British Society for immunology

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A Career in Clinical Science

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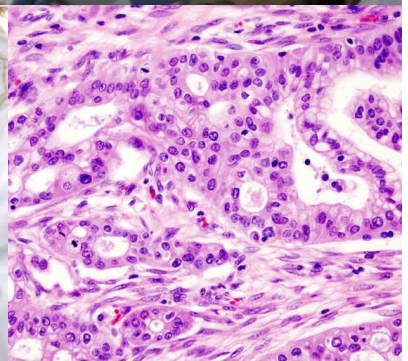

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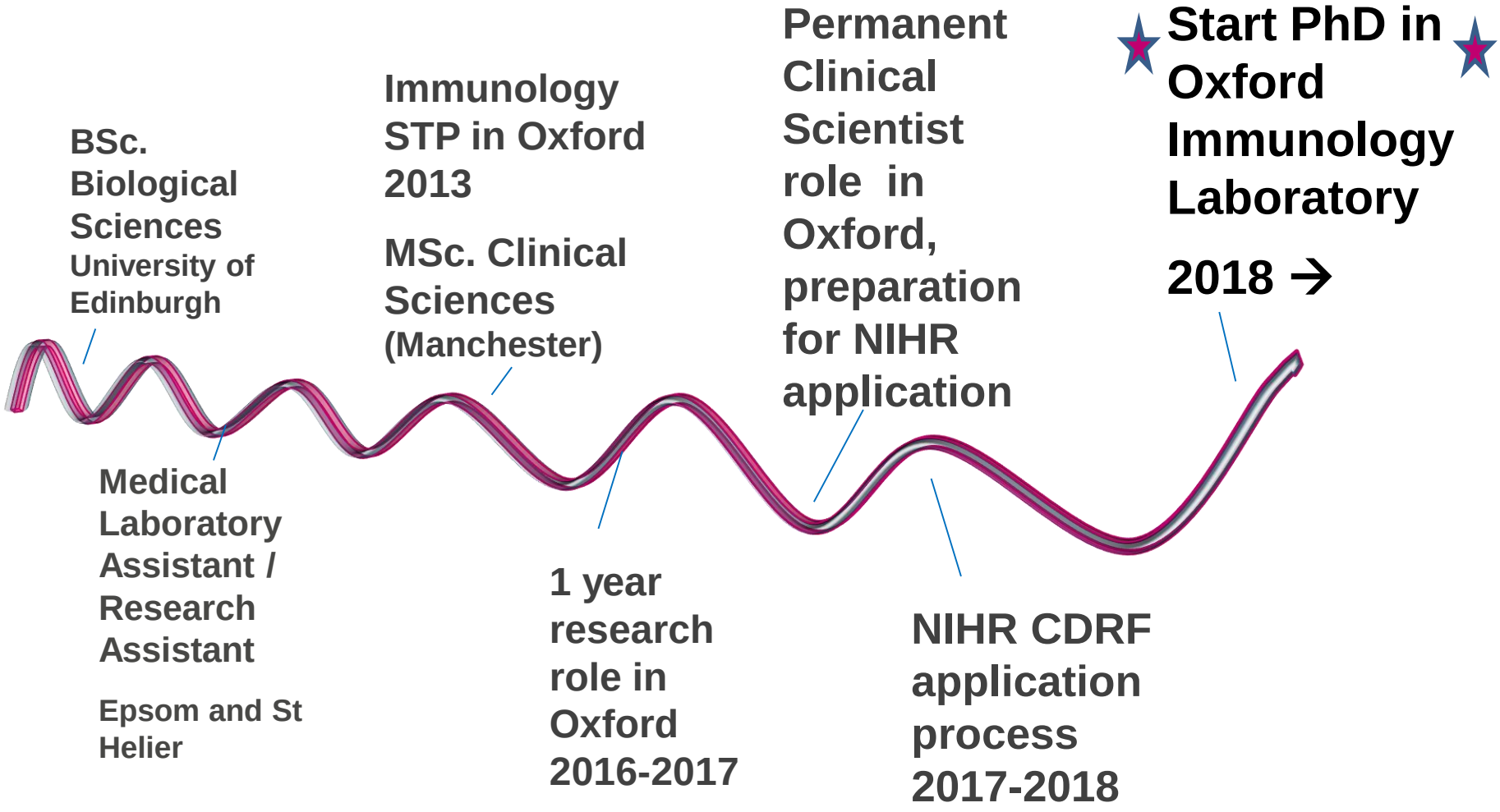
In this presentation

