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## **Essentials for Innovation** 30<sup>th</sup> January 2024



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## Welcome and Introductions

#### Dr Colette Inkson

Innovation and Partnerships Manager at the NIHR Manchester Biomedical Research Centre



## What is the Innovator Training Scheme?

Innovator Training () Scheme ()

**#MCRinnovator** 

In 2021 the NIHR Biomedical Research Centre in collaboration with Translation Manchester delivered a pilot series of webinars entitled The Innovator Training Scheme

 These webinars were designed to nurture participants on their journey to creating innovative partnerships, new opportunities for collaboration, and a culture of pioneering translational research

#### 2024

Evolution of the Innovator Training Scheme into interactive e-learning training materials via the Lifelong Learning Platform





## **Our Speakers**















## 35

#### **Professor Ian Bruce**

Director of the NIHR Manchester Biomedical Research Centre Professor of Rheumatology at The University of Manchester

**Dr Alessandro Faroni** Translational Research Manager at The University of Manchester

**Chris Hepworth** Business Engagement Manager at The University of Manchester

**Dr Duncan Henderson** Head of Innovation Discovery at The Innovation Factory

**Dr Katherine Boylan** Director of Innovation at Manchester University NHS Foundation Trust

**Dr Richard Unwin** Senior Lecturer in Mass Spectrometry and Proteomics at The University of Manchester

#### **Chaired by Dr Colette Inkson & Professor Rick Body** Innovation and Partnerships Manager & Innovation and Partnerships Lead NIHR Manchester Biomedical Research Centre

## Agenda

Time	Session	Presenter
09:30–10:00	Registration and Refreshments	
10:00–10:05	Welcome	Dr Colette Inkson NIHR Manchester Biomedical Research Centre
10:05–10:20	Opening Address from Professor Ian Bruce	Professor Ian Bruce NIHR Manchester Biomedical Research Centre & University of Manchester
10:20–10:35	Translational Research Support at The University of Manchester	Dr Alessandro Faroni Translation Manchester at The University of Manchester
10:35–10:50	Bridging the Gap Between Academia and Industry: How We Can Work Together	Chris Hepworth Business Engagement Team at The University of Manchester
10:50–11:05	Why You Should Think of Commercialisation – and How to Go About It	Dr Duncan Henderson The Innovation Factory at The University of Manchester
11:05–11:25	Comfort Break	
11:25–11:40	Industry, Innovation and Impact in the NHS	Dr Katherine Boylan Manchester University NHS Foundation Trust
11:40–11:55	Complement Therapeutics: Spinning out of Academia	Dr Richard Unwin The University of Manchester
11:55–12:00	The Innovator Training Scheme Next Steps	Dr Colette Inkson NIHR Manchester Biomedical Research Centre
12:00–12:20	Q&A Session followed by Closing Remarks	Professor Rick Body NIHR Manchester Biomedical Research Centre & University of Manchester
12:20	Close and Networking Lunch	

## Housekeeping



**Toilets** Located in foyer



If **fire alarm** sounds leave via nearest exit



Please switch all devices to **silent mode** 



**Networking lunch** will be provided after the event



Please **submit questions** via the QR codes



Follow-up material will be circulated after the event

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## **Essentials for Innovation**

Professor Ian N Bruce Director NIHR Manchester Biomedical Research Centre



## **Manchester: Home of Innovation**



First Industrial City





First Computer



## **Manchester: Birthplace of Our NHS**



## **Our NHS: Enabling Innovations in Healthcare**



#### **Innovating Across the First Devolved Health and Social Care System**



## **Manchester Biomedical Research Centre**

#### **Personalised Health & Care for all**



#### **Grand Challenges**

Addressing our region's burden of ill-health, Manchester BRC's core infrastructure supports scientific programmes designed to tackle three grand challenges:

Basic mechanisms of disease Prevention & early detection **Person-centred** therapies, interventions & care pathways



## **Health Innovation Manchester: Pipeline Method**



- We could do lots of things
- We have limited resources (people, skills, money, tools)

