

Commercialising Genomic Research

Identify and Develop Emerging Opportunities in Precision Medicine

1-3 October 2018

Wellcome Genome Campus | Hinxton, Cambridge, UK



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Course Programme

Monday 1 October 2018

09:30-10:00 **Registration with refreshments**

10:00-10:30 **Introduction and aims of course**
Programme Committee

The course is designed to provide first a review of the dynamic landscape of genomic research commercialisation including describing a range of emerging business models. We will then focus on day two on exploring two main models based on their ultimate customer: 1- the biopharmaceutical industry - using genomics for R&D and 2- the clinic - using genomics for screening, diagnosis or prescribing. We will discuss opportunities, challenges and route to market for early stage technologies considering in turn these two end users. Finally, we will devote some time to discuss a specific challenge relevant to most technology development in this field: software licensing and its impact on commercialisation.

10:30-12:30 **Session 1: Commercialisation surgery - challenges in translating and commercialising genomics research**

Chair: Simon Turner, Director, Nomis Life Science, France

Session content: In this interactive session, each participant will have the opportunity to share their own challenge to be discussed by the group as a whole. These will also be addressed by speakers in the subsequent sessions and reviewed at the end of the workshop.

10:30-10:45 **Setting the scene**
Simon Turner
Director, Nomis Life Sciences, France

- 10:45-12:30 Discussion
- 12.30-13.30 Lunch
- 13:30-15:30 **Session 2: Genomics commercial landscape**
Chair: Adrian Ibrahim, Head of Business Development, Wellcome Sanger Institute, UK
- Session content:**
 Investors and business development professionals will describe the current market for genomic research outputs with a focus on healthcare applications and a review of emerging business models. Followed by a “Deal of the Year” case study dissecting a particularly relevant partnership. Time is earmarked for discussion and to review challenges arising from the surgery relevant to this session.
- 13:30-14:15 The commercial genomics landscape from a VC’s perspective
Yanxiang Zhou
Associate, Illumina Ventures, Ireland
- 14:15-15:00 Clinical diagnostics trends and emerging business models
Denis Bronnikov
Global Licensing Director, Roche Diagnostics, USA
- 15:00-15:30 Discussion
- 15:30-16:00 Afternoon tea
- 16:00-18:00 **Session 3: Genomics commercial landscape: future trends - new opportunities?**
Chair: Joanne Hackett, Chief Commercial Officer, Genomics England, UK
- Session content:** Following on the previous session, it will look at the future of the field and its evolution driven by technological advances, cost reduction or governments support. Presentations and discussions will focus in particular on the rise of artificial intelligence and large population scale initiatives, and the opportunities these advances create for innovation and partnerships. A debate and voting on “where would you invest £10M?” will close this session and the day.
- 16:00-16:45 The investment proposition for genomics
Joanne Hackett
Chief Commercial Officer, Genomics England, UK
- 16:45-17:30 Talk title TBC
Rabia Khan
Founder/Executive, Deep Science Ventures, UK
- 17:30-18:00 Debate and discussion
- 18:00-18:30 **Reflection on the day**
- 18:30-19:00 Drinks reception
- 19:00-20:30 Dinner and networking

Tuesday 2 October 2018

09:00-10:30 **Session 4: IP brief on biomarkers and bioinformatics**

Chair: James Peach, Precision Medicine Lead, Medicines Discovery Catapult, UK

Session content: This session will be a practical “how to” IP briefing focussed on two specific points relevant to our field: Can genetic biomarkers be protected? How can bioinformatics inventions be protected? Examples of patent claim structure and use will be discussed.

09:00-09:30 Patent protection for biomarkers
Emily Hayes
Partner, Patent Attorney, Mewburn Ellis LLP, UK

09:30-10:00 Patent protection for bioinformatics inventions
Julia Gwilt
Partner, Appleyard Lees, UK

10:00-10:30 Discussion

10:30-11:00 Morning coffee and group photo

11:00-13:00 **Session 5: Use of genomics in drug research and development**

Chair: James Peach, Precision Medicine Lead, Medicines Discovery Catapult, UK

Session content: This session will start with a brief introduction by mapping the different points at which genomics can impact the drug discovery and development process. The format will be a discussion panel assembled to include senior drug R&D specialists and providers of genomics products and services.

Discussion will include: Where are the high value points on a R&D axis for interacting with biopharma? What are the opportunities for partnering? What are the roles of SMEs? How can Academia support drug discovery and development? Pros and cons of partnering directly with pharma/biotech vs licensing to an existing provider? Time is earmarked for discussion and to review challenges arising from the surgery relevant to this session.

