INVITROCUE

Limited (IVQ:ASX)

新加坡应求科技有限公司

TRANSFORMING BIOANALYTICS™

创造性生物医学分析

投资者简报—2016年6月

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摘要

我们提供的创造性生物分析解决方案将给

制药和医疗行业的体外实验测试带来革命性变化

具有应用范围广泛和运行成本低的多功能特色细胞技术平台（“3D细胞支架”）

- **适用于大多数类型的组织和细胞**
  - **成熟的**定制细胞组织培养服务资源
  - **成熟的**肝毒性测试资源
    - Cellacyl™：为非甾体类消炎药物排序
    - 机制毒理学/药物再利用
  - 国际领先的疟疾科研资源 (Novartis公司合作伙伴)
  - 国际领先的利什曼病科研资源 (伦敦卫生与热带医学院合作伙伴)
  - 国际领先的非酒精性脂肪肝科研资源 (荷兰TNO公司以及日本TaKaRa Bio株式合作伙伴)
  - 全新的乙肝科研资源 (具有医院和制药公司的合作机会)
  - 全新的肿瘤学科研资源 Onco-PDO™ (全新推出并具有医院和制药公司的合作机会)
- 在新加坡，欧盟，中国，澳大利亚，以及美国拥有多个著名合作项目
- 关键意见领袖作为科学顾问，经验丰富的精英管理团队
- 在细胞平台/测试方法的开发以及培养介质配方方面拥有卓越的专业科技团队

里程碑和公告

1月29日	在AHCC试验组会议和科技会谈中签署了MOU（谅解备忘录）：InvitroCue 和新加坡国立癌症中心合作开发癌症成像和影像组学（Radiomics）的定量研究
2月1日	InvitroCue 和美国ImageIQ公司建立合作伙伴关系，以推进亚洲区域的定量图像分析在临床前研究中的应用
2月15日	InvitroCue 与荷兰TNO公司以及日本Takara欧洲分公司签署了建立非酒精性肝炎模型的协议：New Consortium on NASH Pilots Organ Function-on-a-Chip
3月5日	InvitroCue 扩展了在苏州的细胞实验室，以满足客户日益增长的聚焦中国需求
3月9日	全新的用于利什曼病建模的体外3D技术
4月8日	InvitroCue 推出 Cellacyl 产品：专有酰基葡萄糖醛酸检测法 InvitroCue 和 SciKon Innovation 建立联盟，共同创造人类肝组织灌注的未来
5月12日	**InvitroCue 将3D细胞平台扩展到肿瘤学领域**
5月16日	**InvitroCue 宣布疟疾研究计划**

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关键意见领袖、科学顾问支持

Alex MATTER 教授 医学博士
新加坡科技局实验治疗中心和D3的首席执行官；
伯尔尼大学医学院名誉教授；
新加坡国立大学 Yong Loo Lin 药学院荣誉客座教授。

拥有几十年的**大型制药公司药物研发**经验。

Joseph King-Tak LEE 教授 医学博士 FACR
现北卡罗来那大学放射学主席，特聘教授；
新加坡国立大学和香港大学诊断成像系客座教授。

在**生物医学成像，功能成像和生物标志物成像发展等跨学科领域**提供新的见解。

Simon CROFT 教授 BSC PGCE 博士 FRSB (新加入成员)
传染病和热带病系，寄生虫学教授，
伦敦卫生与热带医学院。

拥有抗菌和抗原虫治疗丰富的经验和知识，为**通过体外实验模型来进行传染病药物筛选应用**提供支持。

Shervanthi HOMER-VANNIASINKAM 教授 BSC MBBS 医学博士 FRCSEd FRCS
英国利兹大学教学医院血管外科医生顾问；
华威大学手术系创始教授；
伦敦大学学院工程与外科学教授。

