

*Session 4: How did I do it?*  
Academic Gastroenterology:  
Entering an Academic and Research Career

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~~How did I do it?~~

# Who am I and what am I doing?

- 42 yr female
- Presented with:
  - a hybrid academic clinical Consultant contract for the last 2 years

# Who am I and what am I doing?

- Academic Gastroenterologist with an Interest in IBD & Senior Lecturer

- My job plan:

Day	AM	PM
Monday	General Clinic	IBD Hot clinic
Tuesday	University	University
Wednesday	Lecturing/Virtual Clinic/SPA	Son to tap class/Rheum- Derm-IBD MDT
Thursday	Research Colons/IBD Clinic	IBD Surveillance Colons
Friday	Admin and IBD MDT	Colon/Inpatient list

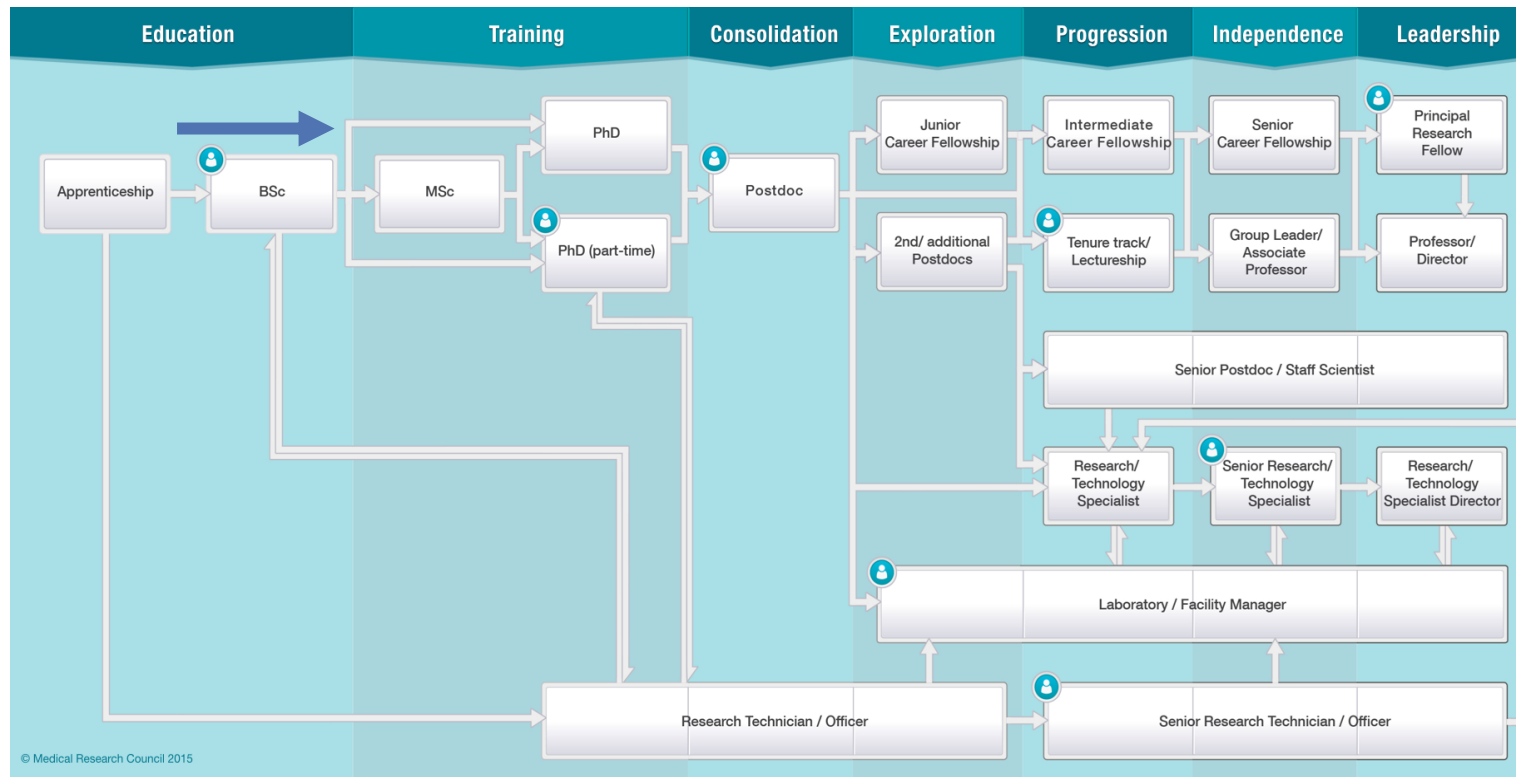
- 1:12 on call

# What else do I do?

- IBD Clinical Lead
- Member of the ENHT Research and Development Steering Group
- CI: IBD-Movement
- PI: CLARITY, IBD BioResource, SEQUENCE
- CO-I: Prospero, RISQ, COSIE
- ENHT Lead: Gut Reaction
  
