

Introduction to STP (Clinical Science) Clinical Pharmaceutical Sciences

Manchester Pharmacy School

- 9 Professors
- 18 Lecturers/Senior Lecturers/Reader
- 29 Post doc researchers
- 7 Teaching Fellows/Senior Teaching Fellows
- 'Visiting' teaching staff
- 25 Technical & Administrative support staff
- 180 UG (M Pharm) students per annum
- 88 PhD students
- 100 CPPE team members

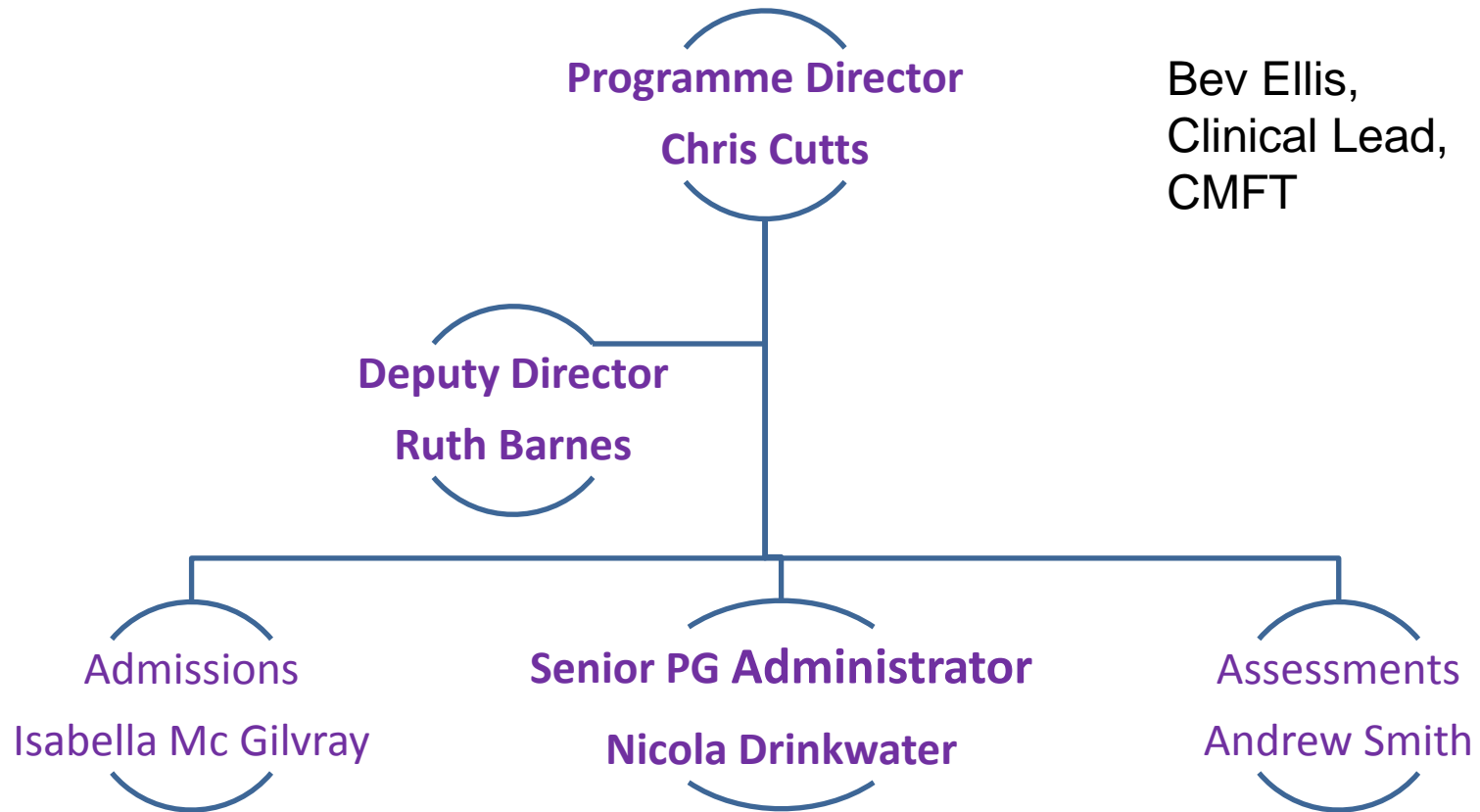
We also run 8 different Postgraduate Taught courses leading to a Masters Qualification:

