INVITROCUE

Limited (IVQ:ASX)

TRANSFORMING BIOANALYTICS™

Investor Presentation – 16 May 2016

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Executive Summary

We provide **bioanalytics** solutions to revolutionize
***in vitro* lab testing for pharmaceutical and medical industry**

- Versatile and powerful platform technology ('**3D cell-based scaffolding**') with wide applicability and low-cost of implementation
- **Applicable to most types of tissues and cells**
  - **Mature asset** in custom tissue development
  - **Mature assets** in liver toxicity
    - Cellacyl™ for NSAIDs compounds ranking
    - Mechanistic toxicology/ drug repurposing
  - Lead asset in malaria (Novartis partnership)
  - Lead asset in leishmaniasis (LSHTM partnership)
  - Lead asset in non-alcoholic steatohepatitis (TNO, TakaraBio Consortium partnership)
  - New asset in hepatitis B (partnering opportunity with hospitals and pharmaceutical companies)
  - New asset in oncology Onco-PDO™ (launch and partnering opportunity with hospitals)
- Multiple collaborations in SG, EU, CN, AU, USA
- Key opinion leaders as scientific advisors, experienced management team
- Skilled scientific team in platform/ assay developments, media formulation

Key Milestones and Announcements

29th JAN	Memorandum of Understanding Signing at AHCC Trials Group Meeting and Scientific Form : Invitrocue and National Cancer Centre Singapore Collaborate to Research and Develop Quantitative Cancer Imaging and Radiomics
1st FEB	InvitroCue and ImageIQ Forge Partnership to Advance Quantitative Image Analysis for Preclinical Researchers in Asia
15th FEB	Invitrocue, TNO (Netherlands) and Takara BioEurope (Sweden) signed Agreement to deliver NASH (non-alcoholic steatohepathis) Model : New Consortium on NASH Pilots Organ Function-on-a-Chip
5th MAR	InvitroCue Expands Cell-based Lab in Suzhou to Meet Client's Increasing China Focus
9th MAR	Novel 3D in-vitro Techniques for modeling leishmaniasis
8th APR	InvitroCue Launches Cellacyl: Proprietary Acyl Glucuronide Detection Assay InvitroCue SciKon Innovation Forge an Alliance to Create the Future of Perfused Human Liver Tissue
12th MAY	InvitroCue Expands 3D Cell-based Platform for Oncology
16th MAY	InvitroCue Announces Malaria's Initiative

KOLs and Advisory Support

Prof. Alex MATTER MD
Chief Executive Officer at Experimental Therapeutics Centre and D3, A*STAR Singapore;
Emeritus Professor of Medical Faculty at the University of Basel;
Honorary Adjunct Professor of Yong Loo School of Medicine, National University of Singapore.

Decades of experience in **drug discovery and development in large pharmaceutical companies**.

Prof. Joseph King-Tak LEE MD FACR
Recent Chair and presently Distinguished Professor of Radiology at the University of North Carolina;
Visiting Professor in the Department of Diagnostics Imaging at the National University of Singapore and Hong Kong University

Provides new insight in interdisciplinary fields of **biomedical imaging, functional imaging and advancements in imaging biomarkers.**

Prof. Simon CROFT BSC PGCE PHD FRSB (Incoming Member)
Professor of Parasitology, Faculty of Infectious and Tropical Diseases,
London School of Hygiene and Tropical Medicine.

Extensive experience and knowledge on antimicrobial and antiprotozoal therapies, supports the adoption of ***in vitro*** **experimental models for drug screening application in infectious diseases**.

Prof. Shervanthi HOMER-VANNIASINKAM BSC MBBS MD FRCSEd FRCS
Consultant Vascular Surgeon, Leeds University Teaching Hospitals;
Founding Professor of Surgery, Warwick University;
Professor of Engineering & Surgery, University College London.

