

MEDICAL STUDENT PRIZE WINNER:
CLAUDIA CIPRIANO



PROJECT: Assessment of Body Composition and The Gut Hormone and Cytokine Profile of Anorexic And Cachexia Upper Gastrointestinal Cancer Patients

'Winning the Dr Falk Core Medical Student Prize is an amazing opportunity. I want to further my research career by applying to the academic foundation programme after medical school so having this award will greatly benefit my application.'

Claudia Cipriano has just completed an intercalated Masters in Medical Sciences at the Faculty for Biology, Medicine and Health at Manchester University. She will return to take up her 4th year medical studies at Manchester University in September.

'I chose this project because I am interested in gut hormones and their role within our body. I have also gained an interest in oncology from a project I completed last year, so this project which involves both fields really sparked my interest. How so many people are affected by cachexia, yet very little is known about causes and how to treat it, is fascinating.

'Cachexia is the loss of muscle and fat due to disease, anorexia is the loss of appetite leading to a lack of food intake, together they form a cachexia- anorexia syndrome in cancer sufferers. Cancer cachexia affects up to 80% of cancer sufferers and causes a reduction in cycles of chemotherapy received, an increase in chemotherapy toxicities and a reduction in overall survival. The causes of cancer cachexia are multifactorial and emerging evidence has implicated the role of gut hormones and cytokines in the development of both cachexia and anorexia. So far, I have been studying body composition in cancer patients by analysing the wealth of information locked into their scans, and the next stage is looking at gut hormone levels in patients with cachexia.

'There is very little research on the role of gut hormones in upper GI malignancy. However, studies in upper GI Crohn's disease, a condition with inflammation levels similar to that seen in malignancy, have found an elevation of gut hormones; PYY, CCK and GLP-1. This project aims to investigate the gut hormone and cytokine profile of 10 anorexic patients with oesophagogastric cancer and 10 non-anorexic counterparts. Participants will be fasted overnight and have a blood sample taken before a test meal is given, subsequent blood samples will be taken over a 2 hour period. The blood samples will be analysed using ELIZA for CCK, PYY, GLP-1 and cytokine levels to determine if there is a rise in anorexic patients.

'Participants will also undergo body composition analysis using CT scans and Bioelectrical Impedance Analysis which will assess muscle bulk and fat mass. There will also be muscle function testing using hand grip strength and stair climb tests. I hope this project could potentially lead the way to further research, which may eventually see clinical implications of treatment ultimately helping cancer sufferers.'

***Ms Cipriano's Supervisor
Professor John McLaughlin comments:***

'Claudia has been working hard with us in Manchester as an intercalated MRes student, studying the severe wasting (cachexia) in patients with advanced gastrointestinal cancer. This is a really important but neglected area, and has a major impact on the outcomes of cancer patients during their treatment. The research team have been really impressed by Claudia's research ability and diligence. We were delighted to hear she had won the Core-Falk award and are confident this will be a springboard to further success in her academic career after medical school.'