拥有关于**患者衍生移植物与类器官研究**方面的权威知识。

Soo Yong TAN 副教授 MBBS FRCPath DMJ Dphil
新加坡国立大学，国立大学医院和 Yong Loo Lin 药学院，病理学系主任

提供**在新兴市场中病理学实践和组织生物实验室**的宝贵见解。

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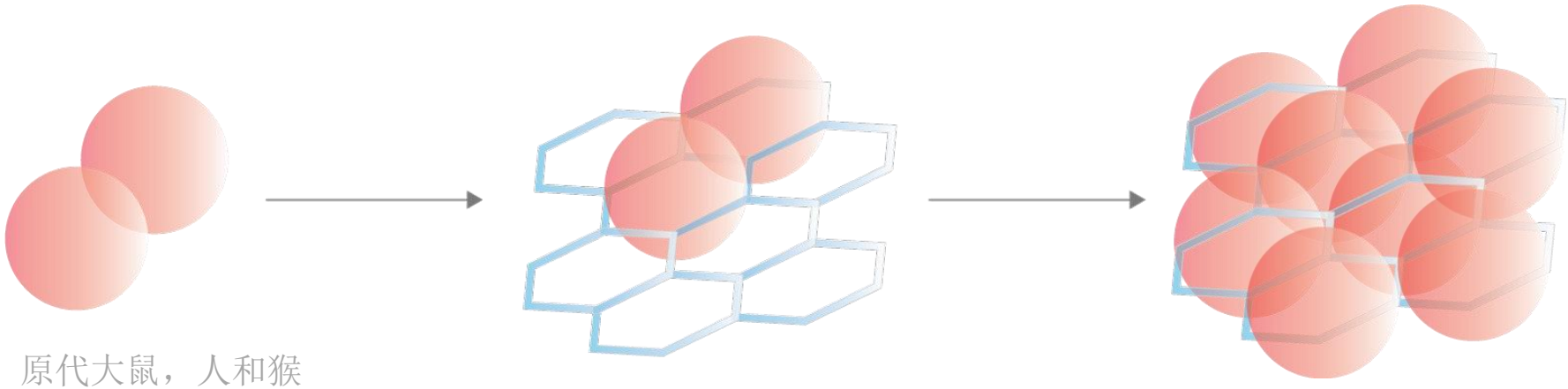
3D细胞技术平台

我们采用的3D细胞支架技术平台，在毒理学和传染病研究领域创建了多个优势项目,同时在**以患者为导向的肿瘤学服务**领域有潜在应用前景



原代大鼠，人和猴肝细胞（HepG2和HepaRG细胞），多能干细胞

第1步：模拟体外复杂的细胞微环境

第2步：促进增强细胞与细胞接触

独特卖点•大孔•细胞球在孔中可以均匀分布•可以良好控制和量化细胞球尺寸，以防细胞坏死•与体内肝脏相似的机械性质•适用于进行高通量筛选的多孔细胞板培养•适合常规分析技术•低成本