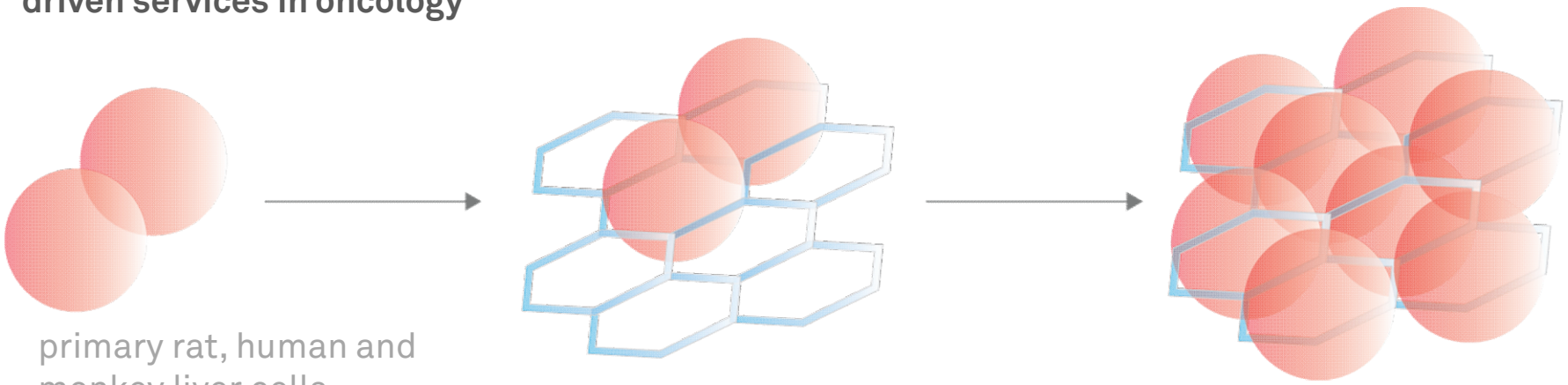
Curated knowledge of **patient-derived xenografts and organoids.**

Associate Prof. Soo Yong TAN MBBS FRCPath DMJ Dphil
Head of the Department of Pathology, National University Hospital and Yong Loo School of Medicine, National University of Singapore.

Provides valuable insights on **histopathology practices and tissue biorepository laboratories in emerging markets.**

3D Cell-based Platform Technology

Underlying platform technology '3D cell-based scaffolding' seeks to create multiple assets in toxicology and infectious diseases, as well as, a **potential deployment to consumer-driven services in oncology**



primary rat, human and monkey liver cells (HepG2 and HepaRG cells), pluripotent/ multipotent stem cells

1st Step: Simulates complex cell microenvironment *in vitro*

2nd Step: Promotes enhanced cell-to-cell contact

USPs • macroporous • homogenous distribution of spheroids in pores • controlled and well-defined spheroid size, prevents necrosis of the core • similar mechanical properties as *in vivo* liver • scalable with multi-well plates format in high-throughput screening • suitable with routine analytical techniques • low-cost of implementation

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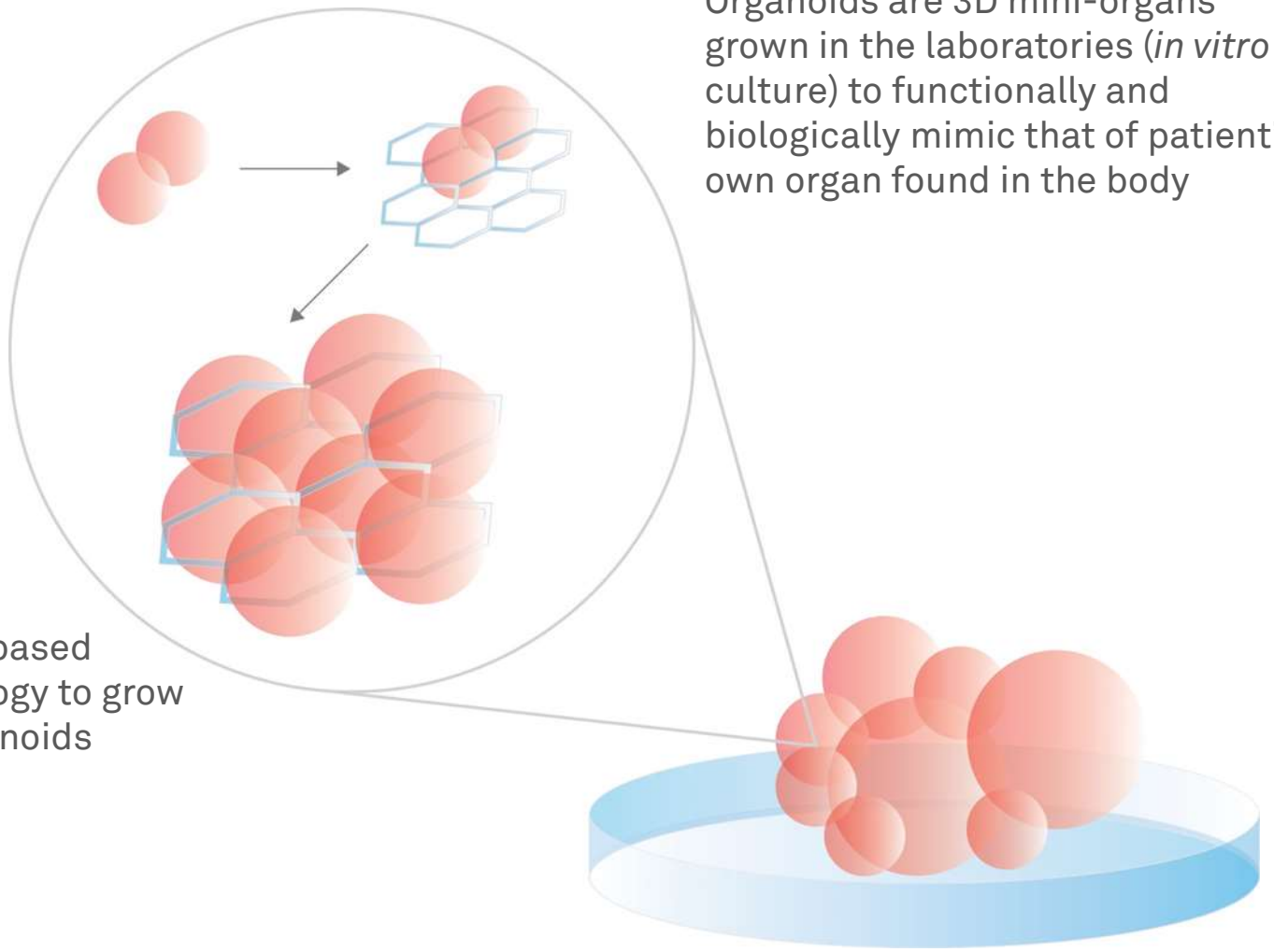
InvitroCue Expands 3D Cell-based Platform for Oncology

