University of Birmingham Business Club
Breakfast Briefing

‘Health and Life Sciences’

Tuesday 13th September 2016
Benefits of being a member...

• Access to BizzInn space
• Regular Breakfast Briefings
• Opportunity to pitch business or research
• Intelligence regarding funding calls
• Networking
• Invite-only events e.g. Distinguished Lecture series
• Much more besides....
BioHub tours

- Tours available of our fully serviced biomedical research laboratory
- Speak to Ewa Truchanowicz for details
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David Wraith,
Professor of Immunology,
Institute of Immunology
and Immunotherapy
Institute of Immunology and Immunotherapy

David Wraith
Professor of Immunology
Examples of Institute Research

- Cancer Immunotherapy for cancers of
  - Gut, liver, lung, pancreas
- Immunotherapy of autoimmune diseases
  - Multiple sclerosis, rheumatoid arthritis, Graves’ disease, uveitis
- Vaccines for infectious diseases and cancers
  - Bacterial, mycobacterial, hepatitis, EBV, KSHV
- Liver inflammation
Research translation

- Fundamental science
- Protection of discoveries
- Early phase clinical trials
- Partnerships with pharma
- Spinout companies
Apitope NV

- WO2009071886 (A1) - FVIII PEPTIDES AND THEIR USE IN TOLERISING HAEMOPHILIACS: Wraith, D. 2009
Funding for R&D

START-UP

- £1.1M from private investor
- £0.3M from Sulis Seedcorn Fund
- £0.35M from Baxter SA
- £0.91M UTA from Wellcome Trust for MS Phase I in SPMS
Funding for R&D

SERIES A

- Euro12M from Benilux VC consortium to Apitope International NV
- $1M from Fast Forward, National MS Society US
- License with Merck-Serono for MS Phase I in RRMS, milestone payments up to Euro154M
Funding for R&D

SERIES B

- Euro12M follow on funding from Benilux VC consortium & Arthurian Life Sciences to Apitope International NV
- Funding for clinical trials in Graves’ disease and inhibitor formation in haemophilia A
Axial T1-weighted scans after intravenous injection of the enhancing agent Gadolinium (GD)

Monthly GD-enhanced MRI images reveal dynamic nature of inflammation in relapsing MS

YELLOW ARROWS MARK GD-ENHANCING LESIONS

Waglione (2008)
New Gd lesions significantly reduced by ATX-MS-1467 treatment

*** P<0.001 vs. Week 0
* P<0.05 vs. Week 0
Research translation

- Fundamental science
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Peter Dirken,
Strategic Partnerships – Exports and Inward Investment,
Innovate UK
Health & Life Sciences Sector

Dr Peter Dirken
Strategic Partnership Manager- Exports & Inward Investment
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https://www.gov.uk/government/organisations/innovate-uk

September 2016

Innovate UK
Health & Life Science

£117m 2016-17 Spend

Priority areas:

• Advanced Therapies (Cell, Gene and other therapies)
• Precision Medicine
• Preclinical Technologies
• Improving Agricultural Productivity
• Enhancing Food Quality
• Biosciences (including genome editing, SynBio and Analytics)
Catapult network

developing next generation technologies for medicines discovery

developing & validating more complex, next-generation therapeutics
Catapult network

Clinical studies of therapeutics already developed and tested in animals

National Biologics Manufacturing Centre – Part of the Centre for Process Innovation at the High Value Manufacturing Catapult
Centres for Agricultural Innovation

- Agrimetrics: Centre for Agricultural Data and Metrics for Sustainability
- Centre for Crop Health and Protection
- Centre for Engineering and Precision Innovation in Agriculture
- Centre for Innovation Excellence in Livestock

For the full interactive version: http://tinyurl.com/jl224lx
Catalysts

**Agri-Tech Catalyst Round 6**
- £4m to work with developing country partners on agri-tech innovations
- Different steams in feasibility, industrial, late stage research

**Biomedical Catalyst**
- £10m to develop innovative ideas to solve healthcare challenges
- Steams in feasibility and early stage research
- Closes 14th Sept 2016
Health & Life Sciences Competition

Aim: To stimulate and broaden business innovation in health and life sciences, leading to increase in productivity

• £15m to address technical or commercial challenges
• Opens September 2016
• Single Stage Competition
• Supporting total project cost of £50k - £2m
  – Projects under £100k led by a single SME
  – Projects over £100k awarded to business led consortium featuring at least one SME
• Projects 6 month – 3 years in duration
Cell Manufacturing Competition


Manufacture of late phase clinical trial and commercial supply of cell and gene therapies.

Aligned Innovate UK competition Q4 2016 to support development of new technologies for manufacturing or embedding products to be manufactured in the Centre.
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Mariochiara Barzotto,
Marie Skłodowska-Curie Research Fellow,
Birmingham Business School
Mariachiara Barzotto
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Phone: 01214146708
Study: This is a research project, funded by the European Commission (Marie Skłodowska-Curie Actions H2020-MSCA-IF-2014-660022).

Team:

Dr. Mariachiara Barzotto
Post-Doctoral Fellow

Prof. Lisa De Propris
Regional Economic Development
What SkillUP Does

Manufacturing has experienced significant transformation as a result of:
• globalisation
• technological change

SkillUP is a research project looking at the mismatch between demand and supply of skills in European advanced manufacturing industries.
SkillUP delivers evidence based policy recommendations in the form of a toolkit to:

• understand what mix of skills manufacturing firms need to be innovative and competitive;

• enhance employability (jobs created and jobs filled),

• explore education and training to ensure that workforce skill development matches industry demand,

• bridge industries and education system,

• promote a smart and inclusive economic growth of Europe.
SkillUP is seeking manufacturers’ view by interviews firms operating in:
• engineering, new materials, biotech, apparel, textiles, and furniture
• with HQ in the UK, Germany, Italy, Spain, and Sweden.