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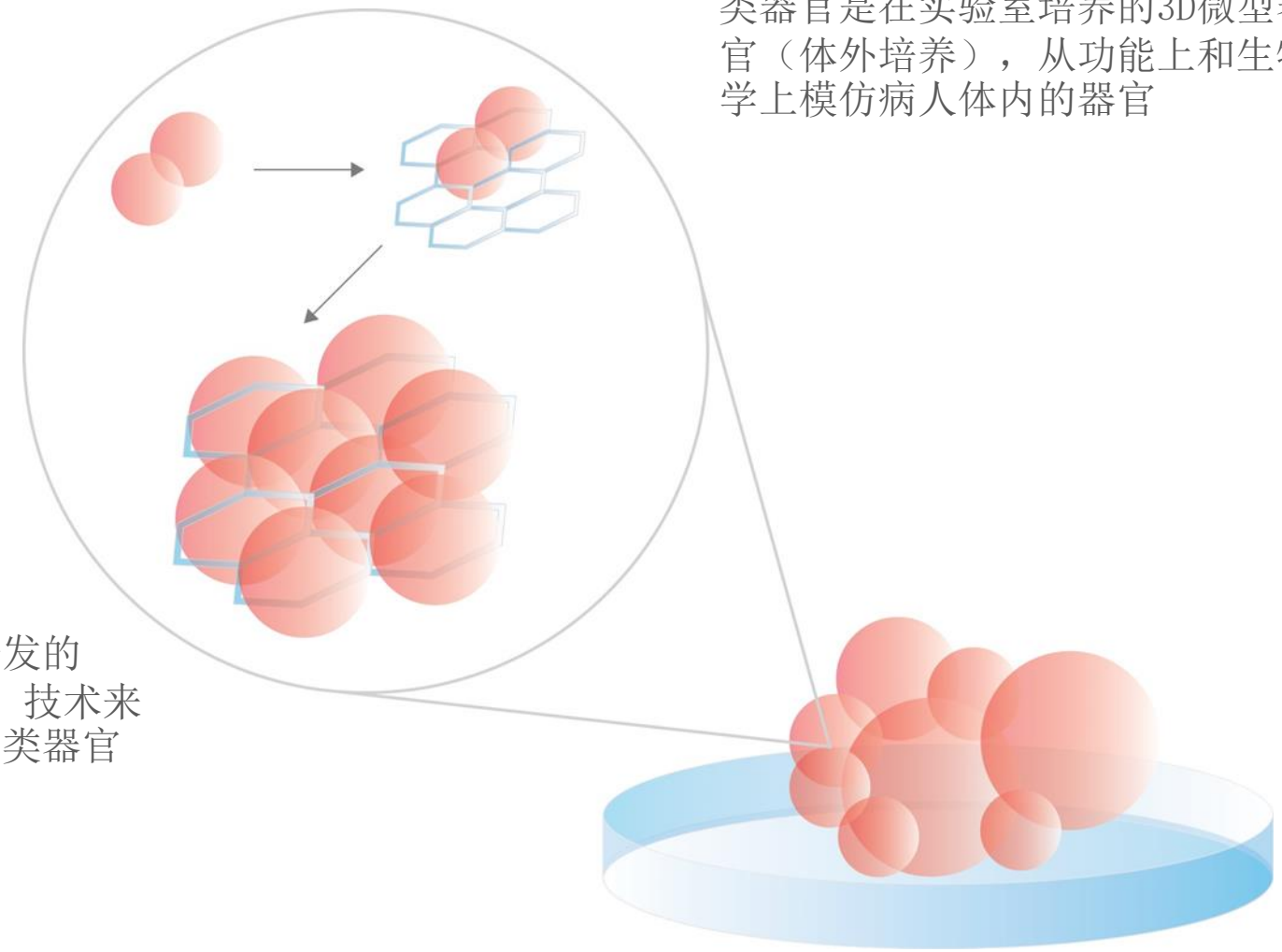
InvitroCue 将3D细胞平台扩展到肿瘤学领域

2016年5月12日 - InvitroCue (IVQ:ASX)，作为先进生物分析的领导者，今天宣布，它计划进入肿瘤药物检测市场，并为特定的固体肿瘤药物提供实验数据。以其革命性的3D细胞培养技术和专有工艺，InvitroCue 将能够在实验室培养来自患者的癌细胞，对一组批准的已知药物和新的候选药物进行测试；我们将会是首批提供该类测试的公司。

Onco-PDO™ 模型，将让 InvitroCue 有能力在实验室培养来自病人的肿瘤细胞，这项服务将首先面向生物制药公司、医疗和学术机构的研究人员，在他们进行耗时且昂贵的临床试验之前帮助他们了解癌症治疗的影响。随后，Onco-PDO 模型还可用于将FDA批准的肿瘤药物进行个体化测试，用来提高个体的特定固体肿瘤疗效；这将创造出一个全新的市场。

患者衍生类器官 (PDO)