May 12, 2016 – InvitroCue (ASX:IVQ), a leader in advanced bioanalytics, announces today that it is planning to enter the oncology testing market for drugs to provide data points in selected solid tumours. Using its revolutionary 3D cell-based technology and proprietary processes, InvitroCue will be able to culture patient derived cancer cells in its laboratories for testing against a panel of approved drugs and new drug candidates; the company will be among the first to offer such tests.

Onco-PDO™, will enable InvitroCue to grow in its laboratories patient-derived tumour cells (an organoid) initially for biopharmaceutical companies, medical researchers and academic institutions to understand the impact of cancer treatments prior to conducting time consuming and expensive clinical trials. Subsequently, Onco-PDO may also create a new market for personalised drug testing using FDA approved drugs to improve individual treatment outcomes in selected solid tumours.

Patient-Derived Organoids (PDO)

Organoids are 3D mini-organs grown in the laboratories (*in vitro* culture) to functionally and biologically mimic that of patient's own organ found in the body



We use our '3D Cell-based Scaffolding' technology to grow patient-derived organoids

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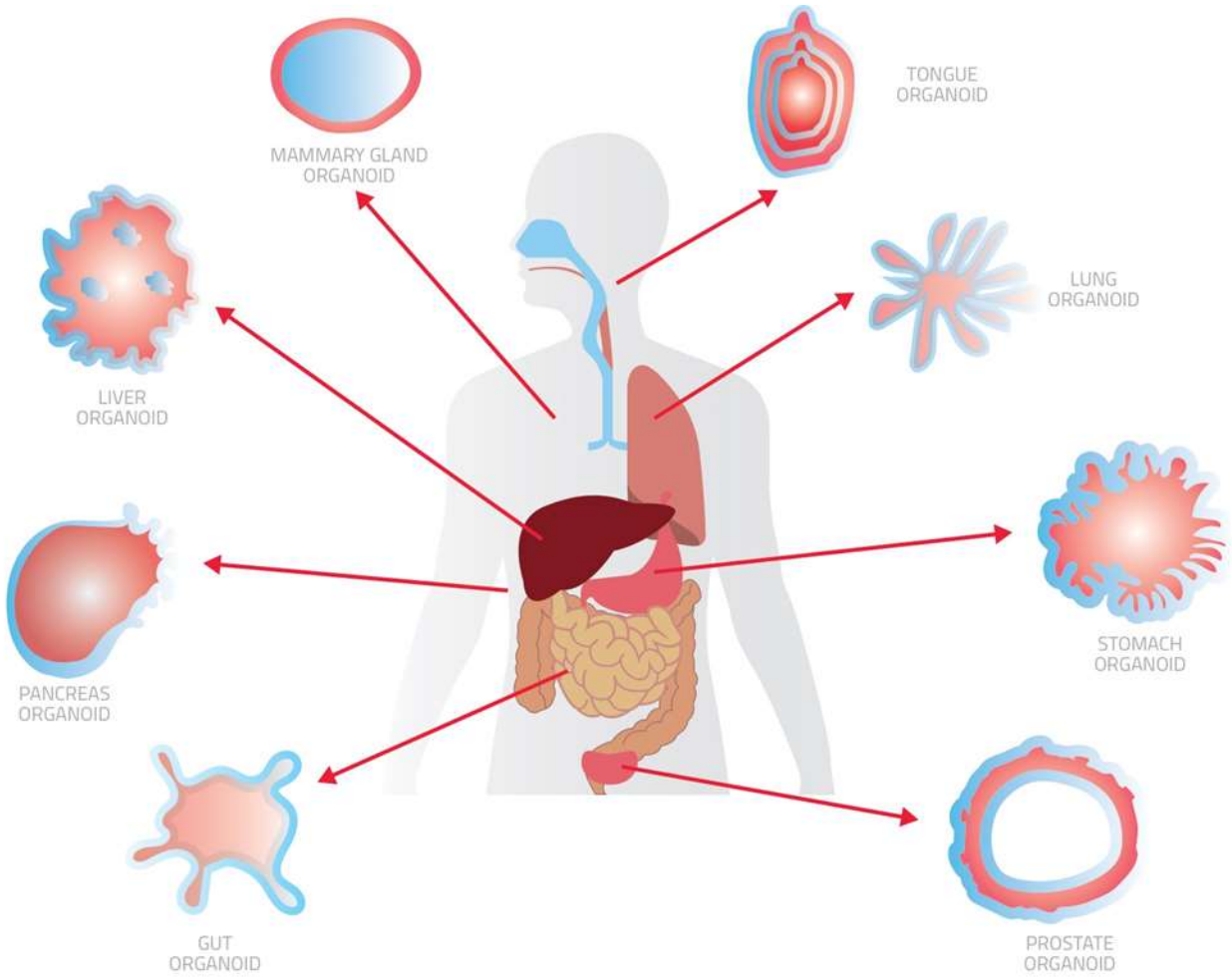
Multiple Organoids



Our '3D Cell-based Scaffolding' Technology allows scalability across multiple organ types, and creates a 'living' biobank derived from patient

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Oncology Market, Biggest Potential, Significant Unmet Need

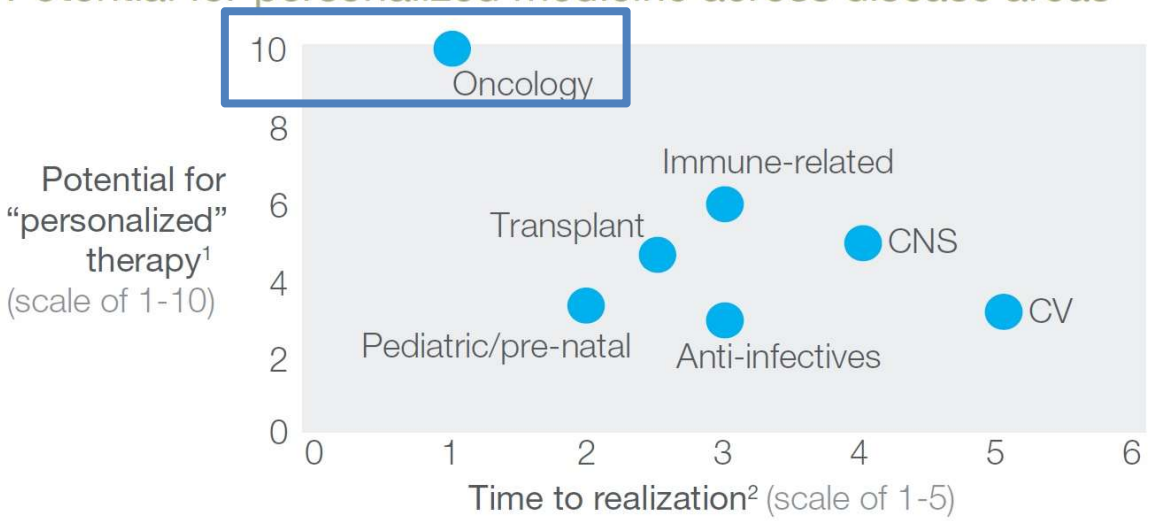
Oncology will continue to be the leading "playground" for personalized medicine with new understanding of disease and new Dx technologies