- Academic Training Representative ENHT Deanery
- BSG SWIG Academic Representative
- BSG AI Task Force Deputy Lead IBD Special Interest Group

# Starting block

- BSc Hons – Medical Microbiology

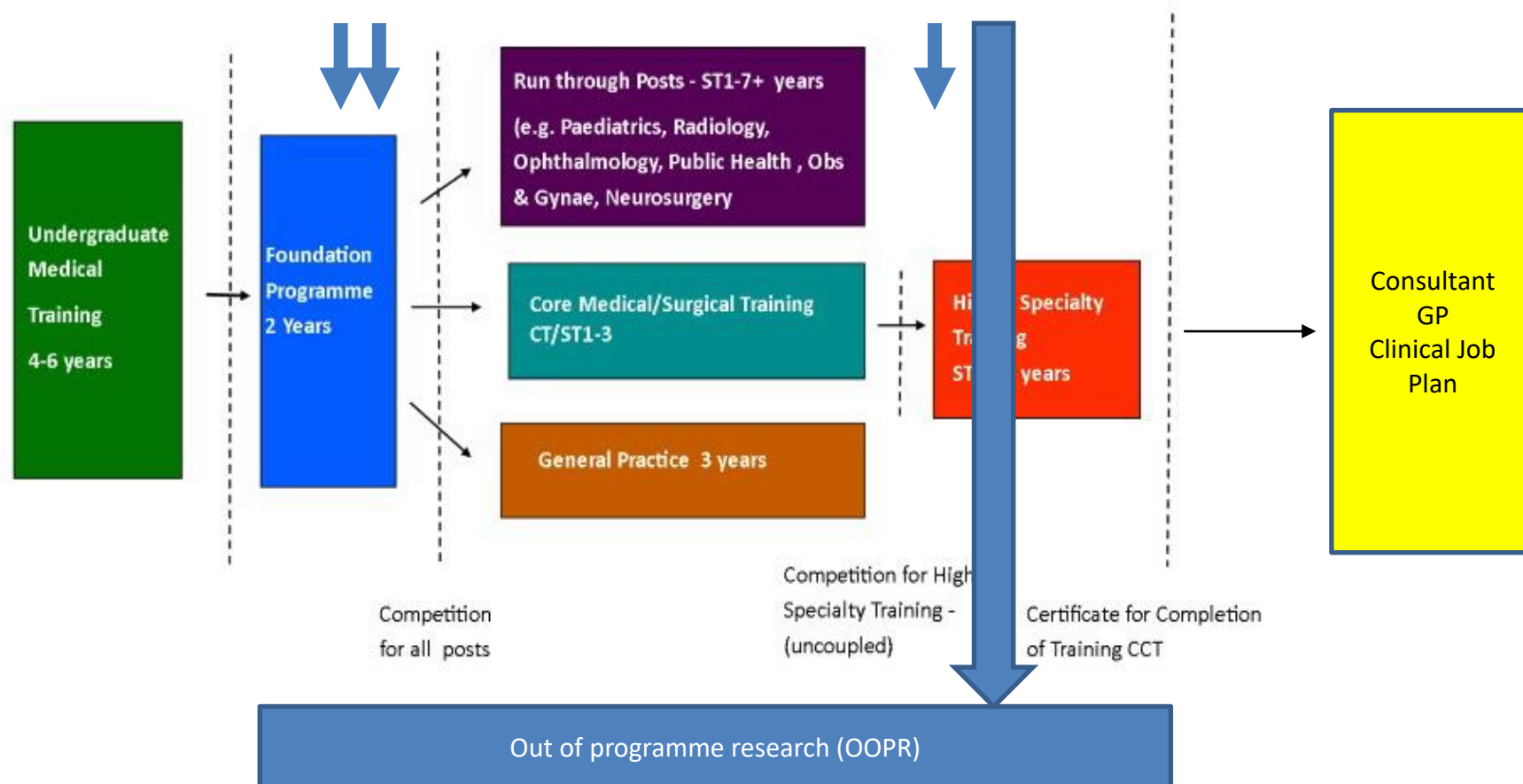


# Starting Block - again

- 1<sup>st</sup> research project FY2 – C.diff toxin production identification in monkey vero cells
- Audits.....lots of audits
- Incidental meeting in the hospital corridor with Prof Carding
- Helped a consultant out by doing the Research Institute Open Day....
- Got asked to do a recording explaining a video capsule endoscopy for the Institute...
- Lots of discussions with education supervisor re: research:
  - The Project: Role of ECM1 Single Nucleotide Polymorphisms in Ulcerative Colitis