11:00-11:30 Open Targets: an academic-industry partnership in genomics
Philippe Sanseau
Head of Computational Biology, GlaxoSmithKline Pharmaceuticals, UK

11:30-12:00 Companion diagnostic partnering and commercialisation: biomarkers and diagnostic development
Huw Ricketts
Director Precision Diagnostics and Pharma Partnering, Qiagen, UK

12:00-12:30 Academia and industry - partnering to achieve a common goal
Birgit Kerber
Head Innovation and Translation, EMBL Enterprise Management
Technology Transfer, Germany

12:30-13:00 Discussion

13:00-14:00 Lunch

14:00-16:00 **Session 6: Developing genomic-based tools for clinical use**
Chair: Emmanuelle Astoul, Business Development Manager, Sanger Institute
Innovation Team, UK

Session content: Experts will highlight the route to market and necessary steps required to validate and develop a research assay towards a clinical test, from proof of concept to defining clinical utility. Discussion will address challenges such as funding; accessing samples or datasets for validation; different constraints linked to developing diagnostic, companion diagnostic or screening tools. A company case study will exemplify the real life experience of going through the process. Time is earmarked for discussion and to review challenges arising from the surgery relevant to this session.

14:00-14:45 Clinical use at bedside: the live wire to success in genomic-based diagnostics development
Hélène Peyro-Saint-Paul
MD, LallianSe Entrepreneurs, France

14:45-15:30 Commercialisation of genomics products and services
David Atkins
CEO, Congenica, UK

15:30-16:00 Discussion

16:00-16:30 Afternoon tea

16:30-18:30 **Session 7: Developing genomic-based tools for clinical use II**
Chair: Emmanuelle Astoul, Business Development Manager, Sanger Institute
Innovation Team, UK

Session content: The regulatory environment both in the US and in Europe is evolving to catch up with the progress of in vitro diagnostics based on genomic technologies into the clinic. Following on session 6, experts in the field will provide an up-to-date view on the path to being accredited in these two main territories. In a fireside chat, entrepreneurs developing clinical decision support will discuss integration of these new technologies into clinical pathways, considering the NHS and other territories. Time is earmarked for discussion and to review challenges arising from the surgery relevant to this session.

16:30-17:25 Advancing precision medicine: navigating regulatory pathways for emerging biomarkers and complex gene panels
Melina Cimler
CEO and Founder, PandiaDx LLC, USA

Danielle Scelfo
Senior Director, Health Policy and Reimbursement, Hologic, USA

17:25-18:30 Panel discussion

Sharon Peacock
Group Leader, University of Cambridge, UK

Paul Rhodes
CEO, Specific Technologies, USA

Andrea Hayworth
Clinical Scientist, Congenica, UK

18:30-19:00 **Reflections on the day and Q&A**

19:00-19:40 Drinks reception

19:40-21:30 Dinner and informal discussions

Wednesday 3 October 2018

09:00-10:30 **Session 8: Software commercialisation**

Chair: Ross Rounsevell, Market Development Lead, Repositive, UK

Session content: Driven by experts in commercial software development and IP, this session will include a crash-course in software, cover relevance to the tech-bio industries and licensing practicalities specific to software such as versioning, improvements versus bug fixes and knowledge transfer. Discussion will include intellectual property rights: copyright and patents; understanding the value of know-how; models for software sale.

09:00-09:30 Software in genome science
Sarah Bastkowski
Biomathematician, Earlham Institute, UK

09:30-10:00 Non-patent IP and their utility relevant to software
David Rainford
Lawyer, Taylor Vinters, UK

10:00-10:30 Discussion

10:30-11:00 Morning coffee

- 11:00-13:00 **Session 9: Creating value from open source software**
Chair: Ross Rounsevell, Market Development Lead, Repositive, UK
- Session content:** Following on the previous one, this session will focus specifically on examining open source licensing, its impact on commercialisation but also the opportunity it creates. Topics addressed will include: What is open source? Myths and facts; How are licenses applied; Pervasiveness of open source; Open source software business models – with case studies; Trip hazards in due diligence; Negating open source terms. Time is earmarked for discussion and to review challenges arising from the surgery relevant to this session.
- 11:00-11:45 Navigating open source software licenses
Ross Rounsevell
Market Development Lead, Repositive, UK
- 11:45-13:00 Panel discussion
- David Rainford*
Lawyer, Taylor Vinters, UK
- Pierre Socha*
Investor, Amadeus Capital, UK
- Misha Kapuchesky*
CEO, Genestack, UK
- Adrian Ibrahim*
Head of Business Development, Wellcome Sanger Institute, UK
- 13:00-14:00 Lunch
- 14:00-15:00 **Session 10: Commercialisation surgery and personal aims, learning outcomes revisited**
Programme Committee
- 15:00-15.15 **Course summary and final remarks**
Programme Committee
- 15:15-15:30 Afternoon tea
- 15:30 **Coaches depart to Cambridge city centre and train station**