In the near term (3 to 5 years), the next frontier of personalized medicine is likely to be in immune-related, pediatrics/pre-natal, and infectious diseases

In the long-run, CNS and cardiovascular have tremendous potential for personalized medicine, but still in early stages of development

FIGURE 2

Potential for personalized medicine across disease areas

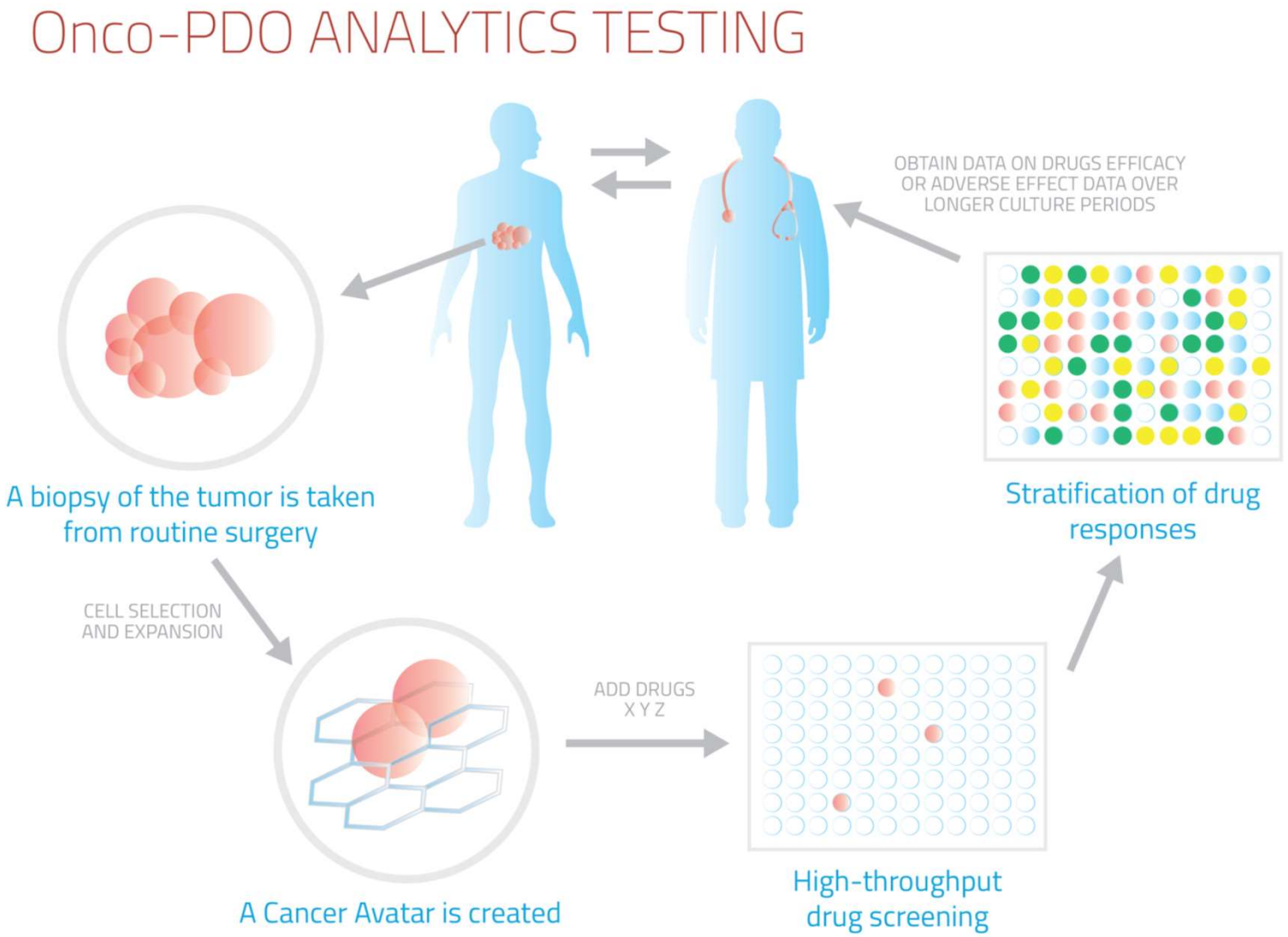


1 Potential based on understanding of disease heterogeneity, clinical relevance of personalized Dx and economic attractiveness

