

JAMES RENNIE BEQUEST

REPORT ON EXPEDITION/PROJECT/CONFERENCE

Expedition/Project/Conference Title: Anaerobe Society of the Americas 2014 Congress

Travel Dates: 26 June - 2nd July

Location: Chicago, Illinois, USA

Group member(s): Maria Kowal

Aims: To present a talk based on recent developments in the *Bacteroides fragilis* ubiquitin project.

To improve presentation and networking skills and meet fellow researchers from similar areas of interest.

OUTCOME (not less than 300 words):-

I was invited to the Anaerobe 2014 Congress to present a ten minute talk on my recent work with *Bacteroides fragilis* ubiquitin. *B. fragilis* is a Gram-negative, anaerobic commensal of the human gastro-intestinal tract with established roles in development of the innate immune system and quenching of the inflammatory response. It has also been found to encode a unique bacterial homologue of ubiquitin, a small, highly conserved, eukaryotic protein modifier with roles in a wide variety of eukaryotic cell functions, including the cell cycle and the inflammatory response. This *B. fragilis* ubiquitin (BfUbb) will be the central topic of my PhD thesis. I have established in recent experiments that BfUbb interacts with human ubiquitin E2 conjugating enzymes *in vitro*, which suggests it has the potential to interfere with any of the host epithelial cell functions that involve ubiquitin.

The Anaerobe 2014 Congress consisted of sixteen sessions, spread across three days, covering a variety of anaerobic microorganisms and investigative techniques. Of particular interest to me were the sessions on "Ecology of the Microbiota", "Beneficial Microbiome Members", "The Care and Feeding of our Intestinal Microbiome" and "Antimicrobials and Resistance". The Congress also featured three poster sessions, all of which I attended, although I was most interested in the first session "Ecology of the Microbiota", which featured many studies on *B. fragilis*.

My presentation at the Congress was a ten minute talk in the session on "Ecology of the Microbiota" and consisted of a brief introduction to *B. fragilis* and eukaryotic ubiquitin, a summary of the previously published work on the BfUbb project, the results of my recent experiments with E2 conjugating enzymes and a few suggestions for future experiments. The talk was well timed and clearly delivered. I received, and was able to answer, questions from the audience and also discussed the project further with several researchers from varying institutions and fields of research who approached me during the networking sessions. Additionally, I established a potential collaboration with a group from Brazil who have been working on a project similar to one I presented two years ago at the 2012 Congress.

Overall, I believe I successfully updated the Congress attendees on the BfUbb project, I established new contacts and a potential collaboration and I gained a greater insight into the research being conducted in the field of anaerobes, particularly in *B. fragilis*. I feel that this experience has provided me with useful skills and knowledge and I hope it will improve my chances of securing a position after my PhD.

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