- A bit about me
- Healthcare Scientists
- Entry Routes
- Routes to the top
- What to expect as a healthcare scientist

My journey so far…



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Healthcare Science

- Only make up **5%** of NHS workforce but involved in **85%** of all clinical decisions.
- Doctors couldn't do their job without us
- Are developing some of the most amazing clinical and technological advancements.
- Are involved in improving clinical service and undertaking translational research.

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The Healthcare Science workforce spans 4 divisions and many specialisms

Physical Sciences and Biomedical Engineering

- Biomechanical engineering
- Clinical measurement and Development
- Clinical Pharmaceutical Science
- Diagnostic radiology and MR physics
- Equipment management and clinical engineering
- Medical electronics and instrumentation
- Medical engineering design
- Clinical photography
- Nuclear medicine
- Radiation protection and monitoring
- Radiotherapy physics
- Reconstructive Science
- Rehabilitation engineering
- Renal dialysis technology
- Ultrasound and non-ionising radiation

Physiological Sciences

- Audiology
- Autonomic neurovascular function
- Cardiac physiology
- Clinical perfusion science
- Critical care science
- Gastrointestinal physiology
- Neurophysiology
- Ophthalmic and vision science
- Respiratory physiology
- Urodynamic science
- Vascular science

Clinical Bioinformatics

including

- Physical Sciences
- Health Informatics Science
- Pathology
- Physiological Informatics

Life Sciences

- Analytical Toxicology
- Anatomical pathology
- Blood transfusion science/transplantation
- Clinical biochemistry including paediatric metabolic biochemistry
- Clinical genetics/Genetic Science
- Clinical embryology and Reproductive Science
- Clinical immunology
- Cytopathology including cervical cytology
- Electron microscopy
- External quality assurance
- Haematology
- Haemostasis and thrombosis
- Clinical Immunology
- Histocompatibility and Immunogenetics
- Histopathology
- Microbiology
- Virology
- Molecular pathology of acquired disease
- Molecular pathology of Infection
- Tissue banking

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How to get into Healthcare Science

