PACEOMICS AIMS

Facilitate development and implementation of coherent and cost-effective ‘omics health technologies in Canadian health care by:

1. Creating a feedback between investment and reimbursement decisions

2. Better target investments to those interventions with greatest positive impact

- Test through disease case studies (breast cancer, liver cancer, Type 1 Diabetes, retinopathies, Long QT, Hepatitis C)
- Validate through partner case studies
Theme 1: Social Values and Public/Clinician Perceptions of PM Technologies

Chris McCabe – Faculty of Medicine and Dentistry, University of Alberta
Dev Menon – School of Public Health, University of Alberta
Tim Caulfield – Faculty of Law, University of Alberta

Theme 2: Health Technology Appraisal and Efficient Evidence Development

Chris McCabe – Faculty of Medicine and Dentistry, University of Alberta
Jonathan Kimmelman – Faculty of Medicine, McGill University

Theme 3: Legal and Regulatory Environment

Tania Bubela – School of Public Health, University of Alberta
Timothy Caulfield – Faculty of Law, University of Alberta

Theme 4: Technology Development Landscape and Intellectual Asset Management

Tania Bubela – School of Public Health, University of Alberta
Richard Gold – Faculty of Law, McGill University
Efficient translation of PM technology

- Population health needs
- IP and legal regimes
- Clinical translation
- Regulatory decisions
- Research activity
- HTA and healthcare payer decisions
- Patient care
- Social values
- Physician uptake
PACEOMICS VALUE-ENGINEERED FRAMEWORK FOR CANDIDATE PM TECHNOLOGIES (VET)

**THEME 1:** Social Value Impact

**THEME 2:** Resource Impact

**THEME 2:** Health Impact

THEMES 2 & 4:
- Technology Impact
- clinical landscapes

**THEME 2:** Macro Analyses – Cost-Effectiveness Modeling

- Assumes cost of goods and effectiveness based on similar bio-therapeutics

**THEME 2:** Micro Analyses – Cost-Effectiveness Modeling

- Manufacturing Scale-up
- Cost of Goods Estimates

**THEME 3:** Regulatory/Legal Burden

**THEME 4:** IP and Patent Life

- Clinical Trial Design
- Assessment of Magnitude of Benefit

De-risk Technology for Phase III Investment

Translational Stage

Pre-clinical

Phase I

Phase II
PACEOMICS: an integrated approach

- Educational Programs
- Public interest litigation
- Disease case studies
- Web portal
- Publications, commentaries, recommendations
- Databases, annotated bibliographies
- Social media
- Parliamentary, legislative committees, judicial education
- PACEOMICS toolkits

VALUE-ENGINEERED TECHNOLOGIES
Theme 2: Efficient Evidence Development
Jonathan Kimmelman – Biomedical Ethics / Social Studies of Medicine / Dept. Human Genetics

Post-Doc: Dr. Spencer Hey
RA: Georgina Freeman

Theme 4: Intellectual Asset Management
K2A Program: Public interest litigation
Richard Gold – Faculty of Law / Dept. Human Genetics

McGill Program Manager, Research Associate:
Dr. Sarah Ali-Khan

RAs: Clarissa Allen, Eric Gashirabake, Kate Goddard, Megan Hodges, Paul Holden, Frédérique Horwood, Jeyachandran Kumarasamy, Lana McCrea, Lipi Mishra, Joel Roy, Gajan Sathananthan, Nicholas Torti, Brittany Trafford, Pierre-Olivier Valiquette
Engineering incentives

Theme 2: Efficient Evidence Development
- Tracing evolution of evidence for predictive cancer biomarkers
- Examining coordination of research activities and efficiency in providing answers to questions caregivers need addressed

Theme 4: Intellectual Asset Management
  - patient access to PM products
  - efficiency of collaboration, enabling knowledge flows to spur innovation
  - recommendations and annotated bibliography
- Lonq QT Syndrome case study

Knowledge to Action/Public interest litigation