类器官是在实验室培养的3D微型器官（体外培养），从功能上和生物学上模仿病人体内的器官



我们使用自主研发的“3D细胞支架” 技术来培养来自患者的类器官

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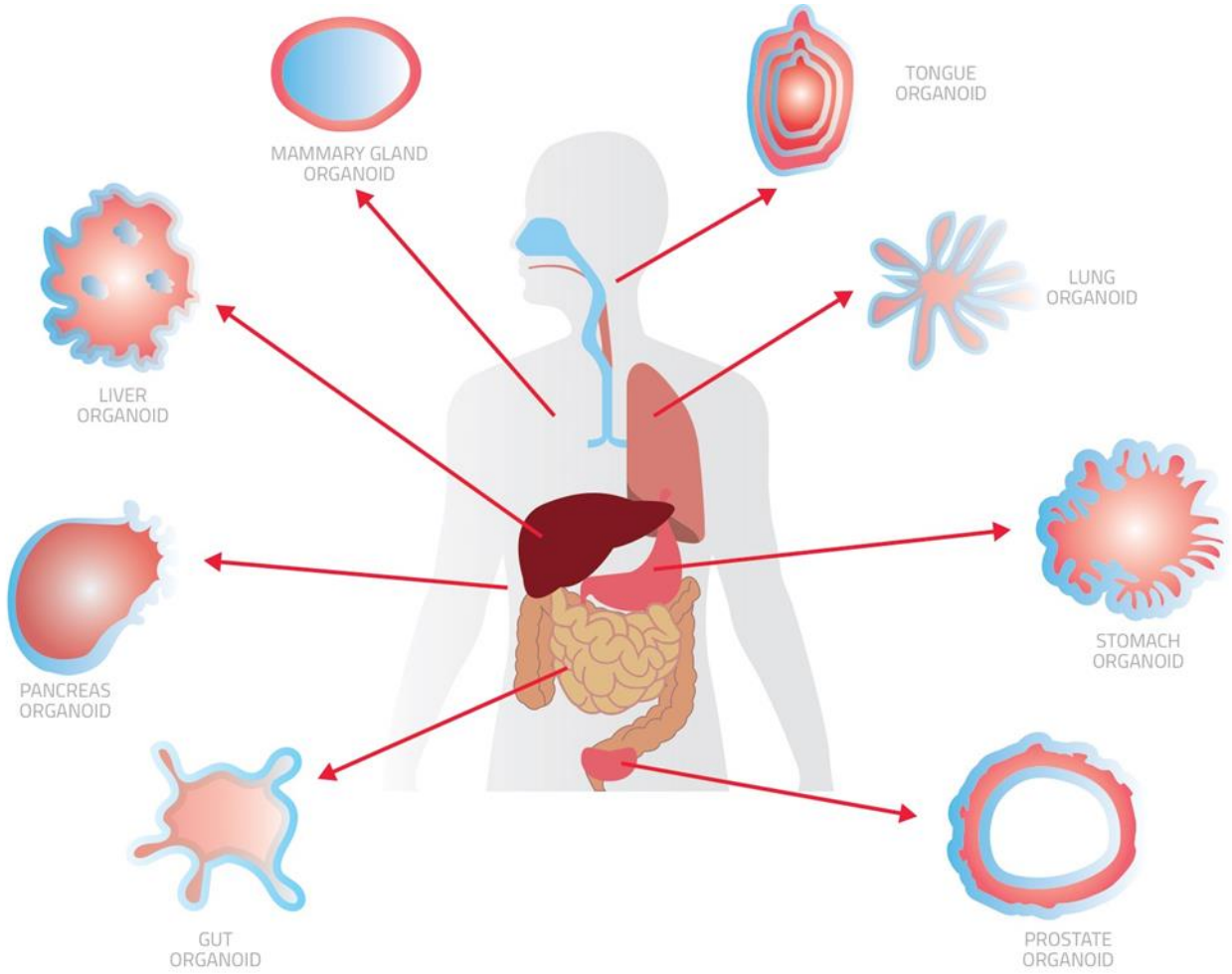
多种类器官



