Undergraduate Engagement Forum: A Research Career in Pathology

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• What opportunities do you have?
  – Undergraduate level
  – Postgraduate level

• Considerations

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Who am I?

- **1998** – Undergraduate medicine
  - 2001 Special study module in Pathology
  - 2002 BSc (hons) in Pharmacology
  - 2003 Elective in Forensic Pathology
  - 2004 MB ChB

- **2004** – PRHO jobs

- **2005** – Histopathology SHO school
  - 2005 Joined PathSoc
  - 2006 Attended first PathSoc meeting

- **2006** – NIHR Academic Clinical Fellow
  - 2007 PGCert in Health Research
  - 2008 Registered for PhD
  - 2008 Published first two papers
Who am I?

- **2009** – YCR Clinical Research Fellow
  - Three years full time research

- **2012** – NIHR Clinical Lecturer
  - Complete clinical training
  - Continue research
  - Management e.g. PathSoc trainees chair
  - Education
  - Student supervision
    - Personal tutor to 13 second year students
    - Summer students
    - iBSc students
    - 4th year SSC students
    - MD student

- **2015** – Senior Lecturer / Consultant
Why should I be interested?

The doctor as a scholar and a scientist

12. Apply scientific method and approaches to medical research.

(a) Critically appraise the results of relevant diagnostic, prognostic and treatment trials and other qualitative and quantitative studies as reported in the medical and scientific literature.

(b) Formulate simple relevant research questions in biomedical science, psychosocial science or population science, and design appropriate studies or experiments to address the questions.

(c) Apply findings from the literature to answer questions raised by specific clinical problems.

(d) Understand the ethical and governance issues involved in medical research.
Undergraduate opportunities

- Special study modules / projects
  - Opportunity to self design a project

- Intercalated BSc / MRes
  - PathSoc bursaries

- Intercalated PhD

- Summer projects
  - PathSoc / BDIAP bursaries

- Elective projects

Jonny Nicholls  Claire Walklett  Arish Noshirwani
Gemma Sheehan-Dare  Kate Sutton
Postgraduate opportunities

1. Integrated clinical academic pathway

2. Normal training pathway
   - Ad hoc involvement

3. Out of programme PhD

4. Old fashioned posts
   - Clinical research fellow

Sir Mark Walport
Integrated academic training pathway

Specialist Training → Certificate of Completion of Training

Integrated Academic Training Path

- Competition
  - Academic Clinical Fellowship
    - Funding max 3 years
    - Training Fellowship 3 yrs
  - Competition
  - Clinical Lectureship
  - Funding max 4 years
  - Clinician Scientist Awards

Foundation Programmes
Academic Foundation posts

- Approximately 450 per year (5% of posts)

- Four months academic placement (usually in 2\textsuperscript{nd} year)

- Most are research but can be in education or leadership

- It is not the end of your research career if you do not get one!

- http://www.foundationprogramme.nhs.uk/pages/academic-programmes
Academic Clinical Fellowships

• Employed by the Deanery (or Trust) with an honorary university contract

• 25% academic and 75% clinical training

• Three years duration (maximum)

• Standards and targets are set locally

• Exact training structure and specific targets will differ between specialities and across regions

• Pattern of clinical and academic work should be flexible
ACF in Histopathology

• In Leeds we expect our ACF’s to undertake:
  – Research time (9 months)
  – Diagnostic time (27 months)
  – Undergraduate teaching (honorary lecturer status)
    • 2nd year undergraduate pathology courses (lectures & tutorials)
    • Supervision of RESS, LURE, BSc student projects
  – GIFT autopsy programme
  – PGCert in Health Research
ACF in Histopathology

• By the end of 3 years we expect our ACF’s to have achieved:
  – Part 1 FRCPath examination
  – Diagnostic caseload equivalent to 75% of a full-time standard trainee
  – Completed PGCert in Health Research
  – One publication submitted
  – One presentation

• Options at the end:
  – Return to standard training programme
  – Progress to out-of-programme MD / PhD
Out-of-programme fellowship

- Either for two years (MD) or three years (PhD)
- Employed by University with either internal or external funding
- Full time research (no or minimal clinical commitments)
- Write the thesis and be examined
Clinical Lectureships

- Funding from NIHR
- Usually employed by a university (can be NHS trust)
- £1,000 per year expenses
- 50% academic and 50% clinical training
- Up to four years duration
Clinical Lectureships

- No specific national standards and targets

- Exact training structure and specific targets may differ between specialities and across regions

- Pattern of clinical and academic work should be flexible

- Requirements
  - Advanced within specialty training
  - Completed higher degree
  - Outstanding potential for career in academic medicine / dentistry
Clinician Scientists

• For senior trainees / early consultants

• Up to four or five years funding (often ~£1m)
  – Salary, research staff, consumables

• To establish independence as a researcher
Considerations

• Institution
  – What projects available (system specific or particular techniques)?
  – Track record of success?
  – Don’t forget clinical training!

