Developing Strong Business Teams to Support Income Generation for Universities

Dr Sharon Ellis, Director of Research, Enterprise and Partnerships, Interim Director of Infrastructure

Queen Mary University of London

Queen Mary's R&I in numbers

1,900+

PhD students

2,060

Academics

415

Post Docs

18

Active spin-outs

110th

THE Global University Rankings

£153m

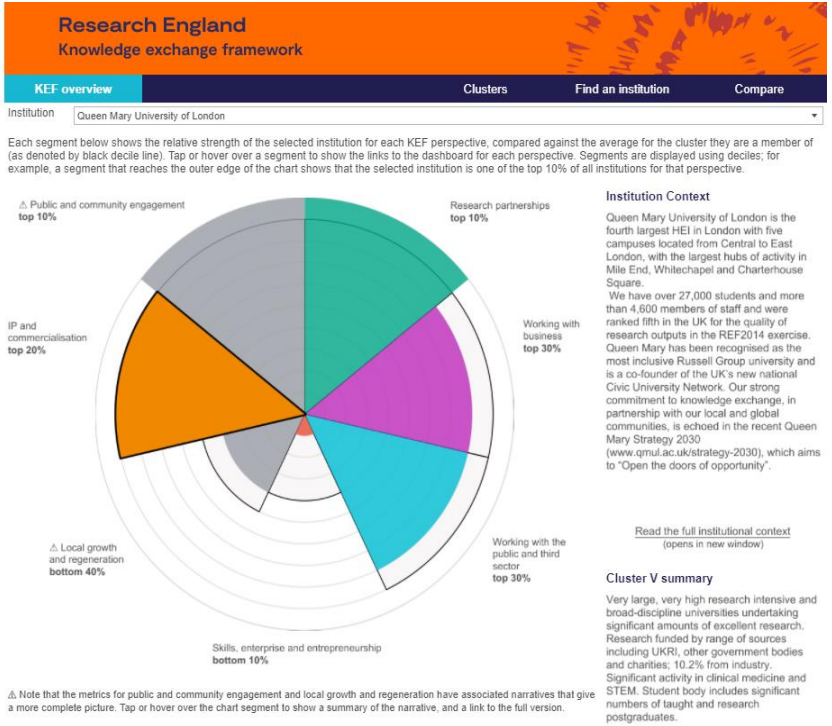
Research income

2

Listed spin-outs

Knowledge Exchange Framework (KEF) – external benchmark performance against English Russell Group Universities

- Public & Community Engagement – top 10%
- Turnover of all active firms per active spinout - ranked equal top in cluster
- Research Partnerships – top 10%
- IP and Commercialisation – top 20%
- Working with Business – top 30%
- Working with the public and third sector - top 30%



