Immunotherapy for Soft Tissue Sarcoma”

Sarcomas are cancers derived from connective tissues such as bone, muscle and fat. Sarcomas are rare (<1% of all cancers), however they account for 15-20% of solid malignancies in children and young adults. Surgery is an integral component of curative therapy for sarcoma patients, however these surgeries often require destructive muscle, bone and joint resections. Additionally, improvements in the systemic treatment of sarcoma have been stagnant for decades; there are very limited options for sarcoma patients who relapse or develop metastatic disease.

Dr. Monument’s basic science research program at the University of Calgary has been developing pre-clinical animal models of human sarcomas. Using these models, his team is investigating a novel immunotherapy strategy, which involves activating the “STING receptor pathway” directly within tumours. Injection of small molecule activators of the STING receptor within sarcomas can recruit anti-sarcoma immune cells into tumours and preliminary results have shown impressive therapeutic responses in sarcoma-bearing mice. Dr. Monument’s research proposal seeks to further elucidate the anti-tumour mechanisms of STING activation in sarcoma and determine if this approach can protect animals against sarcoma metastases and relapse. It is the ultimate goal of Dr. Monument’s research to use these pre-clinical models of sarcoma to determine if STING activation therapy would be a suitable strategy for early clinical trials in sarcoma patients.