

# The Birmingham Institute of Translational Medicine

Professor Charles Craddock

# Challenges in delivering on a translational medicine agenda

- After decades of investment in basic research it is now apparent that there is a global deficit in translational infrastructure
- As a result patients are failing to access novel therapies in a timely fashion
- Pharmaceutical and biotechnology companies identify the inefficiency of new drug development as the major problem in drug development
- **Government and NHS have identified Life Science as a key priority**, so that the UK becomes the global hub for life sciences; the location of choice for investment; and life science is a key contributor to economic growth
- **Birmingham is one of the few global cities** with all the attributes required

# Requirements for an internationally competitive Translational Medicine programme Birmingham's strengths

- ✓ High quality clinical teams
- ✓ World class clinical infrastructure
- ✓ One of the largest catchment regions in Europe
- ✓ Strong, translationally focused basic science programme
- ✓ High quality genomics and stratified medicine programme integrated with robust informatics programme
- ✗ Infrastructure optimising clinical trial recruitment



CENTRE FOR CLINICAL HAEMATOLOGY  
TRANSLATING RESEARCH INTO CLINICAL EXCELLENCE

MORRIS HOUSE

A microscopic image of cells, likely from a blood smear, showing various types of white blood cells and red blood cells. The image is overlaid with a semi-transparent purple box containing text.

## **Translational research in clinical haematology**

Delivering early phase clinical trials to ensure new therapies are safe and work well has traditionally been challenging for many countries – and this means delays to patients getting access to potentially lifesaving new therapies.

One project to address this in the UK is a newly built facility for translational research to help patients with leukaemia and other haematological malignancies. The project was Government funded and developed in close collaboration with the Institute of Cancer Studies at Birmingham University. The new Centre for Clinical Haematology has recruited over 400 patients to take part in clinical trials so far, and has leveraged over £15million of free drugs that were not available on the NHS.



# Geoff Thomas



# TAP

From Leukaemia &  
Lymphoma Research

# Trials Acceleration Programme (TAP)

- Core funding for:
  - Central Coordination Hub to manage TAP trials
  - A funded network of early phase leukaemia centres
- Serving metropolitan areas within the UK-covering catchment area of 15 million
- Dedicated research nurses and data managers

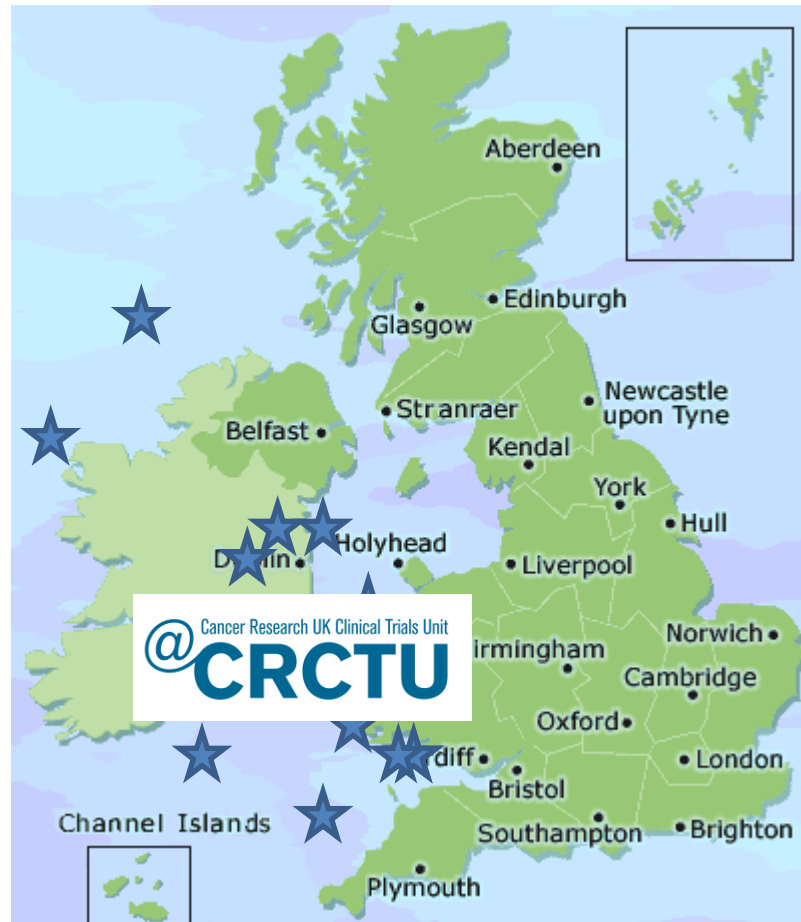
## Aims:

- To open four or five new phase I/II haematology trials each year
- To try and open trials within 6 months of award letter
- To complete, analyse and publish the results of each trial no more than two years after recruitment of the first patient



# Network - Selected Centres

- Southampton General
- St Bart's London
- The Christie, Manchester
- King's College London
- St James', Leeds
- Queen Elizabeth, Birmingham
- Hammersmith, London
- Belfast City Hospital
- Gartnavel General, Glasgow
- Royal Liverpool Hospital
- Churchill Hospital, Oxford
- Cardiff University Hospital
- Nottingham University Hospital



# TAP

From Leukaemia &  
Lymphoma Research



# Progress to Date



- Since Jan 2011
- 13 applications
- 11 accepted
- 3 trials open
- 7 studies to open by December 2013
  
- MAJIC - opened within 10 months of award letter
  - 1<sup>st</sup> patient recruited in 10 months of award letter
  - 29 centres opened within 1<sup>st</sup> year
  - 100 patients randomised within 1<sup>st</sup> year
- RAvVA – opened within 11 months of award

**TAP**

From Leukaemia &  
Lymphoma Research

# A GOLD FOR THE UK!



With this FPFV, UK has now achieved the **first Ruxolitinib IIT patient in the world**, beating Germany in the process.

This is a first for the UK Oncology BU

# Strategy for UK Life Sciences One Year On

 HM Government

Industrial Strategy: government and industry in partnership



Strategy for UK Life Sciences

One Year On

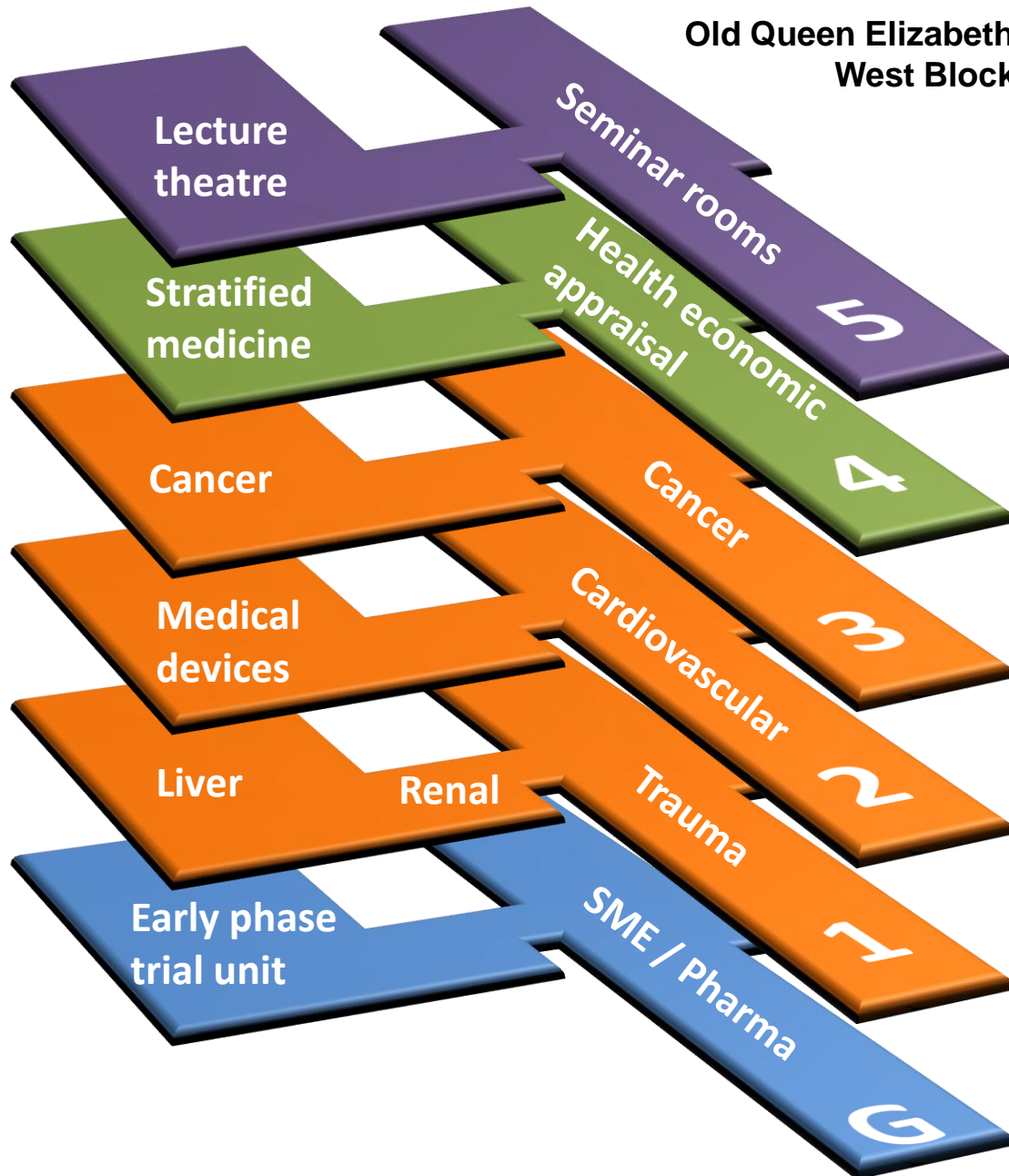