Short interview (1 hour) with your European HR lead and whoever takes responsibility for your operations processes and/or value chain management.
What SkillUP Offers

In recognition of participation, all contributors will be sent a copy of the published final report and invited to the final event along with policy institutions.

The resulting overall research will inform policy makers in the areas of skills development in Industry4.0 in Europe.
THANK YOU FOR YOUR ATTENTION

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www.birmingham.ac.uk/skillup

@skillupEU

SkillUp EU

Business with Birmingham
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George Constantinou,
Business Adviser,
Enterprise Europe Network
Enterprise Europe Network

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Business Adviser
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The i2s programme and IUK funding opportunities

**What we do**

Part of the Innovate UK family we help SME’s in the Midlands region take advantage of business opportunities in the EU and beyond.

**What we offer**

The Innovate 2 Succeed (i2s) programme – supporting you to develop an ongoing innovation management process for your business

**Suitable clients**

Midlands-based companies who want to further develop a culture and process of innovation.

Who recognise there are unexploited opportunities for growth or challenges in their business that will benefit from having a robust innovation management process.

**Funding opportunities**

You can apply for funding to test the feasibility of your idea, research and develop it and demonstrate it in a prototype.
The i2s innovation management programme
Email: innovation@cad.coventry.ac.uk
or call 02476 236236

Innovate UK Funding Competitions
https://www.gov.uk/government/collections/innovation-grants-for-business-apply-for-funding
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Margaret O’Hara,
Daphne Jackson Trust Fellow,
Physics and Astronomy
Breath testing for Clinical Applications

MARGARET O’HARA
DR
MOLECULAR PHYSICS GROUP
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### What we do

- Analyse Volatile Organic Compounds in Breath
  - Mass Spec
  - Sensitive - ppbv
- Conduct clinical studies mainly in liver disease

### What we offer

- Expertise in Breath Analysis
- Expertise in trace gas analysis using ion molecule reactions
- Clinical collaborations with QEH
- Long standing European networks
USP

- Medical Physicist – Physical scientist with clinical training and experience
- In-depth knowledge of VOC breath analysis
- Largest liver unit in Europe
- Experience of running clinical studies
Hepatic Encephalopathy (HE)

- Cognitive impairment - side effect of liver cirrhosis
- Huge burden for carers
- Costs as inpatient admissions are needed
- DVLA need a biomarker to assess who can drive
- Assessment is subjective and needs doctor
- Biomarker desperately needed
What we need

• Partner to develop sensor device for limonene (at ppbv) for near-patient testing
• Partner who knows the medical market
Breath testing for Clinical Applications

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Tony Davis,
Commercial Director,
West Midlands Academic Health
Science Network
“We are in the midst of an unprecedented time of change and upheaval. It is therefore, a time of fantastic opportunity for those who act decisively and bravely, and a graveyard for those who do not”

K. Chandler McDonald, Innovation
What is Meridian?

It is the WMAHSN innovation and adoption service. It’s been designed to support the adoption of good practice and share lessons learned.
Innovation & Adoption Service

- Intellectual Property Support
  - MidTECH
- Industry Gateway
  - MedILINK

Innovation and adoption network

WMAHSN Networks and Services
Meridian Online Platform

Meridian online platform is one part of the service that provides virtual access, it can…

1. Define **challenges** and facilitate **decisions**
2. Define **challenges** to identify affective **solutions**
3. Act as a **screening tool** for organisations
4. Identifies and builds **collaborations**
5. **Promotes** readily available innovations for adoption
6. **Sharing** of ideas and innovations and knowledge
7. Provides access to **tools and information**
8. Brings **expertise** together to solve common challenges
9. Creates an online environment the **encourages** innovation and change
10. Manages the WMAHSN **opportunities process**
11. Way to **promote** what **NHS trusts** have been doing
Value of Meridian

Feedback
- Help to shape – repurpose and funding
- How to overcome challenges and adopt in the WM
- Register interests to take forward and adopt

Warm up the market and get people interested in your innovations

Awareness of developments across the region

Ability to scan existing innovations before embarking on development activities

Easy identification of collaboration and risk sharing activities
Registration
Simple registration process

Active Campaigns
Clearly developed campaigns/challenges that require ready made innovations or information to develop collaborations, open to all Meridian users

Other innovations
Submit relevant innovations not relevant to current campaigns

Campaigns
Ability to develop your own tailored campaigns own to your organisation only.

News
News articles and funding information

Tools
Access to the WMAHSN Innovation and Adoption roadmap

Priorities
Search for innovations by WMAHSN priority or by using the search function on the top right

Comment and Share
Comment on innovations and share experiences and best practice

Features

Innovation Warehouse
Upload case studies to share with the community on innovations and the lessons you learnt
Tony Davis
Commercial Director WMAHSN

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Iain Styles,
Lecturer,
Computer Science
Physical Science for Healthcare

Iain Styles
Co-Director, EPSRC Centre for Doctoral Training
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Business with Birmingham
Sci-Phy-4-Health

New Physical Science for Healthcare
- Aging
- Trauma
- Cardiovascular Disease

What we need
Interesting biomedical problems in our challenge areas that need a physical science solution

What we offer
- Hub for interdisciplinary research
- Ten new PhD students every year
- Joint projects
- CASE-type co-funding
- Access to expertise and facilities

Our USP
Other Events

- Business with Birmingham conference, 6 October 2016
- Family Business workshop, 11th October 2016
- Distinguished Lecture Series, Prof Margaret Boden, 26th October 2016
Thank you to our speakers and for your attention