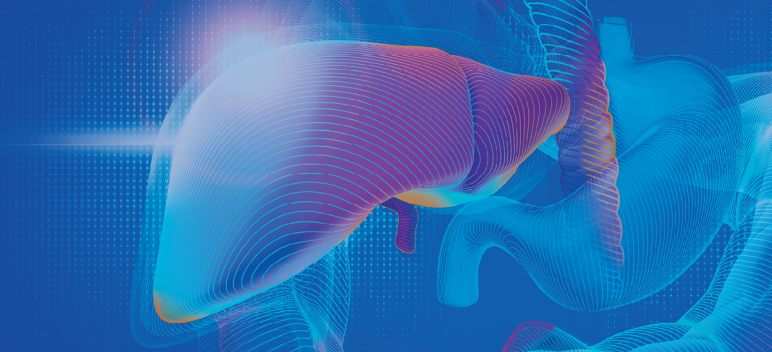


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Dr Falk/Guts UK Awards 2021

MEDICAL STUDENT PRIZE WINNER: **Reuben Veysey-Smith**

PROJECT:

Investigating the Relative Impacts of Proton Pump Inhibitor (PPI) Therapy, *H. pylori*-induced Gastritis and Gastric Mucosal Atrophy on Fasting Serum Gastrin Concentrations.



Mr Reuben Veysey-Smith undertook this research at the Institute for Systems, Molecular and Integrative Biology, University of Liverpool, whilst completing an intercalating MRes in Biomedical Sciences and Translational Medicine - Molecular and Clinical Gastroenterology. He is currently completing his 4th year at the University of Liverpool Medical School.

Mr Veysey-Smith explains:

'Throughout my medical training, I have always had a passion for research. In addition, I have a strong interest in gastroenterology and currently I am considering pursuing a career in this speciality. I also have a particular interest in cancer development. Therefore, this research project, with its primary aim of investigating whether certain common clinical conditions may increase a person's risk of developing gastric cancer, whilst doing an MRes, gave me the chance to further all these interests and to produce my own novel findings.'

'Hypergastrinemia is a common scenario encountered in modern clinical practice, with multiple potential implications. Patients with an underlying malignant cause such as Zollinger Ellison Syndrome (ZES) may have a markedly raised fasting gastrin concentration. However, there is considerable overlap between that of ZES and common clinical factors such as atrophy, PPIs and *H. pylori* infection and this overlap can result in patients undergoing unnecessary tests to determine whether an abnormal result is instead a 'false positive'. Some of these additional tests can be unpleasant and/or expensive such as endoscopies and CT/MRI scans.'

'Our project aims to define what a standard fasting gastrin concentration may be in these groups compared to normal. By understanding the degree to which these common clinical factors affect gastrin concentration, it may be possible to attribute a raised gastrin concentration to a benign cause instead of unnecessarily investigating patients for a malignancy.'

'We recruited a cohort of patients who had previously undergone endoscopy for GI conditions. Gastrin levels from blood samples were compared in 233 normal patients, alongside 301 patients receiving PPIs, 164 patients with *H. pylori* infection status and 284 patients with atrophic gastritis. All the investigated groups analysed had a significantly higher fasting median gastrin concentration when compared to the 'normal' control group. However, between these groups, results varied across several factors including use of PPIs.'

'The results of this study will hopefully be able to guide clinicians in the future when investigating a patient with hypergastrinemia. In addition, concerns have been raised over recent years that a small proportion of patients who take PPIs for long periods of time may have an increased risk of developing stomach or oesophageal cancer as a result of having hypergastrinaemia.'

'Our results may in time contribute to being able to work out an individual's risk and therefore assist with safer long term prescribing of this type of medication. I hope this work and any work I complete in future will aid clinicians, including myself, to give the best care possible to patients.'

Mr Veysey-Smith's Project Supervisor, Dr Mark Pritchard, Professor of Gastrology and Honorary Consultant Gastroenterologist comments:

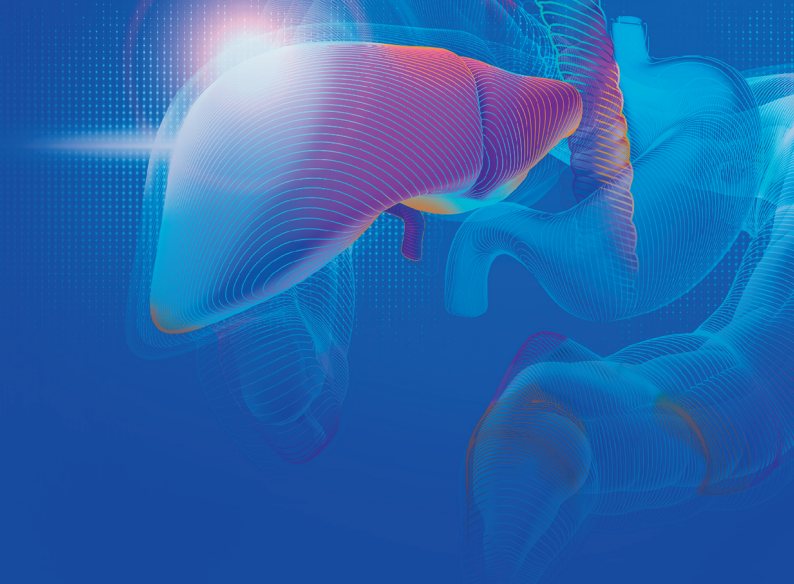
'Reuben Veysey-Smith's analysis represents one of the largest and best characterised cohorts in which this parameter has been evaluated. His project report was awarded a distinction mark and we are currently preparing the data for publication. Reuben is a very talented medical student who has already shown a strong aptitude for research. I hope that he may consider a career in a specialty which will care for patients who have gastrointestinal diseases in the future and would also recommend that he strongly considers pursuing an academic career path.'

Mr Veysey-Smith states:

'I feel very honoured to have been awarded the GUTS UK prize for my work this early on in my career. Therefore, to win this award means so much to me. It has given me the confidence to pursue further academic research during my training, with the hope of publishing more novel research of my own within the fields of gastroenterology. I'm certain that this award will be a great aid for my future career pathway, highlighting my passion and dedication to academic work and the field of gastroenterological medicine.'



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