

**Tanner Stokes Canada (Queen's university) Promoter C; McGlory**  
**Budget : 38475 euros**

Title A bioinformatics approach to uncover the anti-catabolic mechanisms of essential amino acid and omega-3 supplementation

### Summary

Skeletal muscle atrophy is a well-established outcome of bedrest with a suite of negative health implications. Consequently, there is an urgent demand for clinically-viable strategies to counteract this muscle loss. Previous studies suggest that dietary supplementation with essential amino acids (EAA) or omega-3 fatty acids (n3-FAs) can partially mitigate disuse-induced muscle atrophy. However, it remains unclear whether a combination of these nutritional compounds can effectively combat muscle loss during bedrest. Our project's primary objective is to enhance our understanding of the anti-catabolic effects of EAA + n3-FA supplementation by integrating comprehensive transcriptome profiling with a range of clinical outcome measures.