**MSc Clinical Science
(Clinical Pharmaceutical Science)
&
MSc in
Pharmaceutical Technology and
Quality Assurance**

Outcomes of the PTQA/CPS

- NHS service led curriculum
- Patients and service
- Safety and quality
- Career development
- Future workforce: Developments, capacity and planning

MSc in PTQA/CPS : Administrative Team

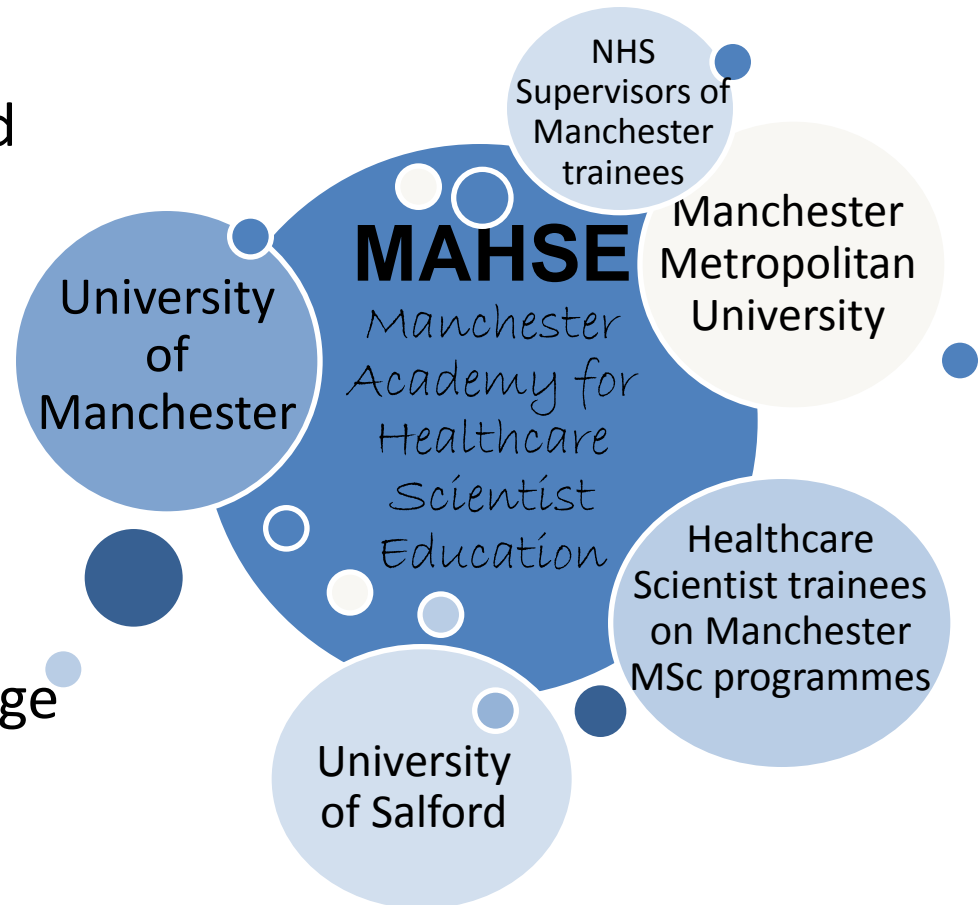


Nicola.Drinkwater@manchester.ac.uk

Tel: +44 (0) 161 306 0597

MAHSE

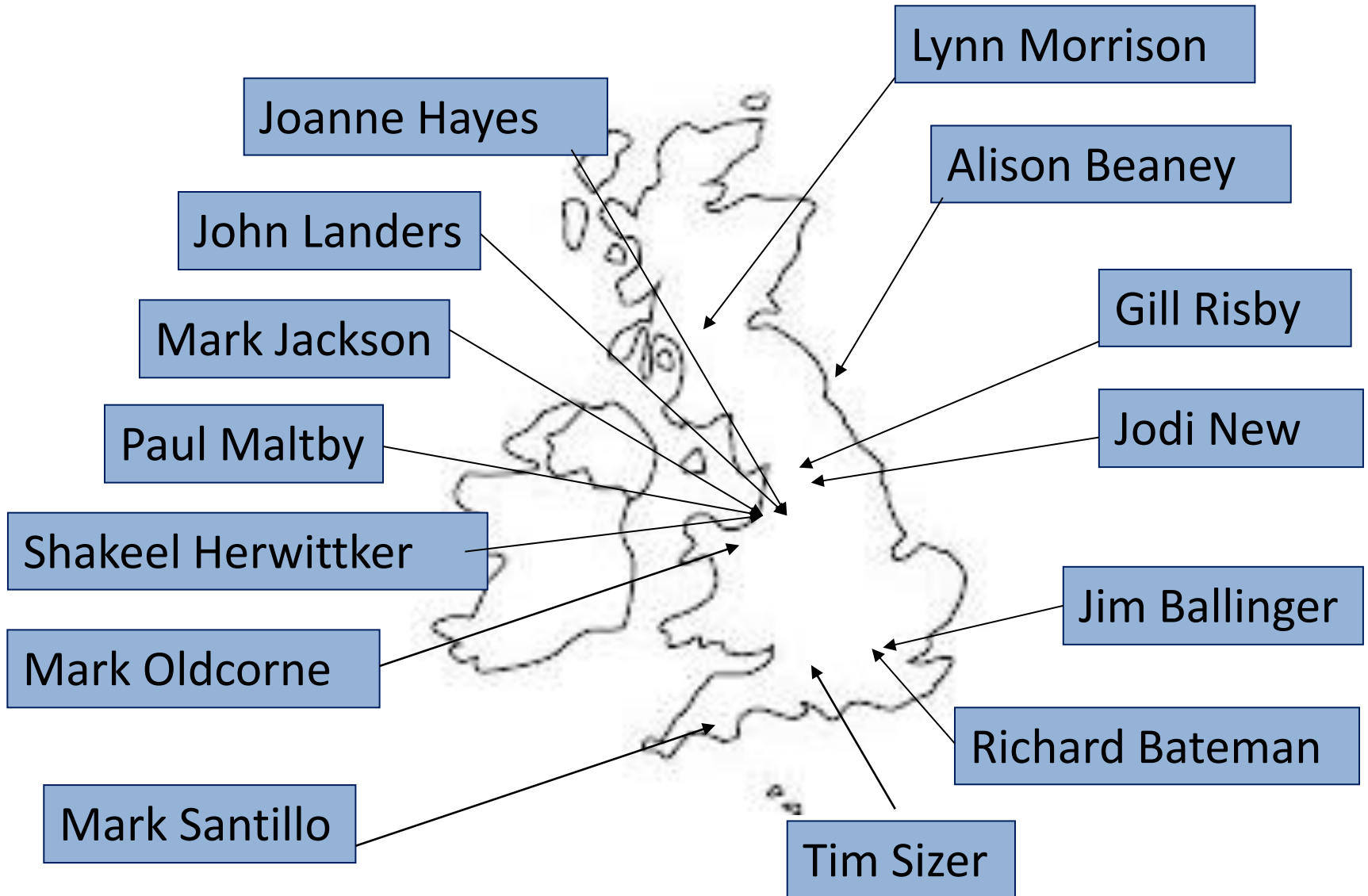
- Partnership between HEIs and NHS
- Encourages innovation and sharing of good practice
- Support and develop PTP/STP programmes delivered in Manchester
- Interprofessional teaching and learning
- Other HEIs e.g. Kings College London (Radiopharmacy), Liverpool, Leeds



Strong links with NHS Trusts

- Stockport NHS Foundation Trust (CPS & MPharm)
 - Classical Manufacturing
 - Aseptic services
 - QA/QC services
- Calderdale and Huddersfield NHS Foundation Trust
 - Classical Manufacturing
- Central Manchester NHS Foundation Trust
 - Radiopharmacy

Examples of collaboration with the NHS on teaching



Patient / Service User Engagement

- Programme issues
 - Limited patient facing opportunities
 - Significant contribution such as drug safety, quality of medicines, chemotherapy, neonatal CIVAS, etc
- Examples of involvement
 - Use pathways in teaching
 - Explain role to a lay group
 - Discussion forums
 - Patient talks about experiences



Clinical Pharmaceutical Science

Professional
Practice

[15 credits]

Regulation &
QA

[15 credits]

Radiopharmacy
(1)

[10 credits]

Aseptics (1)

[10 credits]

Manufacturing

[10 credits]

Research
methods

[15 credits]

Production

[15 credits]

QA & QC

[15 credits]

Research
project (1)

[15 credits]

Aseptics (2)

[15 credits]

Radiopharmacy
(2)

[15 credits]

Research
project (2)

[30 credits]

Chancellors Conference Centre



Chancellors Conference Centre



What covered:

- Hotel room, breakfast, lunch, dinner and refreshments during the study days

What's not covered:

- Additional meals, any other drinks outside study times (ie with dinner), phone calls, partners staying, transport/travel

Our ethos and culture



WELCOME!

