

# Clinical Surgery

Issue IV: March 2016

## Foreword from the Research Manager

Welcome to the first 2016 edition of the research eBulletin for Clinical Surgery.

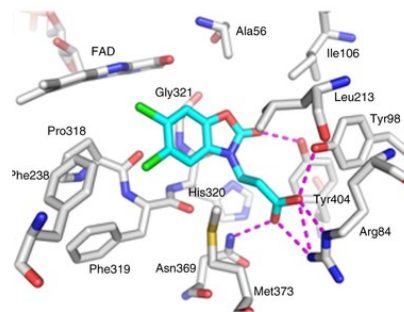


Principle Investigator: Mr Damian Mole

We start 2016 by celebrating the success of **Mr Damian Mole's** group for their recent publication in the highly prestigious medical journal, *Nature Medicine*.

In the study entitled, 'Kynurenine-3-monooxygenase inhibition prevents multiple organ failure in rodent models of acute pancreatitis', the multidisciplinary team of researchers and scientists from The Centre for Inflammation Research and The Centre for Cardiovascular Science, identified the enzyme, kynurenine-3-monooxygenase (KMO), as a key regulator in the pathogenesis of acute pancreatitis-multiple organ dysfunction syndrome (AP-MODS).

Working in collaboration with **Dr Scott Webster** of the Centre for Cardiovascular Science's Drug Discovery Core, the group formed a translational medicine Discovery Partnership with GlaxoSmithKline, and have developed a KMO inhibitor which reduces the severity of AP-MODS in animal models of the disease. This exciting discovery paves the way for the development of novel treatments in humans. You can read more about the study [here](#) and read the Nature Medicine publication in full [here](#).



The group's research in the field is continuing with **Mr Christos Skouras** working to define the kynurenine pathway in human pancreatitis, **Mr Alastair Hayes** is currently developing advanced telemetry and tissue specific KMO knockout animal models to define the mechanism of KMO inhibition, and **Toby Murray** is investigating pharmacokinetic and pharmacodynamic mechanisms of KMO in ongoing studies. The group have also recently been awarded one of 15 PhD Studentships available across Scotland through the MRC Doctoral Training Programme in Precision Medicine. This project, available to basic science students, will investigate the systems biology of acute pancreatitis. More information on the project can be found [here](#), and individuals interested in applying for this position should contact [Mr Mole](#).

Welcome to the first 2016 edition of the Department of Clinical Surgery eBulletin

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## Research in Progress Meeting Reminder

The Clinical Surgery Research meeting has now moved to the new time slot of the first Friday of the month @3.30pm.

The next meetings will be as follows:

Friday April 1<sup>st</sup> — Clinical Audit presentations (see page 3)

Friday May 6<sup>th</sup> — Kevin Gallagher (Title TBC)

## Congratulations & Recent Grant Awards

**Mr Richard Skipworth** has been awarded an NHS Research Scotland (NRS) Clinician post. Funded through the Researcher Support Strand for a research programme entitled "*Improving clinical outcomes for patients with oesophagogastric cancer*", this post provides funding (0.2FTE) over 3 years.

**Professor John Forsythe** has been appointed Associate Medical Director of NHSBT

### Professors Ken Fearon & Jim Ross

Muscle wasting in human disease: Cancer cachexia  
2015-2016  
£104,000

**Kenneth Maclean** was awarded StarSurg/ASiT Medical Student Prize at the ASiT Conference 2016 for his presentation, '*Decision modelling in donation after circulatory death (DCD) liver transplantation*'

## PURE Update

**Have you had a manuscript accepted for publication recently?**

From **April 1st 2016** all manuscripts must be deposited in the PURE publication repository within **3 months of acceptance** in order to qualify for the next Research Excellence Framework (REF).

Depositing manuscripts in PURE will comply with the University Open Access policy. Please note there is **no requirement to pay** gold open access article processing fees for every article - depositing the manuscript in PURE is sufficient to comply with the policy.

Please send the finally accepted version of your manuscripts along with acceptance date to:

**Pure.ClinSurg@ed.ac.uk**

The Clinical Surgery admin team, Susan Keggie, Ingrid O'Malley, and Research Manager, Katie Shaw, will deposit manuscripts in PURE on your behalf.

The finally accepted version of the manuscript is the authors version after peer review, but before copy editing. It will usually be a Word document and the most likely person to be in receipt of this version is the corresponding author.