- We need to choose how best to use our resources to deliver the greatest benefit to the public to 'do the right thing'
- We need to ensure we deliver what we say 'do things right'

## **Commercial Partnerships for Clinical Impact**





## **Collaborative Research Facilities**



The Paterson Building

CityLabs Developments – Oxford Road Campus

Proton Beam Therapy Centre





## **Collaborations for the Benefit of Our Patients**

genedrive

Profs Bill Newman & John McDermott

- Co-development of pharmacogenetic based point-of-care diagnostics
- PALOH Study development of PoC test to identify the genetic predisposition attributable to irreversible hearing loss in babies – NICE recommendation received Feb 2023
- DEVOTE programme development of PoC test for CYP2C19 genotype to guide stroke therapy

**Orchard** therapeutics

**Prof Simon Jones** 

Funding a successful first in human gene therapy trial for MPSIIIA

From this collaboration MFT has now been selected to be the **only UK centre delivering gene therapy** for the approved Orchard product **for metachromatic leukodystrophy** (libmeldy) Profs Angela Simpson, Stephen Fowler &

MEDICAL

**Clare Murray** 

Breath Biopsy<sup>®</sup> platform to identify breath-based biomarkers to guide asthma diagnosis and treatment (RADicA study)

#### **Prof Phil Crosbie**

The RADicA work led to further collaboration on a **Phase 1b study of breath based biomarkers in lung cancer** 

## **Collaborations for the Benefit of Our Patients**

Targeted Lung Health Check Programme

Low dose CT scan

#### Spirometry

NHS long term plan for 1.5M people to be invited for a LHC by 2024/25

30-35% COPD prevalence identified

AstraZeneca

trial & you



*"I consent to my details being held and to being contacted about available trials"* 



Current and future therapeutic and experimental trials



Health and Wellbeing resources

Highlight future and local research opportunities



**Profs Jacky Smith, Caroline Dive & Phil Crosbie** 

## **Innovation: An Alternative Career Path?**



### **Supportive Infrastructure Across Translational Research**



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#### **CONTACT US**



www.translation.manchester.ac.uk



translation@manchester.ac.uk



@Translation\_Mcr

Translational Research support at the University of Manchester 30<sup>th</sup> January 2024

> Dr Alessandro Faroni Translational Research Manager



The University of Manchester





## Supporting Academics to translate their research

## ...but what is Translational Research?

COMMERCIAL

#### TRANSLATIONAL RESEARCH



Aa

noun:

the process of applying ideas, insights, and discoveries generated through basic scientific inquiry to the treatment or prevention of human disease

'systematic effort to convert basic research knowledge into practical applications to enhance human health and well-being'

'applying knowledge from basic biology and clinical trials to techniques and tools that address critical medical needs'

'research process that investigates and translates nonclinical research results into clinical applications'

'involves moving knowledge and discovery gained from the basic sciences to its application in clinical and community settings'



**NON-COMMERCIAL** 

## Translational Pathway





The <u>translational pathway</u> illustrates the journey from research to implementation. The journey isn't always linear and can move forwards and backwards along the pathway.

Where is your research currently at on the translational pathway?



What hurdles or bottlenecks are preventing your progression along the continuum?



## **Translation** Manchester



noun: a group or system of interconnected people or things









## Who are Translation Manchester?

- In 2018 the University of Manchester was awarded <u>a Wellcome Trust</u> <u>Translational Partnership</u> <u>Award</u> (TPA, **£1.2m**).
- In 2021, TPA was renewed for a further 3 years (£2.4m).
- The TPA provides funding and training to support the progression of academic health related research into real world benefit for patients and society.
- The TPA award is delivered through Translation Manchester.





#### Who?

## Translational Manchester Team





#### **Dr Alessandro Faroni** Translational Research Manager

- Post doc, Division of Cell Matrix Biology & Regenerative Medicine, 2012-2020
- Neuroscience, regenerative medicine, POLYNERVE clinical trial

#### **Dr Elli Marinopoulou** Translational Research Manager

cancer.