- Apprenticeships
- Biomedical Science Route
- Scientist Training Programme

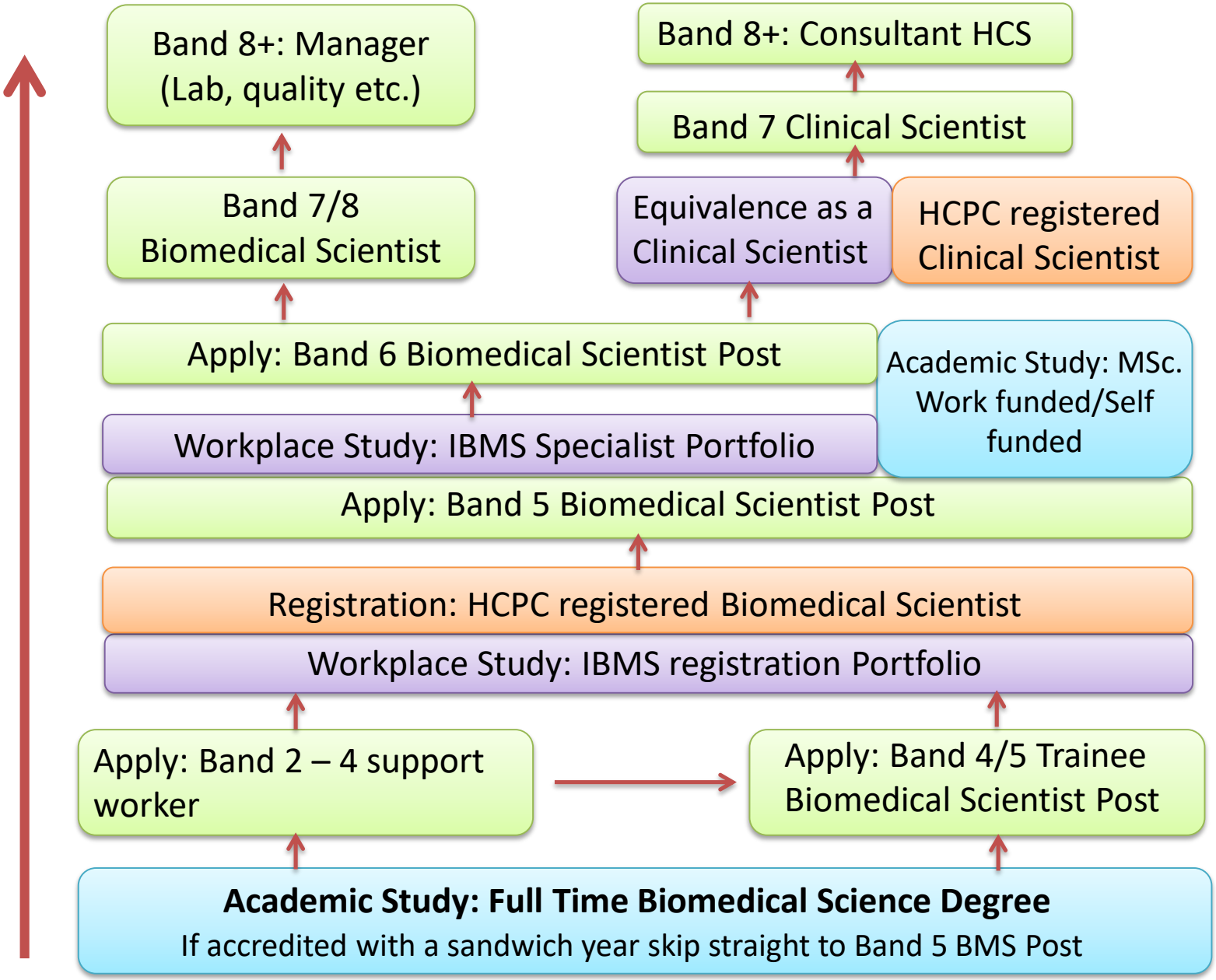
- Which route depends on degree, experience, specialty and preference

Biomedical vs Clinical Scientist

- Many more BMS posts in every specialty
- Laboratory based/hands on
- Can give out results but not any clinical advice
- Usually enter management roles