**Please note that journal generated proofs may not be used for this purpose.**

Please remind any research fellows or students that may have left the department prior to having manuscripts accepted of the requirement to send the finally accepted version to the email address above.

More information about PURE can be viewed at [www.ed.ac.uk/governance-strategic-planning/research/pure](http://www.ed.ac.uk/governance-strategic-planning/research/pure)

# Clinical Surgery Audit Meetings



The Department of Clinical Surgery has a rolling programme of audit studies co-ordinated by **Miss Anna Paisley** and undertaken by Foundation Year doctors during their time in the department.

At the start of their 4 months spent in Clinical Surgery, each FY doctor is assigned an audit project. Some of these are new projects whilst others are re-audits of previous studies following an intervention.



At the end of their 4 month block in the department, the FY doctors are given the opportunity to present their findings during two audit presentation sessions — an opportunity for them to learn about each others work and for members

of the department to hear about the results of the audit studies.

The first of these audit sessions was held on March 11th during which results were presented on gentamicin prescribing, prescription omissions, IV fluid prescribing VTE prophylaxis and Medicines reconciliation on admission and discharge.



The second session will be held **@2pm on Friday 1st of April** (OPD 4 seminar room). Miss Paisley will circulate the final programme prior to the meeting, but presentations will include head injury audit, sepsis 6, consultant TRAK allocation and casenote documentation.

Thank you to the first cohort of presenters:

**Rosa Lancaster; Linda Provan; John Connelly; Jennifer Hall; Peter Cartlidge; Sophie McDermott; Rachel Nelson; Christina Evans**

# Clinical Trials Update

## **PREVENTT** — Preoperative intravenous iron to treat anaemia in major surgery.

A randomised, double-blind controlled phase III study to compare the efficacy and safety of intravenous ferric carboxymaltose with placebo in patients with anaemia undergoing major open abdominal surgery.

NHS Lothian is **now open** as a trial site. This study is now recruiting patients (>18) undergoing elective major surgery with a screening haemoglobin of 90-120 g/L in women and 90-130 g/L in men. Patients will be randomised to receive either study infusion or placebo 10-42 days before planned surgery. Primary outcome is the rate of blood transfusion within 30 days of surgery.

For more information, please contact Edinburgh principle investigators, Mr Ewen Harrison and Mr Richard Skipworth or the local research nurse Mr Alsatour Lang (0131 242 9453).

## The **Balanced Anaesthesia Study**

An international multicentre RCT to assess whether 'deep' general anaesthesia is associated with altered perioperative outcome. Inclusion criteria include age above 60, ASA 3 or 4, and requiring a general anaesthetic of at least 2 hours duration.

Patients will be randomised into 1 of 2 groups, targeting 'deep' or 'less deep' anaesthesia – this is achieved by using BIS (modified EEG) monitoring and targeting a BIS level of 35 or 50. Primary outcome will be all-cause mortality at one year, and secondary outcomes will include various complications of surgery or anaesthesia

Recruitment is expected to commence in the next month. For more information contact the Edinburgh principle investigator, Dr Gary Morrison or local research nurse Alastair Lang (0131 242 9453)



# Clinical Trials Update Contd.

## The **NeoAegis** Trial

A phase III, open-labelled RCT comparing the MAGIC neoadjuvant/adjuvant chemotherapy regimen with the CROSS neoadjuvant chemoradiation protocol in patients with cT2-3 N0-3 M0 adenocarcinoma of the oesophagus or junction. The primary objective is to evaluate 1, 2 and 3-year survival.

This trial is now recruiting. For more information contact the Edinburgh principle investigator Mr Richard Skipworth.

## Visiting Lecturer, Professor Charles Vollmer



In March, the department hosted a visit from **Professor Charles Vollmer**, Director of Surgery, University of Pennsylvania, Professor of Surgery, Perelman School of Medicine.

During his visit Professor Vollmer delivered a guest lecture entitled, 'Limits of resection for pancreatic tumours—how far should we go?' as well as spending time with the research fellows in the department discussing their projects. Professor Vollmer went on to give a presentation at the GBIHPBA congress in Leamington Spa.



## **OCCAMS—Oesophageal Cancer Clinical and Molecular Stratification.**

A Multicentre Study to Determine Predictive and Prognostic Biomarkers and Therapeutic Targets for Oesophageal and Junctional Adenocarcinoma including Whole Genome Sequencing

This study, part of the International Cancer Genome Consortium (ICGC2), has now been refunded by CRUK for next 5 years and is currently recruiting.