- Post doc, Division of Developmental Biology and Medicine, 2014-2023
- Sir Henry Wellcome Postdoctoral Fellow, 2016-2022. Neural Development, brain cancer, breast

#### **Dr Lijing Lin** Translational Research Bioinformatician

- Post doc, School of Health Sciences (2014-2021), Statistics, Machine Learning
- Post doc, Department of Mathematics (2011-2014), Scientific Computing



#### Sally Flint

#### Translational Research Support Officer

 Project Assistant (2022-2024), Division of Musculoskeletal and Dermatological Sciences, Immune-Mediated Inflammatory Disease (IMID) team







## **Translation**Manchester Tackling Translational Bottlenecks

Direct resear

#### Develop pathways



How?



#### Training and events

#### **Translational Funding**



## Translation Manchester ▶ Research Network

>70 p

Dow http Avai

Download the booklet https://bit.ly/3dEBTEs Available in the useful links box



	Research and Technology Transfer Support
artners	Industry
	Research Facilities
	Networks
	Biobanks Biobanks
	Clinical Trials Support
	NHS

Supporting Translational Research D1 D2 D3 D4 T1 T2 T3 T4

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Focus Groups Ongoing

## TranslationManchesterResearch Connections Tool

A 'Dating App' Concept for Research Connections

#### **REGISTER AND START TESTING TODAY**

#### https://rescon.manchester.ac.uk



## **Translation Manchester**



Direct research support



#### Develop pathways





**Establish connections** 



#### Training and events



Identify and overcome translational hurdles



#### **Translational Funding**



TranslationManchesterResearch Skills Training





Building on success of the first Innovator Training Scheme we are developing a Translational Research Skills Training Portal together with BRC colleagues and the SLD / e-learning team.

This features video content, interactive content, quizzes and additional resources.

#### Visit:

http://manchester.ac.uk/lifelonglearning

ENROLL TO JOIN TESTING

Create an account and search for "Translational" to enroll in a test

cohort with selected Units. More added throughout 2024.



Translational Research Skills Training NOW LIVE!\*
\*approval needed after enrolment



#### Available now Coming soon



TranslationManchester
 Bioinformatics Expertise



### ManchesterBCF



Seeking Bioinformatics Solutions? Join Our Bioinformatics Drop-in Sessions

#### Meet the bioinformaticians

A collaboration between **Bioinformatics Core Facility** (BCF, led by Leo Zeef) and **Translation Manchester** 

#### • **Diverse Expertise** Whether you're stuck with code, data analysis

strategies, or result interpretation, our knowledgeable experts are here to help. We can also guide you in starting your programming journey.

## **Michael Smith Building, B1083 Thursday 3-4pm, bi-weekly** Next drop-in: 8 Feb, 2024



## It is your chance to access the expertise across BCF and our bioinformatician and discuss your bioinformatics queries with experts.
### Innovation labs 2022: Digital Health and AI

### **Innovation labs 2023: Diagnostics in Healthcare**

Innovation labs 2024: Drug Discovery and Advanced Therapeutics



# **Translation** starts at the **Discovery** Stages How to be Proactive

- 1. Engage with scientist and clinicians
- 2. Explore patient and public engagement
- 3. Build your team, collaborate and expand your network
- 4. Protect the intellectual property
- 5. Weigh up the competition and the market
- 6. Consider the health economics
- 7. Reach out to funders
- 8. Find out about the regulatory bodies and their requirements





# Do you want to know more?











Linkedin

Twitter

Youtube

Newsletter

### visit www.translation.manchester.ac.uk

Sign up to our newsletter and follow our social media channels to receive more details



# Translation Manchester <

### **CONTACT US**



www.translation.manchester.ac.uk



translation@manchester.ac.uk



@Translation\_Mcr

Visit our website to subscribe to our **newsletter** and **YouTube channel**, and to find out more about how we can help you progress your translational research

# **THANK YOU**









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# Bridging the gap between Academia and Industry: how we can work together

**Chris Hepworth** Business Engagement Manager, FBMH The University of Manchester

# PARTNER COLLABORATE INNOVATE

Manchester.