我们的 “3D细胞支架” 技术将能扩展到各种器官类型，并且创造出一个来自患者的 “活体” 生物样本库。

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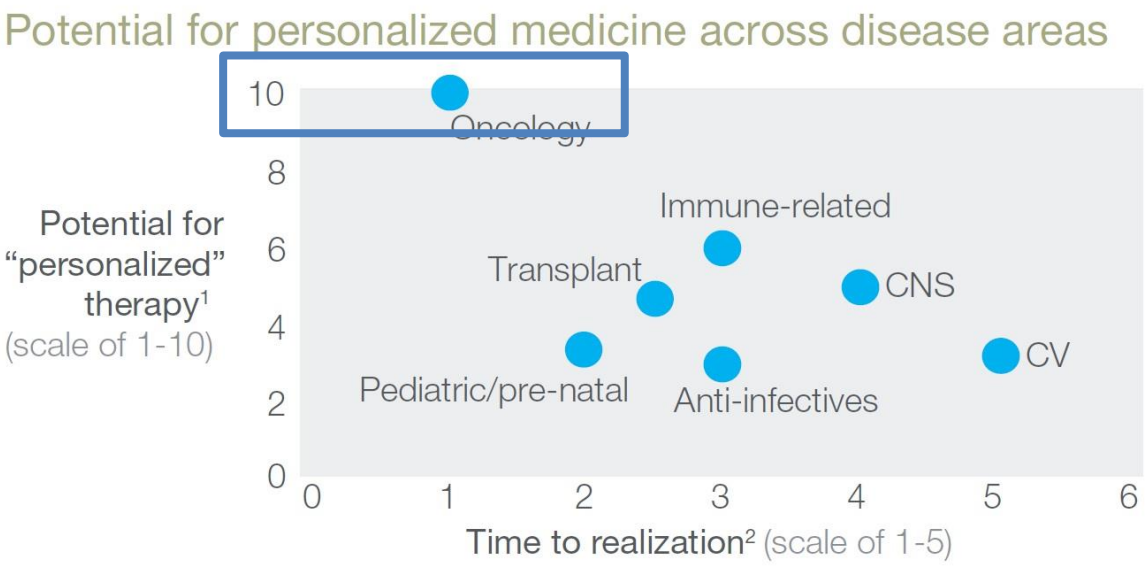
肿瘤市场，潜力最大，需求相当显著

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



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

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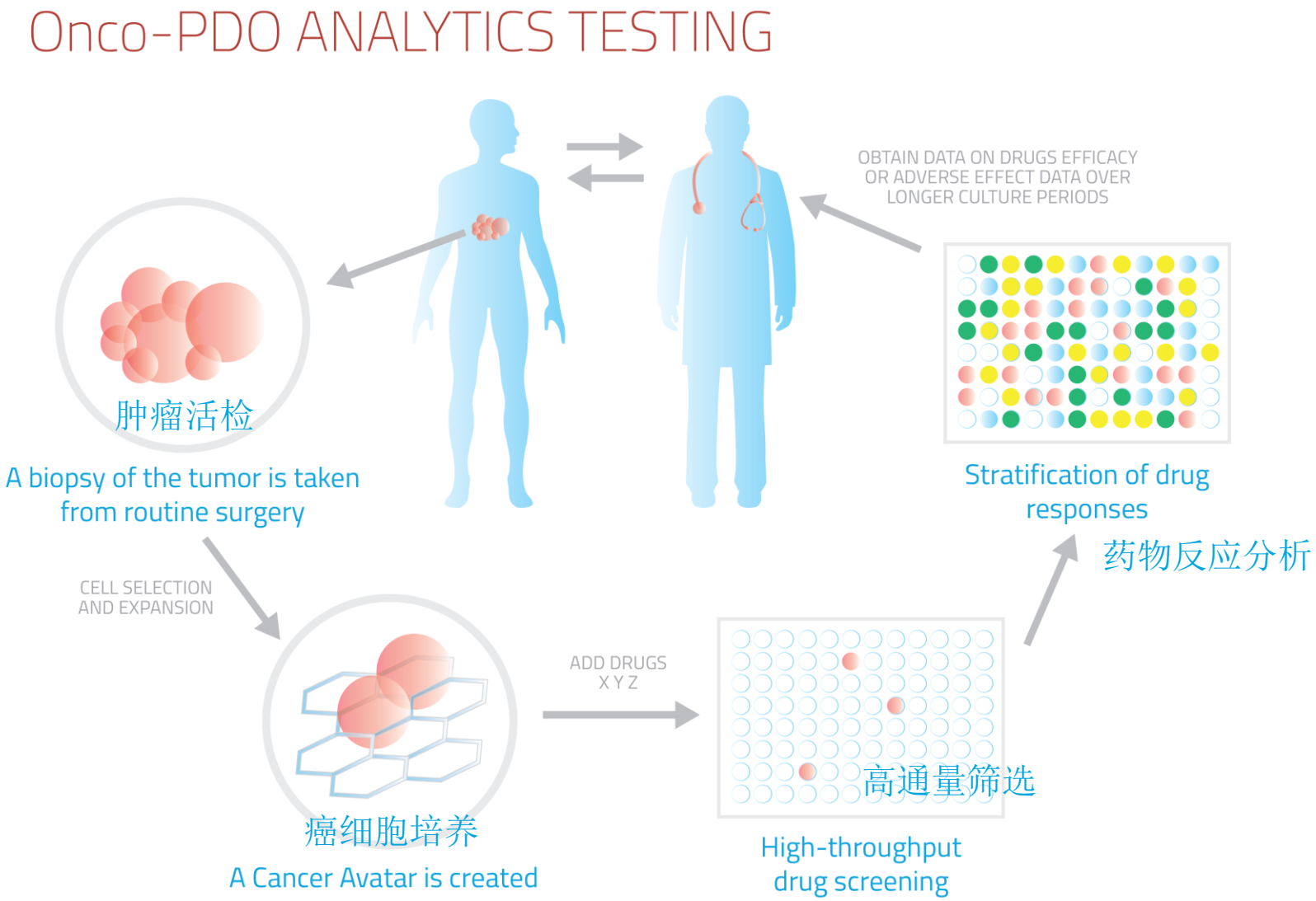
Onco-PDO™ 个性化肿瘤治疗