For more information contact the Edinburgh principle investigator Mr Richard Skipworth.

## British Transplant Society Congress 2016

The BTS held its annual Congress in Glasgow last month. There was a strong presence from Edinburgh transplant surgeons, trainees and research fellows. **Diana Wu**, **John Terrace** and **Kenneth McLean** gave oral presentations.

**Diana** also presented, '*Young, Caucasian, better educated and less socially deprived patients are more likely to be transplanted with a living donor kidney in the UK*,' in the Medawar Medal session.

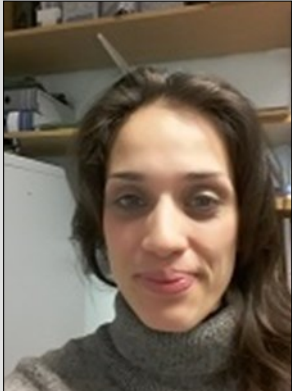
**Rachel Thomas** presented her Moynihan Prize (2015) winning study, '*Heme pre-conditioning in deceased donor renal transplant recipients*', and **Chris Johnston** presented, '*TGM—a novel Helminth-derived immunomodulatory molecules that ameliorates allograft rejection*', in the Basic Science session.

Also present at the meeting were **Miss Lorna Marson**, **Miss Anya Adair** and **Mr Gabi Oniscu** who were invited to chair sessions and new Director of NHSBT, **Professor John Forsthye** who lead the panel discussion, '*Controversies in UK organ transplantation: have we gone too far in terms of organ quantity at the expense of organ quality?*'

Highlights of the conference, including interviews with Miss Lorna Marson and Professor John Forsthye can be viewed at <http://imi.newsweaver.ie/Transplantmed/136m276y39>

# NEW Academic e-Facilitators

## Dr Domenica Coxon



Dr Domenica Coxon is a research fellow at The University of Edinburgh, Centre for Population Health Sciences. She has a background in Public Health (with a focus on psychology and epidemiology).

Domenica undertook an Arthritis UK funded PhD at Keele University investigating patient decision-making and patient preferences for managing Osteoarthritis within general practice. She has worked extensively developing discrete choice experiments (DCEs), and has extensive experience working with Patient Public Involvement (PPI).

Domenica has recently expanded her discrete choice research into patient preferences for Lung cancer management and will be presenting her collaborative research at Harvard University in April 2016.

Over the last 3 years she has worked on a collaborative Cancer Research UK grant with an international and interdisciplinary community of early cancer diagnosis researchers from the UK, Denmark and Australia.

She has a growing experience of teaching within medical education and is currently working with the Royal College of Surgeons of Edinburgh on their ChM in clinical Ophthalmology and their MSc in Primary care Ophthalmology

## Dr Vicky Young



Dr Vicky Jane Young has a cross-discipline profile with a PhD specialising in clinical science and an MBA specialising in strategy.

Vicky has spent time in West Africa developing sustainable strategies for a surgical education centre and has consulted with Johnson & Johnson, Tropical Health and Education Trust (THET), and The Medical and Surgical Skills Institute in Ghana.

Vicky has extensive R&D experience in Reproductive Health with a focus on molecular biology. She undertook a PhD at The University of Edinburgh, Centre for Reproductive Health, looking at TGF-beta signalling and metabolic reprogramming of epithelial cells in endometriosis. Vicky has presented her research at numerous international conferences and has won several international prizes for her research.

## Future Conference Submission **Deadlines**

| Conference   | Date                      | Location               | Abstract Submission            |
|--|---------------------------|------------------------|--------------------------------|
| <i>International Surgical Group (ISG)</i>                    | <i>11-15 Sept 2016</i>    | <i>Edinburgh, UK</i>   | <i>TBC</i>                     |
| <i>Society for Academic and Research Surgery (SARS)</i>      | <i>17-18 January 2017</i> | <i>Dublin, Ireland</i> | <i>TBC</i>                     |
| <i>British Transplant Society (BTS)</i>                      | <i>1-3 March 2017</i>     | <i>Harrogate, UK</i>   | <i>TBC</i>                     |
| <i>European-African Hepato-Pancreato-Biliary Association</i> | <i>23-26 May 2017</i>     | <i>Mainz, Germany</i>  | <i>Aug 1 2016– Jan 31 2017</i> |
| <i>Asian-Pacific Hapato-Pancreato-Biliary Association</i>    | <i>7-10 June 2017</i>     | <i>Yokohama, Japan</i> | <i>TBC</i>                     |