A city of firsts. A city with a history of being at the forefront of technical and scientific innovation, coupled with social progress and ambition to shape the future. Why The University of Manchester?







## **Oxford Road Corridor: A top 5 European Innovation District**

#### LARGEST CLINICAL £3.6BN GVA | £5.6BN BY 2025 74,000 ACADEMIC CAMPUS 20% Of Manchester's GVA STUDENTS

IN EUROPE



6,500 CLINICIANS

Devolved health and care system

Home to UK's only IoT city demonstrator project -



**Research participants across** 635 research studies 2016-18



of life sciences businesses

13.000

JOBS In hospitals, medical and dental practices

42.000

RESIDENTS

in Manchester

1.100 APPRENTICESHIPS WITH 220 EMPLOYER

has successfully delivered over

PARTNERS

MMU degree apprenticeship programme

8.800 BUSINESSES

79,000 WORKERS 104,000 FTE jobs by 2025

of all apprenticeship placements in Manchester



## Why we do it







Enhances the University and company's profile, reputation and research exposure



### Impact of Business Engagement on Career Development

The University of Manchester

chester		<ul> <li>Funding for new staff or equipment</li> <li>PDRA/PhD involvement</li> <li>Publications</li> <li>Important partner to the company</li> <li>Access to market- relevant information</li> <li>4 in</li> <li>2 Year Project, Ba</li> </ul>	<ul> <li>to the company</li> <li>Excellent REF Impact case study</li> <li>Funds for staff/equipment</li> <li>Potential for exploitation of IP</li> </ul>	<ul> <li>Enhanced income</li> <li>Delivering real impact to health sciences, NHS, &amp;</li> </ul>
<ul> <li>New working relationship with Company</li> <li>Low cost, short initial projects</li> <li>Increased personal or</li> </ul>	<ul> <li>Increased research funds</li> <li>Future academics being trained in your group</li> <li>Travel to conferences</li> <li>Collaboration with Industrial</li> </ul>			<ul> <li>society</li> <li>Running a business</li> <li>Generating jobs/wealth</li> <li>Funding further research</li> <li>Option to licence IP</li> </ul>
<ul> <li>research funds</li> <li>Involvement in new product development</li> <li>Enhanced</li> </ul>	ment in oduct ment ment ed ment ed ment ment ment ment ment in ment in in ment in ment in ment in in ment in ment in ment in ment in i		4 Year Project, including PhD Project - Background IP	Spin out company with a new product generated from
reputation Consultancy	PhD Project/KTP	with IP retained by the Company	owned by University/ Academic	owned IP

## **OPPORTUNITIES** TO ENGAGE WITH THE UNIVERSITY OF MANCHESTER

Engagement with the University can take many forms, with differing levels of commitment between partners and the University.

Our collaborative partners work with us across a range of different initiatives that benefit everyone.



#### **Collaboration**:

- collaborative research projects;
- knowledge exchange funding, such as knowledge transfer partnerships;
- i cintly loveraged fundi
- jointly leveraged funding;
- PhD sponsorship;
- access to novel technology.

# Consultancy and services

- technical expertise and specialist opinion;
- contract research;
- access to specialist facilities and equipment;
- contribution on advisory boards;
- expert witness services.



#### Training and skills

- recruitment services and internships;
- secondments, fellowships, and honorary appointments;
- sponsored academic appointments/ endowments;
- industrial input into teaching programmes;
- executive education, master's courses, and bespoke training.

# **COMMUNICATION IS KEY**

- Perception that industry expectations and academic priorities do not always align
- Balancing commercial objectives with academic freedom can seem difficult
- University landscape can be challenging to navigate with many internal stakeholders involved
- Define "success" early what are the deliverables, timescales, milestones etc. be flexible that these may change
- Be clear about what is realistic with the time and resource available
- Ensure ongoing dialogue throughout the project
- Small initial collaborations can lead to long-term, mutually-beneficial partnerships
- Contact the Business Engagement team at the earliest opportunity



## **OUR ROLE**

*...to put researchers with great ideas in touch with organisations that can use them'.* 





# **SUPPORT IS AVAILABLE!**

The Business Engagement team help to bridge the gap between academia and industry by facilitating interactions that lead to mutual benefit.