**The Trials Acceleration Programme (TAP)** by Leukaemia & Lymphoma Research is designed to give haematological oncology patients accelerated and wider access to early stage trials. Working within the existing NIHR Cancer Research Network, TAP's dedicated centralised management at the University of Birmingham minimises the 'red tape' to establish trials and deliver accelerated results via disseminated patient recruitment across 13 UK centres. Early results from Novartis Pharmaceuticals UK Ltd show a 50% reduction in set-up time and significant reduction in costs per patient. In its first year of operation TAP has ratified nine new trials that would not otherwise have taken place in the UK including collaborations with eight pharmaceutical companies.

# The Birmingham Institute of Translational Medicine

- £24 million ITM announced by Central Government as part of £1 billion City Deal and in recognition of Birmingham's unique strategic strengths in the Life Sciences
- Will fund a six story building which co-locates all the key components of an effective translational infrastructure
- 17 clinic rooms dedicated and integrated early drug development trials programme in malignant and non-malignant disease
- 3 floors with dedicated office space for key clinical academic specialities
- 1 floor housing a dedicated Cancer Unit, containing office space for cancer specialties and a link to the Birmingham Cancer Trials Unit
- 1 floor dedicated to stratified medicine in oncology and non-malignant disease and health economic appraisal unit
- Commercial business hub for SMEs/pharma/biotech