# Clinical training programme

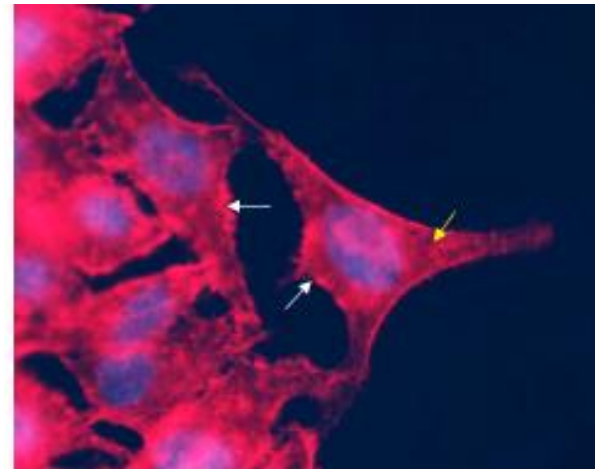
## Overview of Medical Training & Career Structure





# Next steps: skills and attributes

- Extensive meetings and lab visits and attending the UKIBD Genetics Consortium as an observer
- Applied for PhD position based on soft funding: **HIGH RISK STRATEGY**
- Massive learning curve:
  - Cell culture
  - Immunocytofluorescent staining
  - Protein pulldowns
  - Metalloproteinase assessment
  - Genetics!
  - CRISPR



# We don't talk about... failure

- So much didn't work:
  - stains that didn't work,
  - so much optimisation,
  - so many late nights in the lab....optimising, and again, and again, and again.
- June 2014 – First clear ECM1 and MMP9 staining of Caco2 cells.
  - So immensely satisfying!
  - <https://youtu.be/tfFzLtzjos>
- End of year 1: UKIBD Genetics Consortium meeting – explored Manhattan plots for ECM1 SNP for UC (and CD).
  - No signal
  - None. Absolutely Nada. Not even in Linkage Disequilibrium.
  - Flat as a pancake.
- Now what do I do?!
- I start again.



# Building blocks: the networks and collaborations

- I had a research question.....
- A new Bioinformatics Signaling specialist arrived
- August 2014 – applied for a change in tack to the Wellcome Trust
  - NEW learning curve: network biology, R, Python, Machine Learning, early AI
- Collaborations: the Sanger, Leuven IBD Group and utilising the IBD BioResource
  - integrated Single Nucleotide Polymorphism Network Platform (iSNP) was born
  - Patented workflow

# Grants/Funding

- NNUH Local Trust Research Capability funding (Yr 1 PhD)
- Wellcome Trust Clinical Training Fellowship (Years 2,3 &4 PhD)
- Norwich Research Park Translational Fund Award
- University of Hertfordshire Internal PhD Stipend funding
- ENHT Research Capability funding awards x 2 – 1 for IBD-Movement Pilot, 1 for lab equipment (Sonicator and cold centrifuge) for endoscopy samples.

# Building Blocks: additional skills

- Clinical Research:
  - As an SpR:
    - 'Associate' PI for IBD BioResource, Profile
    - SI for IASO
- Academic post: Senior LECTURER
  - HEE Fellow
  - Teaching and examining on the Physician Associate Masters
  - IMT Training Skills lab teaching

# Review, revise.....

- Negotiating a consultant's post
  - Review what is possible and plausible within the clinical department and the research structure
  - Review the strategy
    - Clinical Research
    - Basic Science Research
- Publications – for an independent academic post – Research Excellence Framework – “REF returnable”
- Future planning – start early!!

# Future plans

- Year 2 Consultants post:
  - Consolidation and expansion of Clinical Research Footprint
  - Independent Research:
    - Publication of iSNP, 3 more high impact papers this year for submission
  - Pilot Data for Grant Application
  - Internal Funding/Charitable funding
  - Collaborative Grant Application to CCUK
  - 1 PhD Student Year 2, 1 PhD Student Year 1, Clinical MD Year 1
  - Integrative Research into IBD Service
- Year 3:
  - ECR Grant applications
  - Collaborative Grant applications
- Full 5 Year plan available!

# Summary

- Take, make and bake opportunities
- Balance strategy
- Enthusiastic and pushed for what I wanted to do....
  
- Don't overcommit or overstretch yourself.
  
- It is a lifelong career – not a sprint to the finish.