#### How we can help:

- Manage and facilitate the process from initial contact to delivery of a successful project
- Provide advice on the most suitable mechanisms for collaborating with industry based on the content of the project, for example KTP, collaborative research or PhD studentship etc.
- Lead on negotiations between partners, providing advice and support throughout the process
- Match industry priorities with suitable academic expertise
- Provide advice on growing existing relationships with commercial partners, reviewing mutual interests
- Signpost to other teams if necessary and contact internal stakeholders when required (i.e. Contracts, Innovation Factory, Research Support, Research Ethics, Finance etc.)



## What can you be thinking about?

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#### For academia:

- Who are you already connected to? How good is your network?
- What might be interesting to industry from your research? What have you got which industry may need?
- Do you need to diversify your research income?
- Where do you need business input? How can business help you further your research? What have they got, what you need?
- What would a collaboration look like? Length, personnel, consumables. Is it truly collaborative?
- What background IP would you be adding to the project, and what possible foreground IP could be produced?
- Give it a go!

#### For industry:

- Understand where their knowledge and skills gap is?
- Where can academia add value?
- Understand and appreciate the vision and purpose of academia.
- Engage in a truly collaborative engagement.







#### **BUSINESS ENGAGEMENT** & KNOWLEDGE EXCHANGE

The University of Manchester Oxford Road Manchester M13 9PL United Kingdom

www.manchester.ac.uk/collaborate/business-engagement

Email: collaborate@manchester.ac.uk





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### **Essentials for Innovation**

NIHR Manchester Biomedical Research Centre

## Why you should think about Commercialisation – and how to go about it

Duncan Henderson Head of Innovation Discovery University of Manchester Innovation Factory

Date: 30<sup>th</sup> Jan 2023



The University of Manchester

University of Manchester Innovation Factory

## Commercialisation....Why consider it?

### You want to make a difference?

- Commercialisation can turn your research, ideas, discoveries into products and services that have significant impact outside of academic research
- Disseminate research have positive social, environmental &/or economic impact
- A commercial aspect is often necessary to get your product / idea/ test / therapy to be fully developed and then used
  - To make it happen someone, somewhere, needs to make money...
- You might enjoy it! Alternative career pathways for you or your colleagues
- Create jobs, make Manchester successful

The Innovation Factory at the University and the Innovation Team at the Trust help researchers navigate the commercialisation journey



# Having some Intellectual Property, 'IP', is critical for commercialisation in our setting



Automatic - No registration required

IP Rights can be registered

IP right has to be registered

# The Key to success is understanding value

To whom is it valuable? Why? What problem (for them) does it solve Why will they buy it?



These questions may not be easy to answer!

### IP ownership and academic privilege

- Your terms of employment mean that your Institution owns any Intellectual Property (IP) arising from your work
  - This standard across the world
- Academic privilege is a system established by the government to try to encourage innovation by
  researchers in academia to commercialise their research and so promote economic growth and societal
  benefits.
  - A share of any gains is given to the inventors on favourable terms what that share is will be decided by your employer
- There may be complexities:
  - Student inventors, Research Funders or Sponsors (e.g. charities, companies) may have rights to IP
- Who invented it?
  - Anyone who makes an "inventive or original contribution"
  - Not necessarily person who carries out work, probably not be identical to authors of a paper
  - Must get it right according to patent law

IP Licence	Spinout	W	hat does the University do with the money?
Net income (licensing royalties) University: 60 %	Inventors: 50 % University: 35 %	•	50 % goes to the Department the IP came from
Inventors: 40 %	Options Pool: 15 %	•	50 % goes to central University funds