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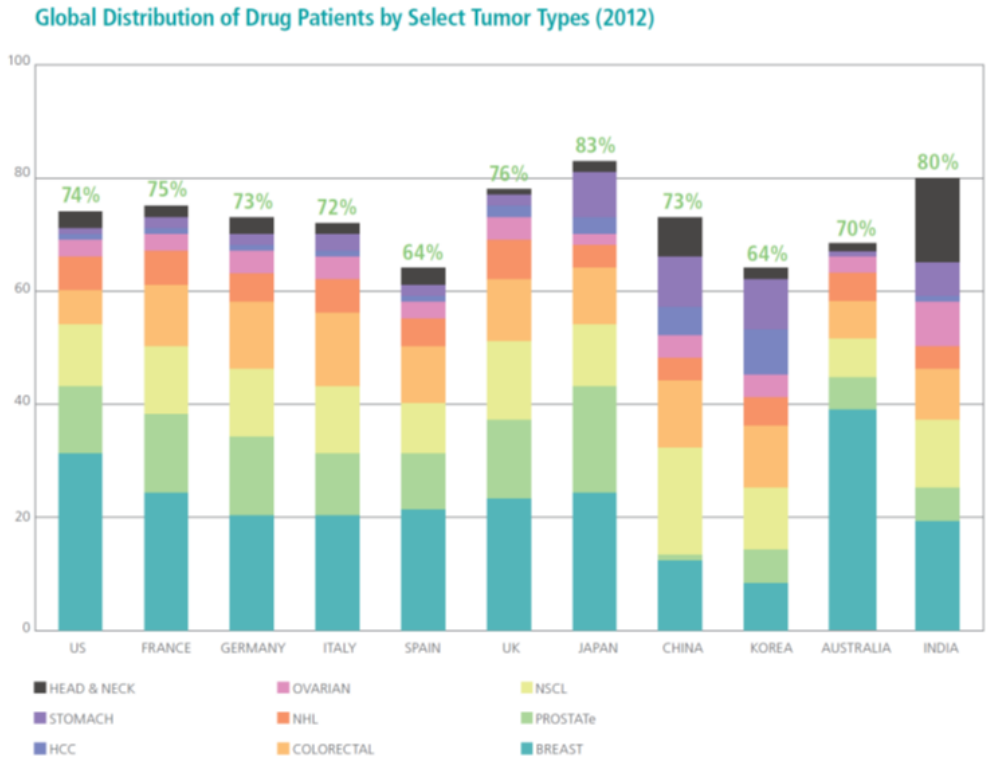
个体化测试

