

July 4th 2013

POLARIS

RIGHT DRUG, RIGHT PATIENT, RIGHT TIME

Our Vision:

Enable and promote clinical use of OMIC technologies to facilitate personalized medicine in routine healthcare, in order to deliver **the right drug to the right patient at the right time**, resulting in improved clinical response rates, reduced treatment toxicities and optimized clinical trials.



Leveraging on Key Factors:

- * Increasing availability of targeted therapeutics
- * Rapidly improving OMIC platform technology
- * Established cutting edge clinical care in Singapore
- * Proven competencies in OMIC research
- * Access to patients with diverse ethnicities and Asian specific diseases

Personalised OMIC Lattice for Advanced Research and Improving Stratification: Transforming Disease Management Through Personalized OMIC Profiling

POLARIS is a strategic initiative for introducing and embedding OMIC information into disease diagnosis and treatment in Singapore.

Asia and Asian-specific diseases are increasingly viewed as growth areas by the pharmaceutical industry. The continent is home to a variety of Asilimhean-specific disease phenotypes (e.g. gastric and lung cancer) more prevalent here than in the West. Separately, ethnic specific differences exist at the molecular level in diseases common both here and in the West (e.g. diabetes and cardiovascular disease) which necessitates the use of biomarkers and drugs

relevant to Asian populations.

In the lab, considerable local success has been achieved in identifying such novel biomarkers in Asian-specific diseases. There is subsequently an urgent need to integrate scientific research with patient care, translating these discoveries into clinically validated and implementable assays and enabling collaboration with industry on novel drug design and clinical trials.

POLARIS is designed to bridge this gap between the laboratory, clinic and industry by utilizing cutting edge genomics and metabolomics

technology in patient care to **match the right patient to the right drug**. This form of personalized medicine seeks better patient outcomes through a more targeted approach based on genetic and molecular profiling.



POLARIS: A Game Changer On Multiple Fronts

For Researchers

Provide a platform for translating locally discovered genomic biomarkers into validated clinical-grade assays.

For Clinicians

Provide the ability to perform specific clinical grade OMIC assays for patient diagnosis and treatment stratification.

For Industry

Enable collaborations with researchers and clinicians to design clinical trials and develop products stratified for Asian populations.

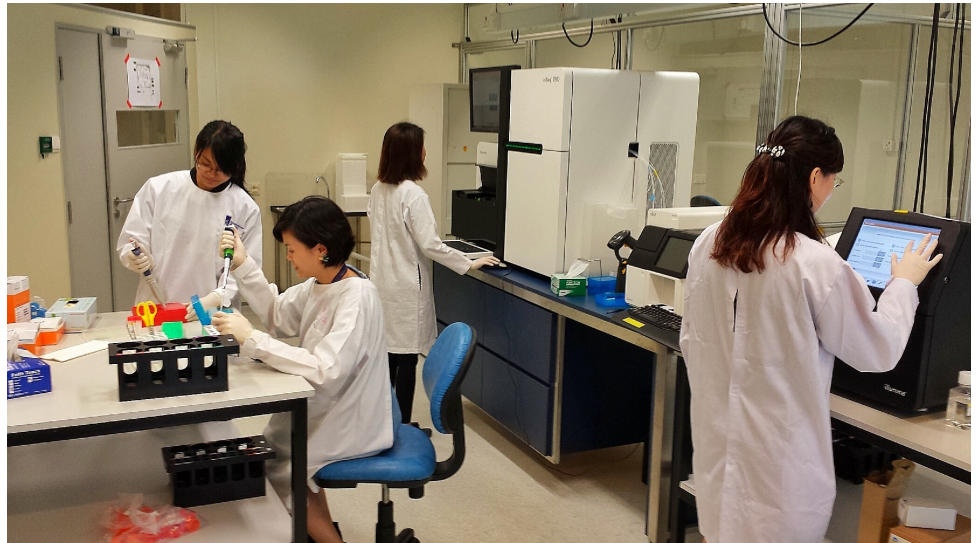
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Operational Targets

- 1) Establish sister College of American Pathologists (CAP) accredited laboratories at SGH and A*STAR for the development and validation of OMIC assays.
- 2) Develop technology to optimize processing of standard patient samples from formalin-fixed paraffin-embedded (FFPE) tissues, small volume biopsies (SVB) and blood serum for next generation sequencing assays.
- 3) Develop end user friendly informatics pipelines for results analysis, data interpretation and clinician reporting.



Key Personnel

Leadership Team

Program Director

Patrick Tan, MD, PhD

Clinical Director

Tony Lim, MBBS, FRCPath, FRCPA

Chief Operating Officer

Christopher Wong, PhD, MBA

Bioinformatics

Pauline Ng, PhD

Metabolomics

Ho Ying Swan, PhD

Disease Champions

Lung Cancer

Daniel Tan, Associate Consultant, NCCS

Gastrointestinal Cancer

Iain Tan, Associate Consultant, NCCS

Eye Disease

Aung Tin, Senior Consultant, NCCS

Contact

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