2 Years to realization based on disease understanding, technical feasibility and development timeline for therapeutics

Source: Mckinsey Report on Personalised Medicine 2013

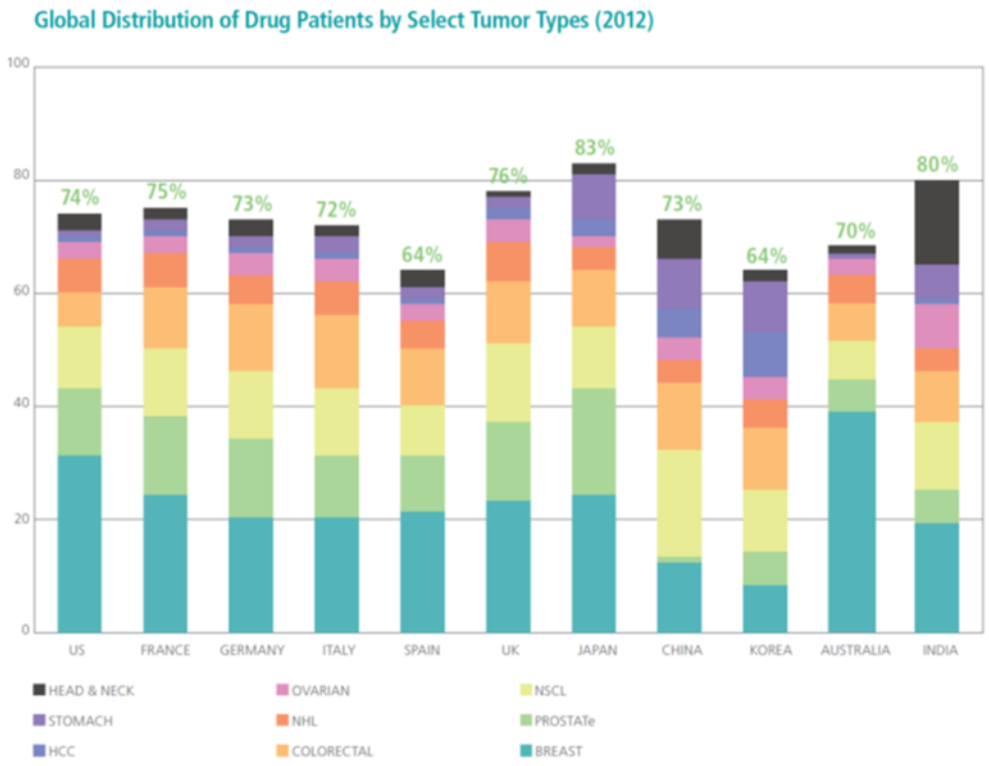
Onco-PDO™ Personalised Oncology



Personalised Testing

Selecting the optimal treatment regimen is highly complex with different oral treatment drugs, drug safety and drug class approved

Personalised Testing is to navigate the treatment plans; representing new treatment options for patients



DRUG	DRUG CLASS	MODE OF ACTION
Gazyva (obinutuzumab)	Monoclonal antibody	Anti-CD20 antibody
Gilotrif (afatinib)	Small molecule inhibitor	EGFR/HER2/HER4-TKI
Imbruvica (ibrutinib)	Small molecule inhibitor	Btk-inhibitor
Inlyta (axitinib)	Small molecule inhibitor	VEGF-inhibitor
Jetvana (cabazitaxel)	Taxane	Microtubule inhibitor
Kadcyla (ado-trastuzumab)	Antibody-drug conjugates	HER2-inhibitor
Mekinist (trametinib)	Small molecule inhibitor	MEK-inhibitor
Perjeta (pertuzumab)	Monoclonal antibody	HER2-inhibitor
Stivarga (regorafenib)	Small molecule inhibitor	Multi-kinase inhibitor
Tafinlar (dabrafenib)	Small molecule inhibitor	BRAF-inhibitor
Xalkori (crizotinib)	Small molecule inhibitor	Multi-kinase inhibitor
Yervoy (ipilimumab)	Monoclonal antibody	Anti-CTLA-4 antibody
Zelboraf (vemurafenib)	Small molecule inhibitor	BRAF-inhibitor
Zytiga (abiraterone acetate)	Hormone antagonist	CYP17-inhibitor

2ND+ LINE TREATMENT FOR STAGE IIIB/IV NSCLC IN CHINA	% OF PATIENTS RECEIVING
Cisplatin/Pemetrexed	13%
Cisplatin/Docetaxel	10%
Cisplatin/Gemcitabine	7%
Docetaxel	7%
Pemetrexed	6%
Gefitinib	5%
Carboplatin/Pemetrexed	4%
Docetaxel/NDP	3%
Capecitabine/NDP	3%
Carboplatin/Docetaxel	3%
Carboplatin/Paclitaxel	3%
Carboplatin/Gemcitabine	3%
Erlotinib	3%

