

MEDICAL STUDENT PRIZE WINNER:
MS ELINOR RODERICK



PROJECT: The Impact of T Cell Receptor Repertoire Restriction In Autoimmune Hepatitis.

'I am delighted to have won the Dr Falk/GUTS Medical Student bursary for my BSc research project. The project has introduced me to the importance of medical research and the impact this can have on the development of treatment for patients. The support of Dr Falk/GUTS UK bursary will no doubt aid the continuation and development of the project, allowing me to collect further results. I have thoroughly enjoyed working on the project, and this has inspired me continue research throughout my clinical career.'

Ms Elinor Roderick is currently completing an intercalated BSc in Clinical Sciences at UCL Institute of Immunity & Transplantation. She is returning to her fourth year of her medical degree at University College London in September.

'The data collected suggested that an activation marker, known as CD69, was expressed to a higher degree on VB3 expressing T cells in patients. This may indicate a more activated cell phenotype, suggesting the possible significance of the VB3 T cell subset.

'I am hoping to continue this project through the summer, recruiting more patients in order to confirm the significance of the expression of this activation marker. I have a keen interest in clinical research, and would love to continue research throughout my clinical career

'The UK-AIH study highlighted a clear unmet need for better therapies. Of those patients receiving corticosteroid therapy (58%), 25% were not in remission with 10% needing a higher dose to maintain remission – a fifth of patients developed osteoporosis as a result of this therapy.

'This project looks into the immunopathology of autoimmune hepatitis (AIH). AIH is thought to be a T cell mediated disorder and previous studies have indicated that a specific T cell, a T cell expressing the VB3 T cell receptor, is enriched in the liver of patients with the condition. This project aimed to assess changes in the VB3 expressing T cells, looking for differences in activation, proliferation or exhaustion between patients with autoimmune hepatitis and healthy controls using flow cytometry technology.

'If we can show that Vb-3 TCR restricted cells are important in the pathogenesis of AIH, it offers the potential to identify shared antigens recognised by the immune system. This may illuminate triggers for AIH such as viral infections, giving us new insights into pathogenesis. Furthermore, if a common antigen can be identified this would provide the potential for novel treatment approaches, such as antigen specific CAR-Treg therapies.

Ms Roderick's Supervisor Dr Neil Halliday, comments:

'Elinor Roderick is a highly capable student who has excelled in the laboratory. She has rapidly acquired the skills needed to perform this project and she confident independent and precise in her work.

'The aims of this project support the needs of patients including improved prognostication, personalisation of therapeutic approach and may help with understanding of why the disease evolves.'