由于市场上有各种不同的口服治疗药物，且拥有各异的药物安全性和药物分类，选择最佳的治疗方案是高度复杂的。

个体化测试能为患者拟订有针对性的治疗计划，并为患者提供全新的治疗方案选择。



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 发展计划

资源　　科研　　合作伙伴　　市场

肺癌
2012年全球180万新增病例

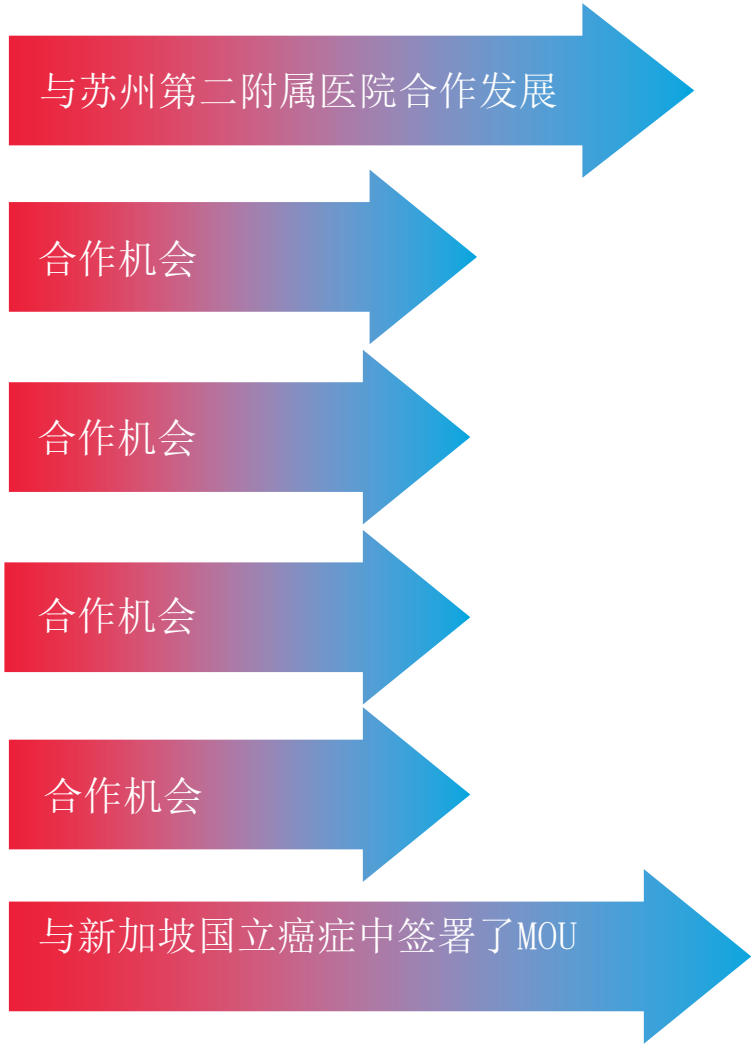
肾癌
2012年全球33.8万新增病例

大肠癌
2012年全球130万新增病例

乳腺癌
2012年全球167万新增女性病例

肝癌
2012年全球78.2万新增病例

与影像组学（Radiomics）合作
(为肝癌提供非侵入性医疗CT / MRI成像)