## There are two main routes to Commercialise University/Trust IP

#### Licensing

- Reasons to go down this route:
  - Improvement over current practice
  - Single application
  - Fits within portfolio of a licensor company
  - Unsuitable for VC funding (timeline, value)
- What it implies:
  - More in line with traditional academic work
  - Early stage R&D collaborations with corporate (especially for long timelines and/or heavily regulated applications)
  - Relies on more limited spectrum of funding streams (e.g. RCs, Charities, Industry linked) for further work
  - Income based on licence fee and royalties over licensee's revenues

#### **Spinout**

- Reasons to go down this route:
  - Disruptive technology
  - No obvious single outlet
  - Multiple applications
  - High value (VC fund attractive)
- What it implies:
  - More non-academic work (business plans, investor meetings, company management)
  - Opens more funding streams (RC, charities, Innovate UK, VCs)
  - Work with investors and management team (CEO etc)
  - More control over technology for longer
  - Satisfaction of creating a self-standing business
  - Income based on share sales, floatation, exit 62



### **Commercialising in Manchester**



The University of Manchester

- 30 year history of Intellectual Property (IP) development & commercialisation
- Reuters Top 100 Most Innovative Universities 2019 Rankings: 49th in world, 8th in Europe, 5th in UK
- 21 social enterprise spinouts

### 2019/20 2020/21 2021/22

- 90+ new invention disclosures 80 new invention disclosures 120 new invention disclosures
- 9 spin-out companies
   13 spinout companies
   10 spinout companies
- £1.5m of licensing income £7.4 of licensing income £4.9m of licensing income
- 10 new licensing agreements
- £3.4m First investment in spinouts £6.3m First investment in spinouts

### Manchester is improving it's spinout successes











The University of Manchester





- Northern Gritstone (NG) is a new investment company that started deploying investment into Northern businesses in 2022, including IPrich University spinouts
- NG secured final close of £312m, with investments from large regional investment funds, M&G, Columbia Threadneedle, British Patient Capital, Lansdowne Partners, and property investor Bruntwood.
- NG has to date invested in one UoM spinout's (Imperagen) and several UoM startups

#### www.northern-gritstone.com

# Some notes on common pitfalls wi

If you publish a paper or poster or give a talk then chances are you can't subsequently patent. But you CAN do it the other way round

- Patents
  - Invention must be new. Any single non-confidential disclosure made anywhere which is sufficiently detailed to impart an understanding of the invention will invalidate a patent
    - Academic papers, preprints, PhD Thesis, Websites and blogs, poster and oral presentations, discussion with academics outside your institution, public description of grant application, conversation in a pub!?

### Open Source Software

- Risks in using it: reliability, security, future development, licence
- Licence obligations with distribution, usually allow commercial use but may be restrictions
- Try to use a recognised licence
- Databases
  - Licenses can govern data and/or software.Confidentiality, GDPR, governance and management.

### Typical patenting process



## What does it take to get to a license / spinout?



### Talk to us!

- We are here to commercialise the University/Trust IP
- It's is never too early to engage with us
  - Keeping us informed of your activities allows an early identification and capture of opportunities & avoids some frequent pitfalls, lets you get advice
- What if your innovation isn't ready for commercilisation?
  - If it's not ready, we have a discussion about what might be achievable to make it ready
  - Most UoM IP that comes through the Innovation Factory is at an early stage of the translation pathway. It's often not ready for commercilisation
  - Generally, further funding is required, from various sources to help de-risk and prepare your IP for commercialisation

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### Industry, innovation and impact in the NHS

**Dr Katherine Boylan** Director of Innovation Manchester University NHS Foundation Trust

**30<sup>th</sup> January 2024 – Essentials for Innovation** 




#### Why the NHS needs Innovation



Ageing population	Hospital activity will be
By 2033 4.4m more	required to increase by
people >65	40%
Increasing prevalence of	Implications on
chronic disease	workforce and capacity
By 2035 the number of	NHS predicted to need
people with multi-	179,000 more staff over
morbidities will double	next 5 years.
COVID-19 pandemic:	Backlog will take years
implications on patients	to clear. 5.61million
and staff	people on waiting lists.