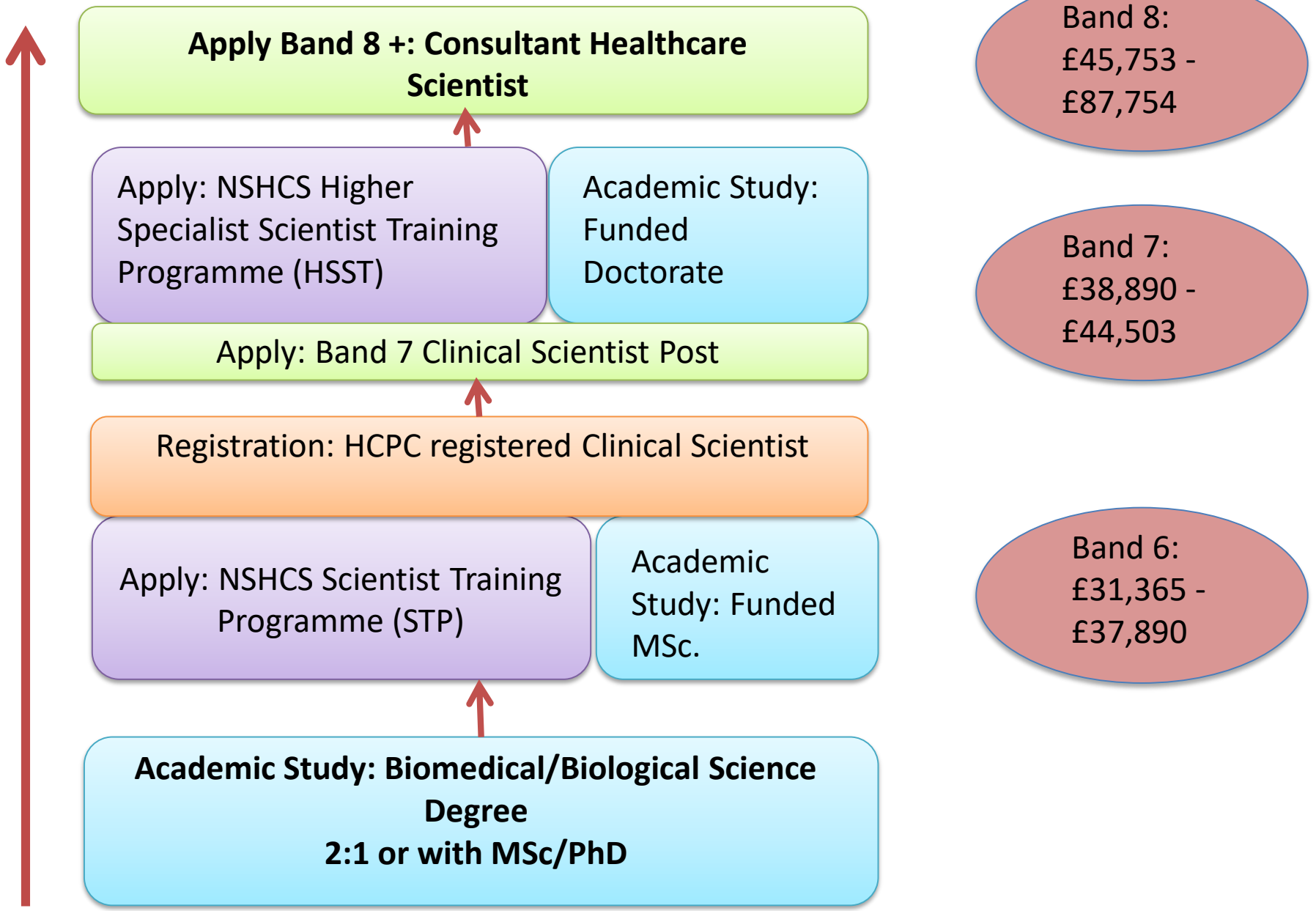
- Number of posts differs by specialty
- Go-between for clinical staff and the lab
- Can give clinical advice
- Usually enter Consultant roles

Biomedical Scientist (BMS) Route



- Band 2-4 job
  - Support worker, specimen reception, admin, telephone enquiries
  - £18,005 - £21,892
- Band 5 job
  - More responsibility, lab work, on-call, quality control
  - £24,907 - £30,615

Clinical Scientist (STP) Route



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How do you become a Clinical Scientist?

