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## Fully annotated PDX library as a live and renewable biobank to support biomarker discovery and guide precision treatment

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Cancers are diverse diseases, with various histo-/molecular pathogenesis, and respond vastly different to treatments. Optimal therapy needs to be precise and personalized, which demands accurate diagnosis and modeling. We recently developed a new molecular diagnostic tool, HuDiagnosis<sup>TM</sup>, that can precisely diagnose cancer diseases using NGS per a novel molecular pathology algorithm, to guide precision therapy. This tool, with equivalency to classic histopathology but significantly more reliable and objective, can also be particularly useful in annotating biobank. In addition, we have also built the largest patient derived xenograft (PDX) library of >3,000 models covering diverse cancer types with full annotation of histo-/molecular pathology, growth and treatment information. This growing library, with intent as experimental model to support population-based investigations (clinic styled) at preclinical setting (mouse clinical trial -- MCT), is also a live and renewable biobank that can be used to facilitate various biobank functions, e.g. biomarker discovery. In particular, together with experimental efficacy readout, this live bank can greatly enhance predictive biomarker exploration.

### Biography

Henry QX Li, PhD currently leads Crown's Translational Oncology Division with platforms built on patient derived xenograft (PDX). Prior to Crown, Dr. Li has over 20 years of biopharmaceutical, as well as academic R&D, experiences in cancer and viral infection, including leadership roles as R&D director/senior director roles in several US-based biotech companies. Dr. Li currently also holds visiting Professor position at Peking University-State Key Laboratory. He earned his Ph.D. in Molecular Biology/Biochemistry from University of California (Irvine) and completed his postdoctoral training at UCLA School of Medicine. He has published more than 50 manuscripts and edited 3 books in the biopharmaceutical areas. He is also on the editorial board of Current Signal Transduction Therapy.

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