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Dr Falk/Guts UK Awards 2022

MEDICAL STUDENT PRIZE WINNER: Mr Wing Kiu Chou

PROJECT:

Clinical and Genetic Determinates of Severe Acute Pancreatitis: A systematic review and population based genetic association study in the UK Biobank



Mr Chou is undertaking this research project at the University of East Anglia as an intercalating Masters of Research (MRes) student. It will be completed in August 2022, after which he will return to his final year at UEA Medical School. He currently serves as the National Chair of the British Foundation for International Reconstructive Surgery and Training (Medical Student Committee) and as a Scholar at the Healthcare Leadership Academy.

Mr Chou explains:

'I developed an interest in acute pancreatitis whilst working alongside academic upper gastrointestinal surgeons who manage complex pancreatitis. Acute pancreatitis affects 56 out of 100,000 people each year and concerningly, substantial increases in hospital admissions have been reported over the last 30 years. Pancreatitis can be mild, but one in four people develop a severe form of the disease which requires critical care monitoring and long hospital stays. Despite intensive support, many people develop irreversible organ failure, life-threatening lung infections and almost half of such patients will not survive.'

'Little is known about what causes severe acute pancreatitis although risk factors include gall bladder disease, alcohol consumption, smoking and obesity. Current clinical prediction tools for disease severity are limited and treatment in hospitals has largely been unchanged for over half a century.'

'In recent years, genetic variations have uncovered notable insights into diseases. Genetic variation may explain why some people progress to a severe form of acute pancreatitis, while others do not. Previously published work has suggested a relationship between some genetic variants and severe acute pancreatitis, but existing research is limited and further evidence is needed.' 'In this project, we aim to carry out a systemic review of the literature and to harness the vast amount of data collected by the UK Biobank of over half a million people, to study how disease activity is affected by genetic variation. Aims include identifying clinical risk factors as well as identifying and validating single nucleotide polymorphisms associated with severe acute pancreatitis.' 'This study will be the largest of its kind studying the relationship between single nucleotide polymorphisms and disease severity in acute pancreatitis. The results from this research will validate pre-existing knowledge regarding this relationship, provide insight into the mechanisms of this deadly disease, and establish the groundwork for potentially identifying drug targets to treat pancreatitis in the future.'

Mr Chou's Project Supervisor Mr Bhaskar Kumar, Consultant Oesophagogastric Surgeon Norfolk and Norwich University Hospitals Foundation Trust comments:

'Wing is a highly promising medical student who has demonstrated significant commitment to academic medicine and surgery as well as being a very capable researcher in GI medicine. He has been awarded the Carlile Prize for research into gallballer dysplasia, the Wolfson Intercalation Award and has presented at GI congresses in Spain, Korea, Belfast and at the BSG Annual Meetings.' 'His project will be crucial for understanding the driving factors for disease severity in acute pancreatitis and it is without doubt that his project will be successful.'

Mr Chou states:

'The Dr Falk/Guts Medical Student Prize is very important in supporting medical students such as myself to take an intermission year during our medical studies to explore our academic research interests. It is a great honour therefore to be recognised for my research project and I am deeply humbled to receive this prestigious prize.'

'This award also highlights the salience of research in understanding this highly dangerous condition and has also further affirmed my motivation to pursue future research into upper gastrointestinal surgery and become an academic surgeon. Receiving this award will, without doubt, support future career applications and provide a platform for me to share my research findings with experts in the field.' 'I am indebted to my two supervisors, Mr Bhaskar Kumar and Mr Stephen Lam who have helped me develop my research acumen and supported me throughout my project.'



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