



Dear Colleagues,

Welcome to the October 2017 update of the POLARIS program! We're pleased to share with you our exciting news:

POLARIS to validate companion diagnostics kit for the drug ETC-1922159.

POLARIS will be performing analytical validation of the D3 RSPO Gene Fusion Test kit. This kit is the companion diagnostics kit for ETC-1922159, which is a small porcupine inhibitor that can potentially treat tumors harboring molecular aberrations with hyperactivated Wnt

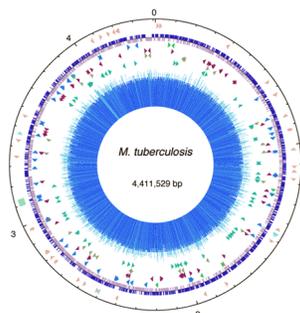
signalling.

In compliance with FDA guidelines, the validation studies will be conducted in our CAP-certified POLARIS laboratory. The project is a collaboration with D3, led by CEO Prof. Alex Matter and Head of Development Dr. Veronica Diermayr with clinical support from Dr. Iain Tan and Dr. Tony Lim. The D3 RSPO Gene Fusion Test is a RT-qPCR assay that detects gene fusions containing R-spondins (RSPO). RSPO gene fusions recur in colorectal cancer and are expected to be sensitive to porcupine inhibition; the validated D3 RSPO Gene Fusion Test will be used as a clinical trial assay (CTA) to support the selection of patients eligible for ETC-1922159 treatment in the Phase 1B trial. The testing of clinical samples for the selection of clinical trial subjects will also be carried out at the POLARIS laboratory.

Reference: Anti-tumor efficacy of ETC-1922159 in two colorectal cancer patient-derived xenografts. [Madan, et al. OncoGene 2016.](#)

POLARIS continues to be infectious.

Sequencing proved that the recent large outbreak of Group B Streptococcus was caused only by one strain. Dr. Hsu Li Yang and Dr. Tim Barkham led a multi-centre, international collaborative effort with Tan Tock Seng Hospital, Changi Hospital, National University Hospital, Singapore General Hospital, KK Hospital, Khoo Teck Puat Hospital, NUS Saw Swee Hock School of Public Health, Thammasat University Hospital (Thailand), Chinese University of Hong Kong, St. Andrews University (Scotland, UK), Ministry of Health, AVA, NEA, POLARIS, and the Genome Institute of Singapore to sequence more than 200 Group B Streptococcus patient samples.



TB or not TB.

POLARIS will sequence 500 tuberculosis (TB) isolates annually from patients in Singapore in collaboration with Dr. Hsu Li Yang from Tan Tock Seng Hospital, as well as the Central Tuberculosis Laboratory at SingHealth, NUH, and NUS Saw Swee Hock School of Public Health. POLARIS has

developed a pipeline for sequencing TB samples and established a phylogeny method for predicting a patient's sensitivity and resistance to TB drugs.

Say hello to Sandro and Roger!

Dr. Alexander "Sandro" Lezhava has taken the reins as Program Manager for POLARIS, since our former program manager Dr. Patrick Tan was promoted to Deputy Executive Director for BMRC. (Congrats Patrick!) Sandro has an ISO-certified Translational Research laboratory, initiated >10 projects with industry and academic partners, and established 2 joint laboratories with industry. Sandro's vision is to further integrate POLARIS with translational research, which will help enable translational medicine.



We also welcome aboard Dr. Roger Foo as a new Disease Champion. Roger is a Senior Consultant Cardiologist at NUH, and a senior investigator at GIS and the Cardiovascular Research Institute in NUS. He runs the Inherited Heart Disease clinics at NUH and CGH. Dr. Foo joins us to enable whole exome sequencing for clinical diagnostics in Singapore. He is a Programme Lead for the SUREkids program (Singapore Undiagnosed disease REsearch for kids). Look out for more exciting news on clinical whole exome sequencing from POLARIS!

To CAP this newsletter off.

We had a non-routine inspection by CAP only 6 months after our first inspection because we were a new lab. We're pleased to say that we passed with flying colors (yay!), and the POLARIS laboratory continues to be CAP-certified.



Until next time,
Alexander Lezhava
(On behalf of the POLARIS Team)