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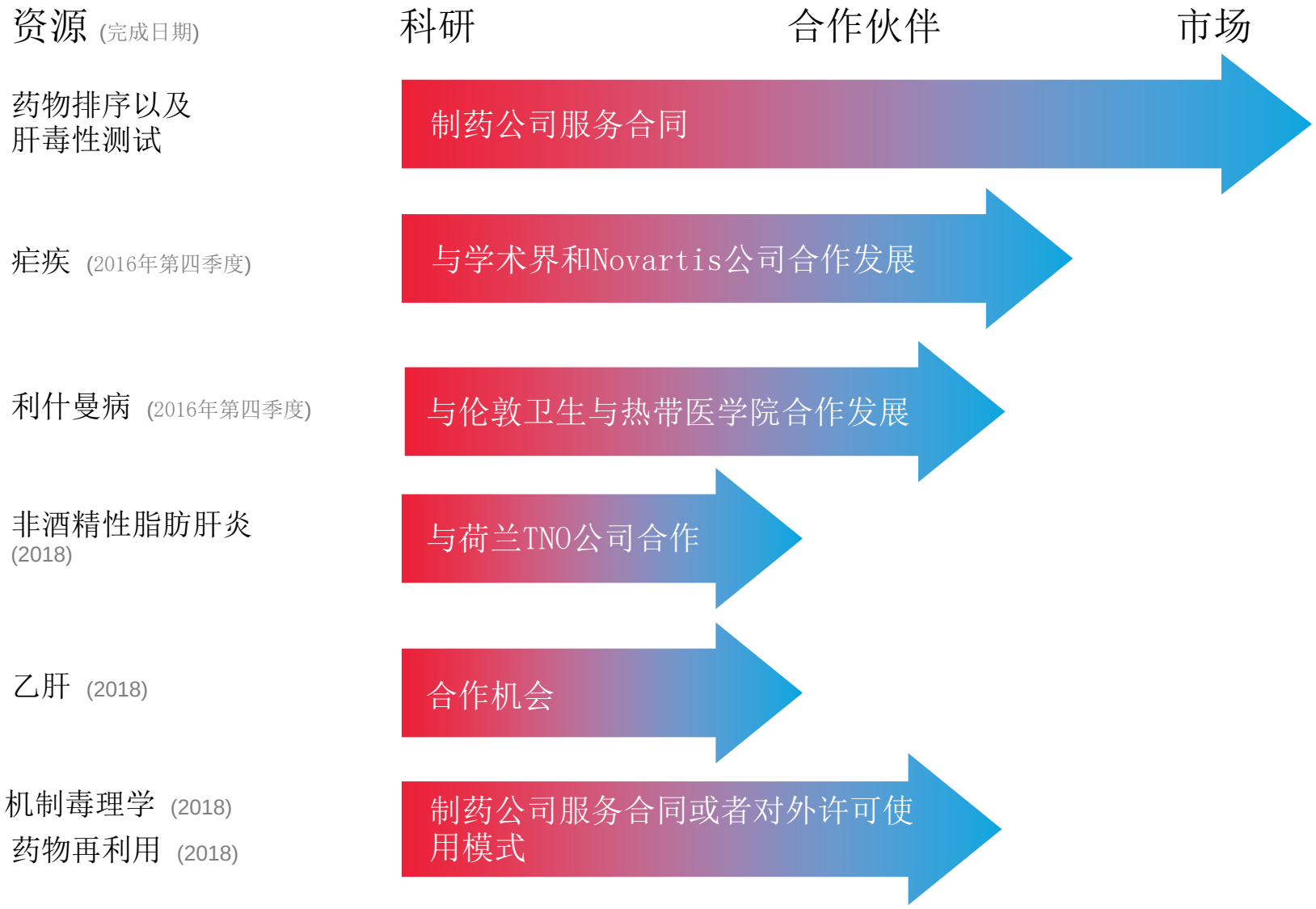
Source cited from International For Research on Cancer, World Health Organisation http://globocan.iarc.fr/Pages/fact_sheets_cancer.aspx
http://www.wcrf.org/int/cancer-facts-figures/data-specific-cancers/kidney-cancer-statistics

InvitroCue 宣布疟疾研究计划

2016年5月16日 - InvitroCue (IVQ:ASX)，作为先进生物分析的领导者，今天宣布了一项关于疟疾治疗方面的关键举措：公司将研究识别和评估新的药物靶点，为热带传染病的治疗做出卓越贡献。

继成功启动针对利什曼病的药物科研项目之后，InvitroCue 成功建立了一个开放且合作化的策略，包括集成学术界传染病研究机构和制药公司之间的合作伙伴关系以及合作网络。InvitroCue 已经和Novartis公司热带疾病研究所签署了共同研究合同，双方将利用体外肝细胞培养技术进行深度合作，对猴疟疾疟原虫展开深入研究。

服务发展计划



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