

MEDICAL STUDENT PRIZE WINNER:
MS JACLYN TAN



PROJECT: Improving the diagnosis and management of patients with spontaneous bacterial peritonitis.

"It is a great honour to be awarded the Dr. Falk Medical Student Prize. This has fuelled my drive to undertake further work within the discipline, as I strive to contribute to the scientific community and apply research findings in the clinical setting to improve patient care. This project has provided me with great insight into the crucial interplay between medical specialties (Hepatology and Infectious Diseases) for proper patient care. The skills learnt from this project will prove beneficial in my future career as a clinician."

Ms Jaclyn Tan is currently completing an intercalated BSc in Clinical Sciences at the University College London and will begin her 4th year of clinical medicine in September.

'Over the years, I have developed an interest in the use of molecular technologies to improve patient care. This, coupled with my interest in gastroenterology, made my project an ideal choice for my intercalated year. This project focuses on the diagnosis and management of patients with spontaneous bacterial peritonitis (SBP), an infection of pre-existing ascites in the absence of a known intra-abdominal infection. It is a very frequent and severe complication in patients with cirrhosis and ascites, with a median mortality rate of 43.7%.

'To guide the management of patients with SBP, current procedures include identifying the causative pathogen and its sensitivity to antibiotics. However, only about 40% of patients will have a pathogen identified and this can take up to 5 days. Therefore, clinicians often use broad-spectrum antibiotics as first-line treatment before the results are known. This practice is suboptimal as patients are either at risk of antibiotic-associated infection and resistance or are receiving antibiotics to which the pathogen is not sensitive to. Both circumstances can potentially lead to rapid clinical deterioration.

'Recently, novel molecular diagnostic tools have been gaining scientific interest. They are seen to have better diagnostic performance and produce results faster as compared to conventional diagnostic microbiology. One example is the Curetis Unyvero IAI Application. The key advantage of Unyvero is the reduction in time - crucial results will be known within 4 to 5 hours.

'This pilot study aims to determine the efficacy of the Unyvero in identifying pathogens and antibiotic resistance markers for patients with SBP. This could shed light on a potential method to dramatically minimise delays in diagnosis and may guide clinical decisions on appropriate antibiotic therapy to reduce severe morbidity and mortality.'

Ms Tan's Supervisor Dr Rachel Westbrook comments:

'This project is of immense importance. Spontaneous bacterial peritonitis is a frequently fatal complication of cirrhosis and one where little progress has been made in recent years. Use of the novel molecular diagnostic procedure, outline in the application could dramatically change our approach and save patients' lives.

'Jaclyn is a remarkable student who has showed great enthusiasm and aptitude for the project. She has quickly developed an impressive understanding of the topic. She uses her own initiative to move the project forward and constantly communicates with the team.

'She has also proved to be a highly competent, confident, and good-natured young woman who takes a serious and rigorous approach to her work. During the course of this project, she will thus continue to obtain useful clinical research experience that will prove helpful in her medical career. I have no doubt that she will progress to be a highly proficient individual in her chosen field.'