# Institute for Translational Medicine

Old Queen Elizabeth Hospital,  
West Block



**5** Educational & Stratified Medicine

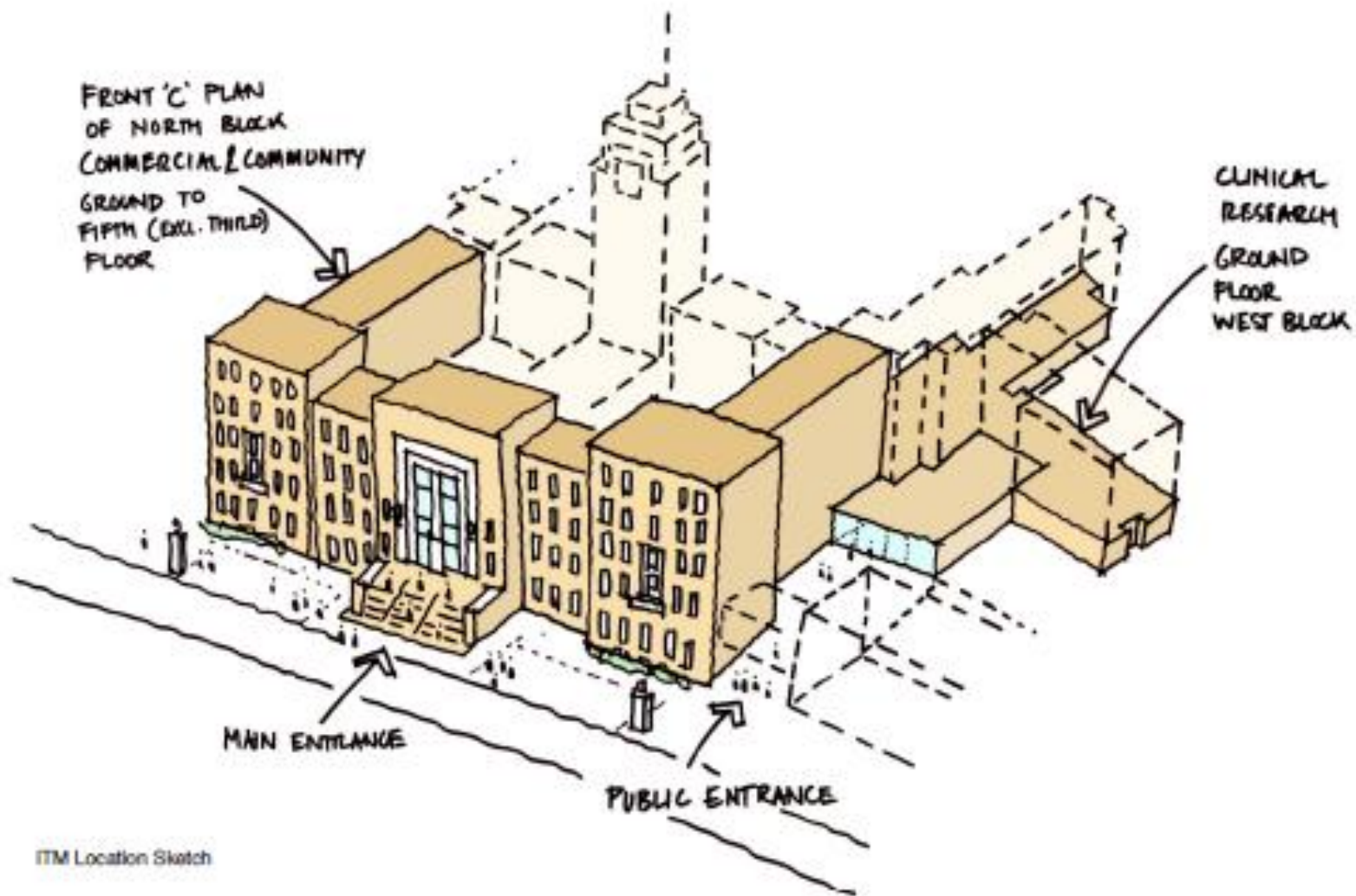
**4** Health Economic Appraisals & Informatics

**3** Clinical Academic Groups

**2** Clinical Academic Groups, Medical Devices Cardiovascular

**1** Clinical Academic Groups  
•Liver  
•Renal  
•Trauma

**G** Clinical trials & early phase trials team & Commercial hub  
•Industry  
•IP  
•Knowledge & Tech transfer  
•MediLink



ITM Location Sketch

# Strategy for UK Life Sciences One Year On

 HM Government

Industrial Strategy: government and industry in partnership



Strategy for UK Life Sciences

One Year On

The **new £24m Birmingham Institute of Translational Medicine**, funded in part through the **Greater Birmingham and Solihull City Deal** will rapidly accelerate the development of new therapies, providing capacity for high quality clinical trial design and delivery, and bringing together clinicians, academics, small and medium-sized enterprises (SMEs) and large pharmaceutical firms under one roof.

# Conclusions

- Working together UoB, UHB and the City Council have unique national and international strategic advantages in translational medicine.
- The last decade has demonstrated the academic and economic benefits of investment in translational programmes
- The ITM will allow Birmingham to become a global player in translational medicine
- We must now act with urgency, scale and ambition if we are to maximise the clinical, academic and economic dividends of the ITM