Source: White Paper Oncology: The Disease, the Dynamics March 2014 Jackie Ilazqua

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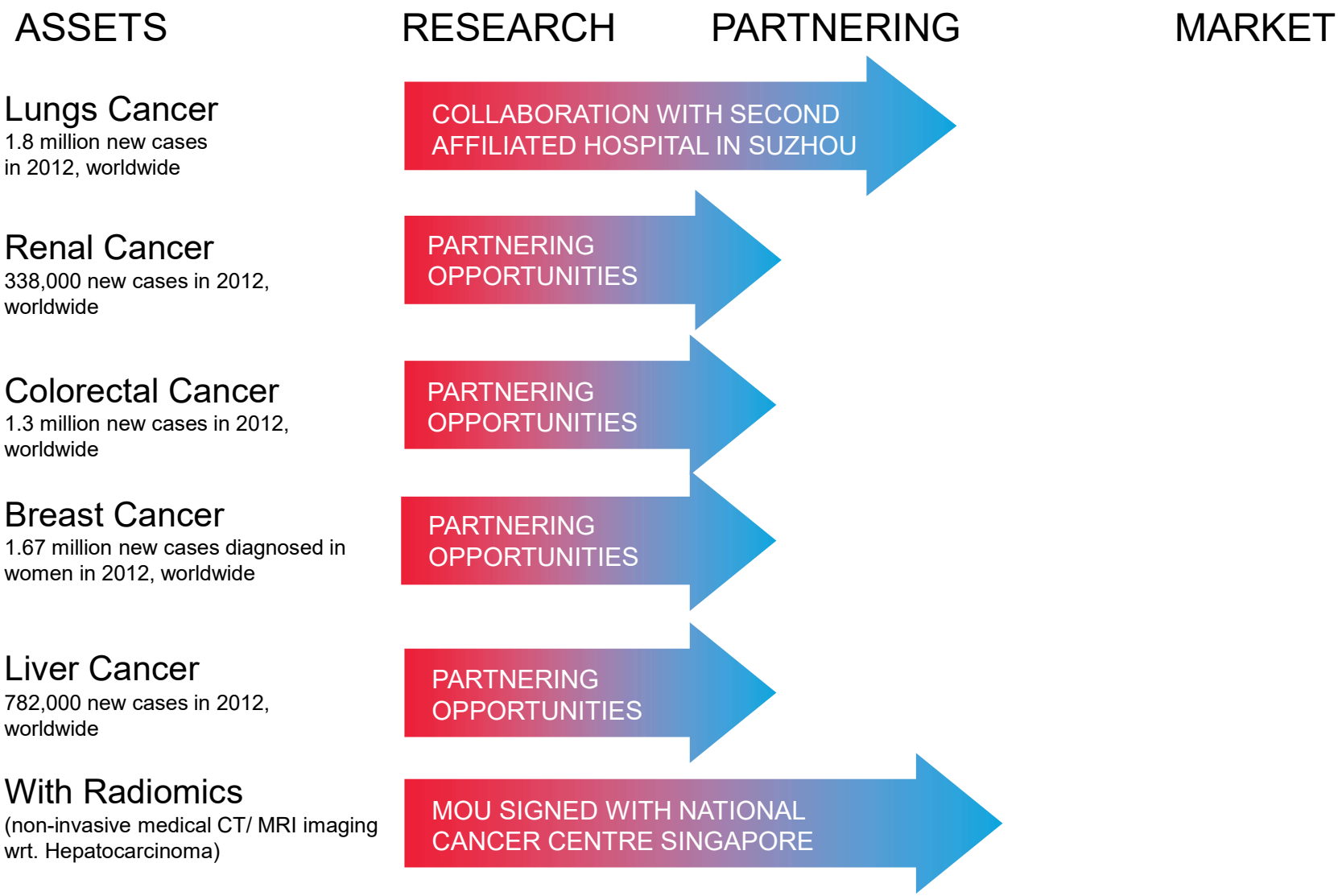
Onco-PDO Pipeline