# Recent Publications

Fairfield C, Penninga L, Powell J, Harrison EM, Wigmore SJ. **Glucocorticosteroid-free versus glucocorticosteroid-containing immunosuppression for liver transplanted patients.** *Cochrane Database Syst Rev*, 12; 2015

Oniscu GC, Ravanan R, Wu D, Gibbons A, Li B, Tomson C, Forsythe JL, Bradley C, Cairns J, Dudley C, Watson CJ, Bolton EM, Draper H, Robb M, Bradbury L, Pruthi R, Metcalfe W, Fogarty D, Roderick P, Bradley JA; ATTOM investigators. **Access to Transplantation and Transplant Outcome Measures (ATTOM): study protocol of a UK wide, in-depth, prospective cohort analysis.** *BMJ Open*, 6(2); 2016

Knight SR, Oniscu GC, Devey L, Simpson KJ, Wigmore SJ, Harrison EM. **Use of Renal Replacement Therapy May Influence Graft Outcomes following Liver Transplantation for Acute Liver Failure: A Propensity-Score Matched Population-Based Retrospective Cohort Study.** *PLoS One*, 11(3); 2016

Mole DJ, Webster SP, Uings I, Zheng X, Binnie M, Wilson K, Hutchinson JP, Mirguet O, Walker A, Beaufils B, Ancellin N, Trottet L, Bénétou V, Mowat CG, Wilkinson M, Rowland P, Haslam C, McBride A, Homer NZ, Baily JE, Sharp MG, Garden OJ, Hughes J, Howie SE, Holmes DS, Liddle J, Iredale JP. **Kynurenine-3-monooxygenase inhibition prevents multiple organ failure in rodent models of acute pancreatitis.** *Nat Med*, 22(2): 202-209; 2016

Gallagher IJ, Jacobi C, Tardif N, Rooyackers O, Fearon K. **Omics/systems biology and cancer cachexia.** *Semin Cell Dev Biol*. 2016. Epub ahead of print

McBride OM, Joshi NV, Robson JM, MacGillivray TJ, Gray CD, Fletcher AM, Dweck MR, van Beek EJ, Rudd JH, Newby DE, Semple SI. **Positron Emission Tomography and Magnetic Resonance Imaging of**

**Cellular Inflammation in Patients with Abdominal Aortic Aneurysms.** *Eur J Vasc Endovasc Surg*, 2016. Epub ahead of print

Forsythe RO, Newby DE, Robson JM

**Monitoring the biological activity of abdominal aortic aneurysms Beyond Ultrasound.** *Heart*, 2016. Epub ahead of print

de Beaux A. **Abdominal wall reconstruction: an emerging and rewarding specialty.** *Br J Hosp Med*, 77(3):150; 2016

Temel JS, Abernethy AP, Currow DC, Friend J, Duus EM, Yan Y, Fearon KC. **Anamorelin in patients with non-small-cell lung cancer and cachexia (ROMANA 1 and ROMANA 2): results from two randomised, double-blind, phase 3 trials.** *Lancet Oncol*. 2016. Epub ahead of print

Fearon K. **Cachexia: Treat wasting illness on multiple fronts.** *Nature*, 529:156, 2016

Fearon K, Argiles JM, Baracos VE, Bernabei R, Coats A, Crawford J, Deutz NE, Doehner W, Evans WJ, Ferrucci L, Garcia JM, Gralla RJ, Jatoi A, Kalantar-Zadeh K, Lainscak M, Morley JE, Muscaritoli M, Polkey MI, Rosano G, Rossi-Fanelli F, Schols AM, Strasser F, Vellas B, von Haehling S, Anker SD. **Request for regulatory guidance for cancer cachexia intervention trials.** *J Cachexia Sarcopenia Muscle*, 6(4):272-4; 2015

Duffin R, O'Connor RA, Crittenden S, Forster T, Yu C, Zheng X, Smyth D, Robb CT, Rossi F, Skouras C, Tang S, Richards J, Pellicoro A, Weller RB, Breyer RM, Mole DJ, Iredale JP, Anderton SM, Narumiya S, Maizels RM, Ghazal P, Howie SE, Rossi AG, Yao C. **Prostaglandin E<sub>2</sub> constrains systemic inflammation through an innate lymphoid cell-IL-22 axis.**

*Science*, Epub ahead of print