- Apply for job in January to start in September
- Online aptitude tests
- Application form – 4 questions
- Interviews during March/April (speed-dating)
- Successful candidates choose preferred location

Entry requirements: 1st or 2:1 honours or 2:2 but with a relevant Masters or PhD

Research experience is desirable but not essential

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Structure of the Scientist Training Programme

University

- Introductory Modules
- E - learning
- Specialist teaching
- Examinations
- Research project
- Final examination awarding MSc

Work base

- Induction
- Rotations
- Specialist (elective)
- Research modules

Assessment programme

- Work based e-portfolio
- Continuous assessment
  DOPs
  CBDs
  Competences
  OCEs
  Annual Review of Progression
- Objective Structured Final Assessment
- Review and confirmation of all Assessments

Completion of Training Programme

REGISTRATION

The STP…Changing Lives

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Your life

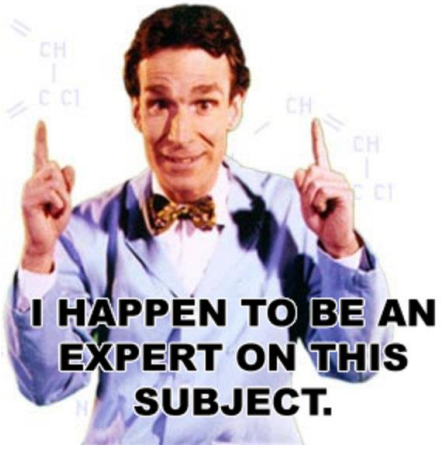
- Setting you on an exciting career path
- MSc and HCPC registration
- Be employed as a registered Clinical Scientist
- Relocation! Friends!
- Gain a bucket load of transferrable and sought after skills

Patient Lives

- Scientists change lives too!
- Life Sciences
  - Improving our understanding, diagnosis and monitoring of illnesses
  - Mainly based in hospital labs
  - At the forefront of clinical and technological advances
  - STPs highly involved in research and service improvement

The Good

- On your way to being an expert in your field.
- Challenging.
- Make a difference to patients day-to-day and long term changes in the laboratory.
- Meet lots of new friends, mentors, advisors.
- It's a real job! In the NHS!



The not so good

- Overwhelming in the beginning…and middle….and end.
- Juggling your academic commitments and clinical learning.
- Feeling out of control.
- High expectations, big test at the end.
- Leadership opportunities can be hard to find.

Who makes a good Clinical Scientist?

- High achieving graduates
- People who are passionate about science or technology
- People who want to apply their skills and knowledge for the benefit of patients and the public
- People who seek constant improvement and innovation

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What skills will I need?

- Attention to detail
- Problem solving
- Ability to multitask
- Communication
- Enquiring mind
- Leadership and team member skills
- Patient focused

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What does the future hold?

- You will be a registered clinical or biomedical scientist
  - Clinical Scientist/Consultant
  - Junior/Senior Biomedical Scientist
  - HSST/FRCPath
  - Research
  - Teaching
  - Science Communication
  - Industry
- We are sought after individuals!

My plan: PhD → HSST → Consultant Clinical Scientist → **Clinical Academic Leader**

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Training to become a Consultant Healthcare Scientist.

- HSST (Higher Specialist Scientist Training)
  - 5 year doctoral level programme
  - Advertised posts or nominated by employer
  - Master clinical knowledge
  - Leadership and management training
  - Research skills
  - CHANGE AGENTS
  - Further Exams!!!

Not only in the NHS

- Armed forces
- Higher Education
- Medical Research Council
- National Blood Service
- Pharmaceutical/Biotech companies
- Health Protection Agency

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What to expect as a healthcare scientist

- We do carry out similar tasks everyday – that is the point!
- But the patients are different, problems are different, the doctors are different.
- Always involved in research – new tests and technology, working with industry, data collection
- You will never stop learning

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What to expect as a healthcare scientist

- NHS is a great community
- But can feel thankless on the hard days
- You have to be very patient focused
- The hard work never stops but everyday is a great challenge
- I love the options available to me and how I can choose my own path within the healthcare science career

Where to find more information

- NSHCS www.nshcs.hee.nhs.uk
- Health careers www.healthcareers.nhs.uk
- IBMS www.ibms.org
- HCPC www.hcpc-uk.org
- NIHR (for clinical academic careers) www.nihr.ac.uk
- British Society for Immunology www.immunology.org