Successful Spin-out Companies

Octopus Ventures – Entrepreneurial Impact Rankings 2019 and 2020

Spinning out Success / The ranking 8

Entrepreneurial Impact Ranking

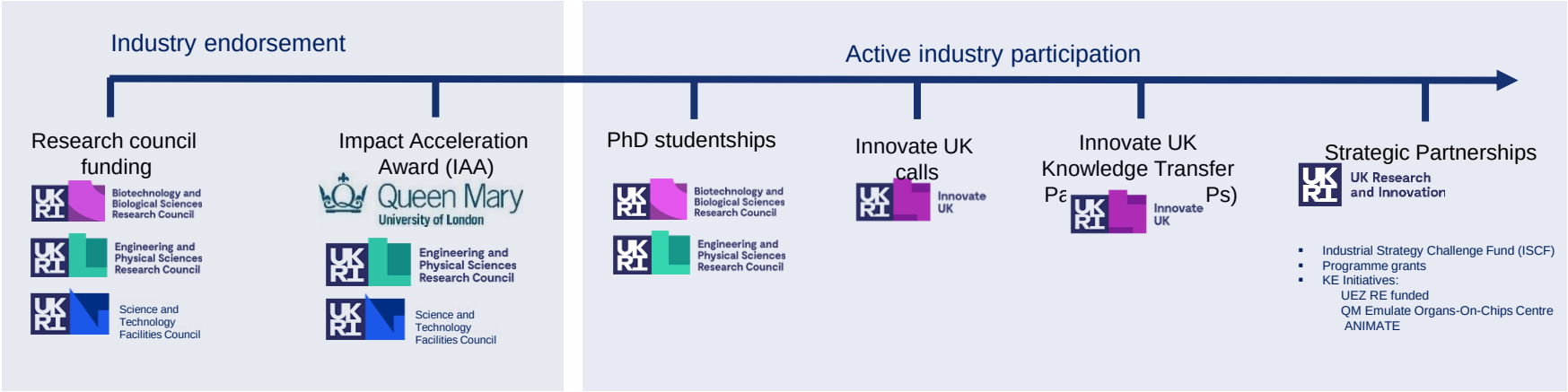
*Movement in the ranking vs. last year

Rank	University name	EIR score
1 (–0)*	Queen's University Belfast	101.34
2 (–0)	University of Cambridge	95.53
3 (–0)	Cardiff University	82.39
4 (–0)	Queen Mary University of London	78.87
5 (+1)	University of Dundee	77.34
6 (-1)	University of Leeds	76.08
7 (+2)	University of Oxford	74.75
8 (-1)	University of Nottingham	73.03
9 (+2)	University of York	67.78
10 (-2)	King's College London	67.62
11 (-1)	Imperial College London	66.98
12 (+14)	University of Bristol	63.91
13 (-1)	University of Aberdeen	61.39
14 (+4)	University College London	60.15
15 (-2)	Royal Holloway, University of London	59.60
16 (-2)	Ulster University	58.98
17 (-2)	University of South Wales	58.56
18 (-2)	The University of Manchester	58.11
19 (-2)	Durham University	57.37
20 (+12)	University of Sunderland	57.05
21 (-1)	University of Glasgow	56.97
22 (-1)	University of Bradford	56.71
23 (-4)	University of Strathclyde	56.17
24 (-2)	University of Salford	55.47
25 (–0)	University of East Anglia	54.91
26 (-3)	University of Warwick	54.57
27 (+1)	University of Leicester	53.40
28 (+2)	Loughborough University	53.23
29 (-5)	University of Bath	53.21
30 (-3)	Glasgow Caledonian University	53.10
31 (+34)	University of Liverpool	52.11
32 (+22)	Nottingham Trent University	51.56
33 (-4)	University of Exeter	51.22
34 (-3)	University of Southampton	49.64
35 (-2)	University of Birmingham	46.19
36 (-1)	The Institute of Cancer Research	35.50
37 (-3)	Coventry University	35.49
38 (+31)	University of Surrey	33.92
39 (-1)	University of Plymouth	29.47
40 (-3)	Royal College of Art	29.20
41 (-2)	Oxford Brookes University	28.88
42 (-2)	Edinburgh Napier University	28.69
43 (-2)	St George's, University of London	28.46
44 (+14)	Bangor University	28.33
45 (-2)	University of Wolverhampton	28.33
46 (-4)	Staffordshire University	28.14
47 (+3)	Robert Gordon University	28.13
48 (-3)	Middlesex University London	27.98
49 (-5)	Royal Veterinary College, of London	27.96
50 (+2)	University of Hull	27.77

- Spin-out success relative to funding received
- IP, spin-out performance and successful exits

Industry engagement support from proof-of-concept to full scale collaborations at QMUL

We work with and support on finding commercial partners from mirco-, small-, medium-sized (SME) to large global corporations



How we work with academics and businesses to foster collaborations

Consultancy and contract research

Work with Queen Mary researchers to add value to in-house capabilities or buy-in specialist knowledge and expertise

Benefits for partners:

- Quick access to world-class facilities
- Access to research and technical expertise from across QMUL

Knowledge Transfer Partnerships

A three-way collaboration between business, university and a graduate

Benefits for partners:

- Embedding knowledge and training staff
- Commercialisation of new products
- Expected increase in turnover
- Scope to enter new markets

Innovate UK – Collaborative R&D

Funds industry and research collaborations to accelerate product and technology innovation within companies

Benefits for partners:

- High quality research and knowledge exchange
- Potential for commercialisation of new products
- Expected increase in turnover

PhD Studentships

Industry and research collaborations to accelerate product and technology innovation within companies

Benefits for partners:

- High quality research and knowledge exchange
- Potential for the development and commercialisation of new products

What do we look for in recruiting to business facing teams?

- Commercial awareness and understanding of investor/industrial trends
- Deep technical understanding that aligns with the strengths of the University
- Interpersonal skills and understanding/empathy to manage the “meeting the minds” – academics and industry - to facilitate do the deal
- Balance between Tenacity and Tone – time frames to developing the relationship and doing the deal are long, and for industry its risky, so getting to deal is fragile – you have to push, but be careful.
- Junior roles, PhDs – research takes time is difficult and risky, and an understanding through direct experience is essential.
- More senior team members - experience of tech transfer/early stage commercialisation; whether in university, industry or start-up;

Softer skills we look for:

- Fit with in the team
- complimentary skills, i.e. deep experience of building business, understanding of TT process, experience with legal.
- Eye for the opportunity

Development pipelines are long

- Evaluation – Funding - License/Spin-out 3 to 4 case at License/Spin-out can take up 75% of a TTMs time - and can take years.
- Progress at the License/Spin-out is iterative, failure or evolution occurs
- Many times failure is not an intrinsic technical or market failure – it can be e.g. wrong application, market, partner or timing.