It is imperative to identify new innovations that will reduce costs and drive improvements in patient care and efficiency within the NHS

"Innovate or perish"

#### **Manchester University NHS Foundation Trust**

# Manchester University





## **MFT Innovation**

# Manchester University



## NIHR Manchester University NHS Foundation Trust HealthTech Research Centre



The National Institute for Health and Care Research (NIHR) awarded £2,998,433 for the NIHR Manchester University NHS Foundation Trust HealthTech Research Centre from 1 April 2024.



- Companies, NHS clinicians, academics, the public and patients to test and commercialise new healthcare technologies aimed at transforming urgent and emergency care
- Committed to ensuring equality, diversity and inclusivity is championed in all its programmes and activities
- Patients and the public will be involved throughout project development, active engagement with under-served populations

## **Industry Co-development & Collaboration**





- Association of British HealthTech Industries leadership and representative members met with MFT R&I leadership to explore joint working
- GM Health Innovation Accelerator (>£8m) focused on rapidly improving diagnosis and treatment. MFT leading/ co-leading work streams around liver disease, heart failure, lung cancer, pre-hospital Troponin testing, and genomics
- Manchester researchers awarded £1 million to test potential life-saving technology for early detection of liver cancer



- **NHS** Health Research Authority
- Developments to facilitate access to clinical data for research, innovation and commercial projects

## **Industry Collaboration & Future Opportunities**



#### bruntwood

MedTech – Partnership with Bruntwood SciTech to support their accelerator programme



**Citylabs 4.0** – £42m, 125,000 sq ft specialist lab and office workspace. Working with Bruntwood SciTech to identify and secure optimal tenants for the clinical campus



**Earlier Diagnosis** – New agreement to spearhead earlier detection and diagnosis of cancer and other health conditions across Greater Manchester (September 2022)

#### **Strategic Partnerships**

Exploring and formalising further strategic partnerships with other leading MedTech industry partners to support future expansion of our innovation footprint:









# Industry, innovation and impact in the NHS – an exemplar







The University of Manchester

## Manchester researchers awarded £1 million to test potential life-saving technology for early detection of liver cancer

Posted: Thursday Jun 22nd 2023

Manchester researchers have been awarded over £1 million by NHS England to explore the use of an innovative test for liver cancer, which will help patients access earlier care and potentially save lives.

The team at Manchester University NHS Foundation Trust (MFT) and The University of Manchester (UoM) will implement the new technology across MFT hospitals. The test aims to improve early detection of hepatocellular carcinoma (HCC) – the most common cancer affecting the liver and the third most common cause of cancer death.

One of the risks for developing HCC is a pre-existing liver disease and scarring of the liver, known as cirrhosis. Around two in 100 patients with cirrhosis will develop HCC every year.



# What next?

- Explore local training & development
- Specific opportunities for particular professional groups (eg NMAHPS)
- Consider becoming an "Innovation Champion"
- Look out for upcoming events around specific initiatives (eg MFT-HRC)
- GET IN TOUCH!

#### innovation@mft.nhs.uk

# Agenda

Time	Session	Presenter
09:30–10:00	Registration and Refreshments	
10:00–10:05	Welcome	Dr Colette Inkson NIHR Manchester Biomedical Research Centre
10:05–10:20	Opening Address from Professor Ian Bruce	Professor Ian Bruce NIHR Manchester Biomedical Research Centre & University of Manchester
10:20–10:35	Translational Research Support at The University of Manchester	Dr Alessandro Faroni Translation Manchester at The University of Manchester
10:35–10:50	Bridging the Gap Between Academia and Industry: How We Can Work Together	Chris Hepworth Business Engagement Team at The University of Manchester
10:50–11:05	Why You Should Think of Commercialisation – and How to Go About It	Dr Duncan Henderson The Innovation Factory at The University of Manchester
11:05–11:25	Comfort Break	
11:25–11:40	Industry, Innovation and Impact in the NHS	Dr Katherine Boylan Manchester University NHS Foundation Trust
11:40–11:55	Complement Therapeutics: Spinning out of Academia	Dr Richard Unwin The University of Manchester
11:55–12:00	The Innovator Training Scheme Next Steps	Dr Colette Inkson NIHR Manchester Biomedical Research Centre
12:00–12:20	Q&A Session followed by Closing Remarks	Professor Rick Body NIHR Manchester Biomedical Research Centre & University of Manchester
12:20	Close and Networking Lunch	

# Complement Therapeutics: Spinning out of Academia

# **Richard Unwin**

Senior Lecturer in Mass Spectrometry and Proteomics

Founder, Complement Therapeutics Inc.