Clinical Pharmaceutical Science

Specialities

What does each speciality do?



Radiopharmacy

Overview of Radiopharmacy activities

Radiopharmacy

- **Manufacture and supply of radio-medicinal products to nuclear medicine**
 - Majority ^{99m}Tc products
 - Variety of dosage forms – majority administered intravenously
 - Sterile and free from pyrogens
- **Quality Assurance**
 - Compliance with regulations – very regulated speciality
 - Quality Control of products
- **Clinical pharmaceutical care**
 - Nuclear medicine – work as part of a multidisciplinary team
 - Provide clinical pharmaceutical service to nuclear medicine eg. Advise on medication interactions, medicines to enhance diagnostic studies
- **Research, Development and Audit**
 - Basic scientific research
 - Clinical trials of radiopharmaceuticals
- **Education and Training**
 - Multidisciplinary – provide training to medical doctors, physicists, radiographers, pharmacists

Production

Overview of Pharmaceutical Production activities

Production

- Non-sterile batch manufacture

- Oral solutions and suspensions
- Topical solutions
- Creams and ointments
- Suppositories

- Sterile batch manufacture

- Ampoules
- Infusion bags
- Vials
- Intermediates

- Starting material supplier approval

- Tracing supply chain and approval of all parties
- Testing based on supply chain pedigree

- Distribution

- Sale and dispatch of products and associated record keeping

- Extemporaneous preparation

- Individual patient

- Research and Development

- New products
- Stability assessment and shelf life allocation

Aseptics

Overview of Aseptic Preparation activities

Aseptics

- Farwell
 - Contaminated TPN
- NPSA 20
 - Risks of ward-based preparation
- Batches or individual doses
 - Licensed
 - S10
- Product types
 - Chemotherapy
 - CIVAS
 - TPN
- Clinical trials

QA & QC

Overview of QA & QC activities

QA & QC

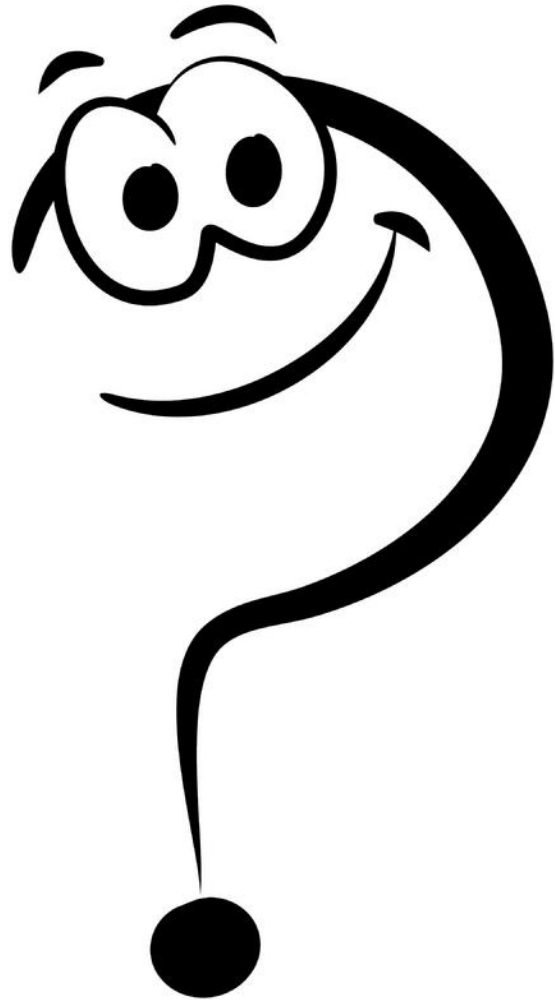
•QA

- Batch release for classical manufacturing units
- Support manufacturing units on all aspects of QA, GMP etc
- Document approval (SOPs, BMRs, product labels etc)
- Raw material supplier approval
- Audit
- Advice

•QC

- Chemistry, Microbiology, R&D
- Raw material testing
- In-process testing
- Product testing
- R&D (new products, method development etc)
- Test validation
- Stability trials

Radiopharmacy



Questions