2009	Novelty spot the difference App that failed in the App Store – **Eyes and Seek**	**First Try Fails**
2012	Chance meeting with a Market Consultant suggested an alternative use – **website optimisation** QMUL PoC funded the prototype development -DNA	**Evolution of Application**
2014	**Blackswan Data (BSD)** engaged as the commercial partner - licence QM Founder seconded to BSD – paid for by BSD – Dragonfly is born	**Partner Engaged**
2017	First attempt traditional SaaS business model, £50 per seat, failed, numbers and revs too low 2017 Dragonfly takes on new leadership and **new business approach, selling value**	**Evolution of Business Model**
2018	**Dragonfly AI Ltd** – Spun-out of BSD – to give independent and raise own capital	**DF Spun-out**
2019/20	DF secures partnership with **Capita** – access to market DF get investment from Downing of **£650k**	**Significant Partnerships/ Funding**
2021	Early 2021 – DF revs of **~£700k pa**, with significant royalty flowing back to QMUL QMUL create a part-time Research Fellow (Dragonfly) post for QMUL to be at the heart of DF's future research – **grants, translational funding, PhDs, contracts**	**Royalties & Research Funding return to QMUL**

But you need motivated academics to dock into & create supportive policies and processes

- Helping identify the right grants, partnerships to lay the foundations for commercialisation:
    - KTP grants 3X
    - Industry sponsored studentships 2X
    - IUK collaborative awards 3X
    - CDAs/MTAs 2X
- By dedicating team members to these areas and often working with academics at earlier career stages
- Entrepreneurs club – sharing experiencing, building knowledge and appetite amongst academics
- You need to make the conditions right for busy academics
- Suite of new enabling policies on consultancy, CPD, short courses, including new finance and HR frameworks to prevent blockages
- Made changes to our academic promotion criteria recognising enterprise and commercialisation
- Need a VP R&I – that is interested and ideally has experience

kinomica

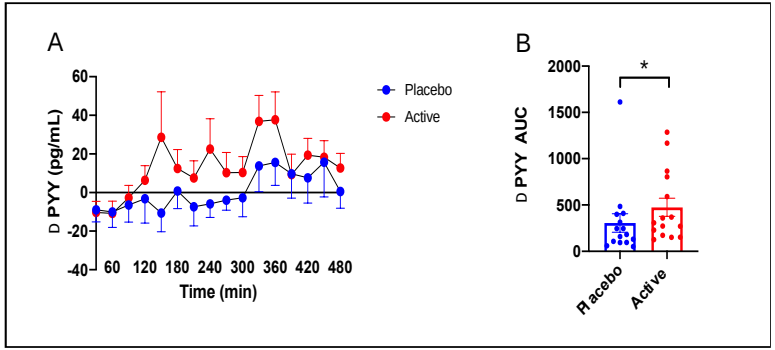
- Spin- out from Barts Cancer Institute: Four patent families licensed from QM
- Machine Learning enabling discovery of new biomarkers
- Focus on kinase inhibitor market, worth $75bn by 2024- Midostaurin responders 87.5% accurate vs genomic assay 47.3% and negative responders 73% with Kscan vs 35% with FLT-3 assay
- Offering **Pharma Services; Clinical research**; and **Clinical services** Customers include: Astra Zeneca, Eli Lilly, Novartis, Medigene, Gilead, Novartis ~£500K YR1: Offering
- £1M Innovate UK grant and investment 2019
- Raised £3.9M Series A from BGF, Longwall and Family Offices.
- Bionow Digital Awards; Best investment deal of the year, 2021
- Predicted valuation £25-30M 2025

enterika

The Science of Weight Loss

- Spin- out company Appetite suppressant with IP: combination of nutrients delivered to the colon cause boost of satiety hormone
- Phase I data positive (John Moulton Foundation) and show a 16% weight loss that could take a clinically obese individual of BMI of ~30 to a safer health index
- Obesity (BMI>30) costs the NHS £6BN a year in UK p.a.; type II diabetes, coronary heart disease, breast cancer, bowel cancer and stroke.
- Featured on Channel 4 " How to Beat…Fat" : Daily Telegraph, Daily Mail.
- Aim to raise £1.5M to support Phase II Trials Time to market within 2 years and sales £60M by YR5 predicted ; Lead investor identified £4.5M pre- money

Kate Quilton and Dr Javid Abdelmoneim will offer their top tips to would-be dieters



Queen Mary Innovation

Thank you

Queen Mary
University of London