The University of Manchester



# In the beginning..... Building the story

Take Home #1



# Training

- Minimum value product
- Value Inflection points
- Pathway to translation

# Science

- Build the story Problem/Solution
- Build the product Proof of Concept

Medical Research Council

Confidence in Concept (x2), Project Grant (RU), Fellowship (SC)

# Liaise with Innovation Factory:

- Write and submit patents
- Prepare for the next stage......



# **Decision time.....**

## **Grant Funding**

- Competitive
- Risky (~20% success)
- Retain full control
- 'Delays' getting industry involved?

#### License

- Commercial partner develops your IP
- 'Path of least resistance'
- Potentially relinquish (some) control
- Finding an interested partner not easy
- Legals.....

# ×



#### Spin-out

- You develop your IP
- Whole new world for an academic (legal, finance, manufacturing, regulatory)
- Need to bring in ££££
- Retain (some) control (for a while).



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# So you're setting up a spin-out...

- At this stage you're look bringing value to your ic
- Make your pitches clear for the investor – this is
- Business plan runway
- Be prepared to repeat tl
- Most companies/investo



et you off the ground and

#### ve and the opportunities Take Home #2

#### ntify CROs. **CLARITY**.



CTx Incorporated March 2020







Scientific excellence in ocular models





















"For 20 years I thought my job was as a basic scientist. Publish papers and throw them over the wall for someone else to apply. I now realise that there's no one on the other side of the wall. Just a huge pile of papers that we've all thrown over."

Prof. Duncan Watts, U Penn

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# Introducing the Innovator Training Scheme

Dr Colette Inkson Innovation & Partnerships Manager NIHR Manchester Biomedical Research Centre





- In 2021 the NIHR Biomedical Research Centre in collaboration with Translation Manchester delivered a pilot series of webinars entitled The Innovator Training Scheme
- These webinars were designed to nurture participants on their journey to creating innovative partnerships, new opportunities for collaboration, and a culture of pioneering translational research



## **Interactive E-Learning Training Materials**

Translational Research Skills Portal hosted on the Life-Long Learning Platform



#### https://lifelonglearning.manchester.ac.uk/

**NIHR** Manchester Biomedical Research Centre

# **Innovator training scheme E-learning modules**

Unit 1: Essentials for Innovation

**Unit 2: Developing an Entrepreneurial Mindset** 

**Unit 3: Identifying Intellectual Property** 

**Unit 4: Communicating Your Research to Commercial Audiences** 

Unit 5: Building Your Network and the Value of Teams

**Unit 6: Commercialisation as a Route to Clinical Impact** 





**START COURSE** 





# What would you like to see on the Innovator Training Scheme?

Tell us what you need!



#### New modules:

- New Principal Investigator Training for Clinical Trials
- How to build effective Industry Partnerships
- HealthTech and Medical Devices: Understanding the Regulatory Landscape

# How can you access the Innovator training scheme?

#### **Step 1: Create a Lifelong Learning Account**



Visit: https://lifelonglearning.manchester.ac.uk/

Manchester Biomedical

**Research Centre** 

**Translation**Manchester

# How can you access the Innovator training scheme?







# How can you access the Innovator training scheme?

**Step 4: Click on Enrol Now** 

#### Step 5: We will approve your enrolment within 48 hours





Success

You are successfully enrolled, an Admin will be approving access before you can continue.

Close

Any queries please contact us:



brc-crfpartnerships@mft.nhs.uk





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# **Innovation & Partnerships Team**



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