• Research supervisor
  – Experienced
  – Supportive
  – Accessible

• Flexibility of training
  – Right for you, your supervisor and the project
  – Remember that early research gives you more time
Opportunities

• Work in an excellent lab with world class researchers
  – Molecular pathology, tissue banking, clinical trials
Ground-breaking clinical trials

**FOxTROT Protocol**
Fluoropyrimidine, Oxaliplatin & Targeted Receptor pre-Operative Therapy for colon cancer
A randomised trial assessing whether preoperative chemotherapy and/or an anti-EGFR monoclonal antibody improve outcome in high-risk operable colon cancer

**ARISTOTLE**
A phase III trial comparing standard versus novel CRT as pre-operative treatment for MRI defined locally advanced rectal cancer

**GLiSten**
Low Rectal Cancer National Development Programme

**T-REX Study**

**EnROL**
Enhanced Recovery Open vs. Laparoscopic
ISRCTN48516968

**ExCITE**

**ROLARR**
Robotic versus Laparoscopic Resection for Rectal cancer
An international, multicentre, prospective, randomised, controlled, unblinded, parallel-group trial of robotic-assisted versus laparoscopic surgery for the curative treatment of rectal cancer

Leeds Institute of Cancer and Pathology
Pathology and Tumour Biology
Opportunities

• Work in an excellent lab with world class researchers
  – Molecular pathology, tissue banking, clinical trials

• Presentations, & publications
  – Posters, talks, abstracts, original papers, book chapters
Evidence of the Oncologic Superiority of Cylindrical Abdominoperineal Excision for Low Rectal Cancer
Nicholas P. West, Paul J. Finan, Claes Anderin, Johan Lindholm, Torbjorn Holm, and Philip Quirke
Volume 26 Number 21 July 20 2008
Journal of Clinical Oncology

Multicentre experience with extralevator abdominoperineal excision for low rectal cancer
N. P. West1, C. Anderin1, K. J. E. Smith2, T. Holm3 and P. Quirke3 on behalf of the European Extralevator Abdominoperineal Excision Study Group
British Journal of Surgery 2010; 97: 588–599

Pathology grading of colon cancer surgical resection and its association with survival: a retrospective observational study
Nicholas P. West, Esa J. Manni, Ole Krome-Riksen, Alison Gaine, Paul J. Finan, Philip Quirke

Complete Mesocolic Excision With Central Vascular Ligation Produces an Oncologically Superior Specimen Compared With Standard Surgery for Carcinoma of the Colon
Nicholas P. West, Werner Hohenberger, Klaus Weber, Aristoteles Perrakis, Paul J. Finan, and Philip Quirke
Journal of Clinical Oncology

Improving the Quality of Colon Cancer Surgery Through a Surgical Education Program
Nicholas P. West, M.B.Ch.B.1 • Kate M. Sutton1 • Peter Ingholm, M.D.2
Rikke H. Hagemann-Madsen, M.D.2 • Werner Hohenberger, Ph.D.4
Philip Quirke, Ph.D.1

Understanding Optimal Colonic Cancer Surgery: Comparison of Japanese D3 Resection and European Complete Mesocolic Excision With Central Vascular Ligation
Nicholas P. West, Hirotsushi Kobayashi, Keiichi Takahashi, Aristoteles Perrakis, Klaus Weber, Werner Hohenberger, Kenichi Sugihara, and Philip Quirke
Journal of Clinical Oncology
Opportunities

• Work in an excellent lab with world class researchers
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• Prizes
  – Posters / oral presentations
  – RCPPath research medals
Prizes
Media coverage

University of Leeds

honour cancer surgery research

John Roberts

A LEEDS University whose research can save the lives of those patients who have been treated by the institution.

Dr Nick West's Faculty of Health has been awarded Postgraduate Research Fellowship.

His work investigates the impact of surgical patients undergoing surgery by assessing and identifying the likely improvement in patient survival.

Dr West was able to improve survival rates by identifying the “good surgery” which involved removing more tumour around the cancer.

PhD Improving outcomes

Meet Dr Nick West

A move towards cancer surgery could increase the likelihood of patient survival.

Leeds Institute of Cancer and Pathology
Pathology and Tumour Biology
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• Travel (national, international)
Travel
Opportunities

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• Prizes
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  – RCPPath research medals

• Travel (national, international)

• Get the foundation and higher training jobs you want!
Opportunities

Leeds Institute of Cancer and Pathology
Pathology and Tumour Biology
Draw backs

• Job insecurity
  – In pathology this is no longer an issue (run-through training)

• Dependant on getting money (for OOPE, CL and CS)

• Highly competitive at ACF, OOPE, CL and CS levels

• Time management (overlap difficult to avoid)

• Have to ensure clinical progress remains satisfactory
Draw backs

- Length of training will be extended
  - Standard histopathology training = 5 years
  - Academic histopathology training
    - ST1 (1 year)
    - ACF (3 years from ST2)
    - OOPE (3 years)
    - CL (up to 4 years through to CCT)
    - TOTAL TIME = 11 years

- Money
  - There may be a short term financial disadvantage
  - Long term career earnings are likely to be equivalent or higher
Potential draw backs
You will succeed in the end!
Research is great fun!

Any of you can do this if you want to!!
Further info

- Walport report (2005)

- Academic foundation training website (http://www.foundationprogramme.nhs.uk/pages/academic-programmes)

- NIHR website (http://www.nihr.ac.uk)

- PathSoc website (http://www.pathsoc.org)

- RCPPath website (http://www.rcpath.org)