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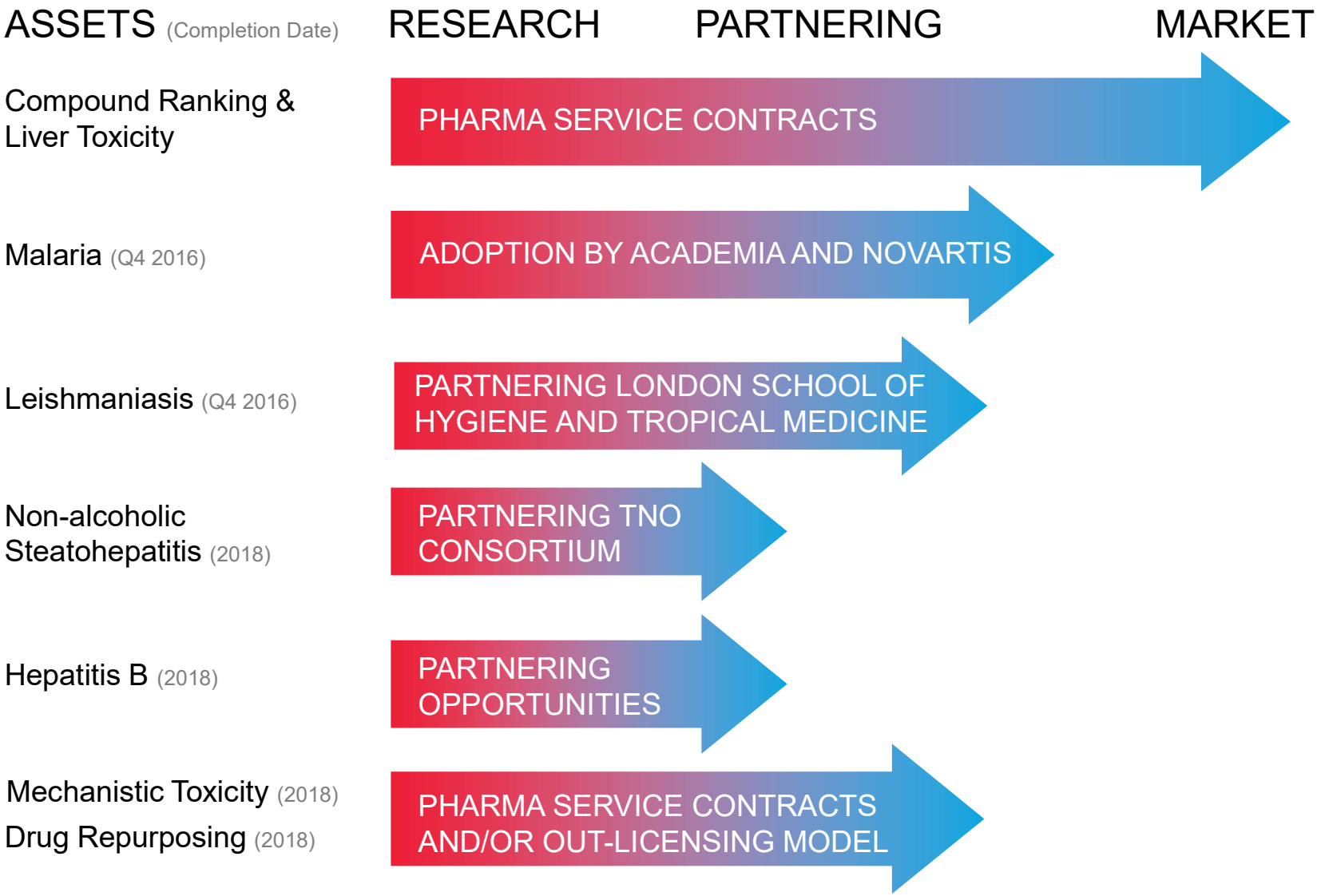
Source cited from International For Research on Cancer, World Health Organisation http://globocan.iarc.fr/Pages/fact_sheets_cancer.aspx
http://www.wcrf.org/int/cancer-facts-figures/data-specific-cancers/kidney-cancer-statistics

InvitroCue Announces Malaria Initiative

May 16, 2016 – InvitroCue (ASX:IVQ), a leader in advanced bioanalytics, announces today a key initiative on Malaria to identify and evaluate new drug targets to tropical infectious diseases.

Following its successful initiative to investigate drugs that target leishmaniasis, InvitroCue establishes an open and collaborative strategy that involves integrated partnerships and networks between academic infectious diseases institutes and pharmaceutical companies. InvitroCue has signed a research collaboration with Novartis Institute for Tropical Diseases Pte Ltd to investigate parasite *Plasmodium cynomolgi* (monkey malaria) using *in vitro* hepatocyte culture systems.

Services Pipeline



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