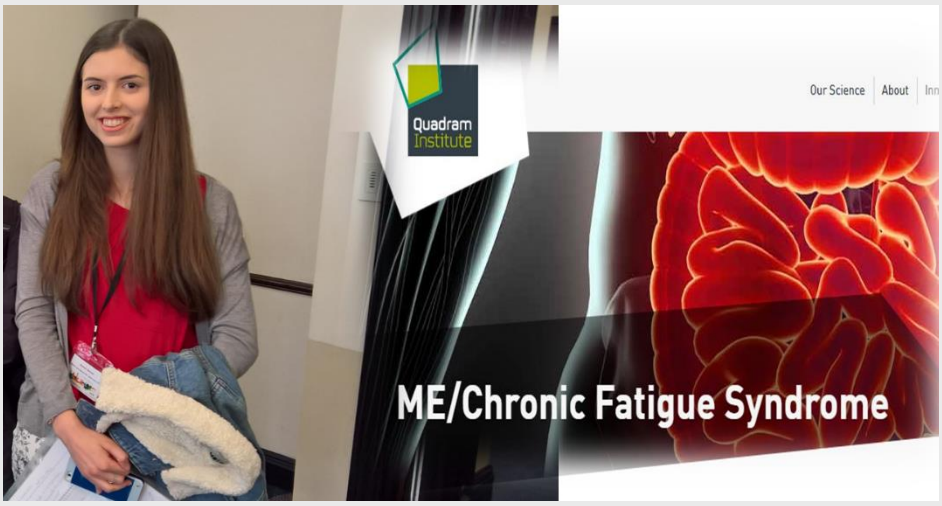
Invest in ME Research

Research Blog

“Defining autoimmune aspects of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME)”

Introduction from the PhD research student and a study update

Posted by: Katharine Seton Post Date: 2 November 2017



Hi Everyone

I would like to introduce myself to you all.

I am Katharine Seton, a 22-year-old PhD student and I have just began the second year of my PhD.

I originally came from Cumbria and studied Biomedical Sciences at Newcastle University before starting my PhD funded by Invest in ME Research.

I have always had a strong interest in the immune system and ME research.

I have a personal investment and interest in ME research, because in January 2009 I was diagnosed with ME, when I was just 13 years old.

It was both physically and emotionally challenging to make the transition from a very active and musical child, regularly competing in basketball, swimming, orienteering, hockey, netball and athletic events, to a child too ill to attend school more then 9 hours a week.

Up until my ME diagnosis, I had always dreamt of being a stunt woman and having a very active career.

When I developed ME, I had to cut out sport, music and socialising, which meant I became focussed on my education.

I realised after I managed to achieve 11 GCSE's grades A* to A whilst attending school on a part time basis that I am academically able, something I did not realise prior to my ME diagnosis because I was always so focussed on sport.

It was only once I was at University, studying my undergraduate degree, that I came to the realisation that I could contribute to the ME research field.

In the summer of my second year, I had a Wellcome Trust funded Vacation Studentship, researching the heritability of ME with Professor Julia Newton at Newcastle University.

I loved every minute of this placement, although it was computer based, and after this valuable work experience I realised that I would love to contribute to laboratory research into the cause of ME.

I aspire to help find a cure for ME … so watch this space!

The research that I am focussing on in my PhD is the immune system and its interaction with gut microbes, specifically, whether there is an inappropriate immune response triggered by bacteria that has leaked across the gut wall.

There is current evidence of an inappropriate immune response and gastrointestinal involvement in ME patients and I endeavour to find out whether there is a link between the two, and if this link is blocked, would it lead to symptom improvement.

As ME patients experience a wide range of symptoms, and have different onset patterns, it is a scientifically challenging area of research to study, often yielding different results between different research groups.

The first year of my PhD was focussed on creating a plan for recruitment, sample collection and sample analysis.

This study has received ethical approval from the Health Research Authority, and participant recruitment is underway.

It has been agreed that this study will focus on the recruitment of severe ME patients and their household controls, recruited through East Coast Community Healthcare Centre and through Dr Bansal at Epsom and St Helier CFS Clinic.

As this is a longitudinal study, blood and stool samples will be collected on up to six occasions.

Now that we have received ethical approval for this study, the second year of my PhD will be focussed on participant recruitment, sample collection and processing, and sample analysis, hopefully leading to the generation of some interesting, valuable, results.

Katharine Seton

- Quadram Institute, Norwich