CROWN BIOSCIENCE

PDX Model Collection

PDX models for cancer therapy evaluation

A JSR Life Sciences Company

FACTSHEET

V1.0

Discover Crown Bioscience's extensive collection of patient-derived xenografts, to better evaluate your cancer therapies.

Preclinical drug discovery still faces many challenges, one of which is the need for models which give better insight into clinical outcomes. Patient-derived xenografts (PDX) have proven to be a more predictive preclinical model, demonstrating to be more clinically relevant through better representation of human heterogeneity.

Crown Bioscience provides the largest collection of well-characterized *in vivo* PDX tumor models available for preclinical drug evaluation.

Explore this collection to:

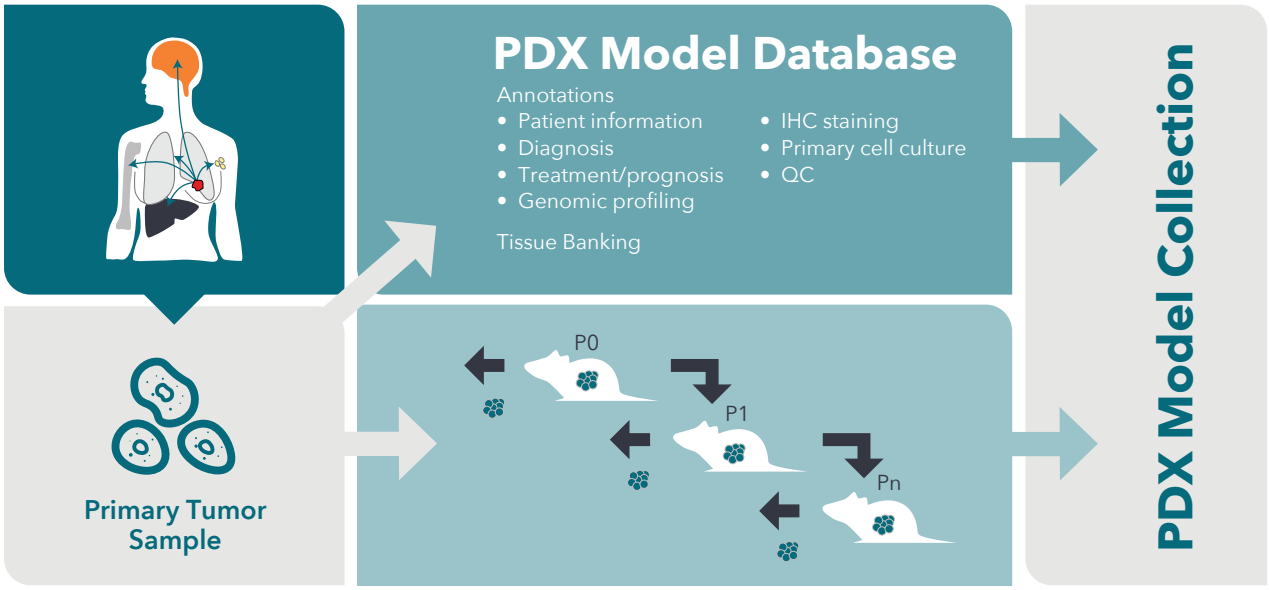
- Diversify your model choice through access to over 2,800 well-characterized PDX models representing more than 30 cancer types
- Stratify patients into responders, partial, and non-responders, and look for molecular signatures of response
- Evaluate models through standard efficacy testing or gain more clinical insight by enrolling PDX models into mouse clinical trials

Key Facts

PDX models are well-characterized for pathology, growth characteristics, and response to standard of care (SoC) agents, and are also genetically/genomically annotated for gene expression, gene copy number, mutations, and fusions via NGS technologies, as well as microRNA.

- Large, diverse collection from US, European, and Asian populations, covering over 30 cancer types
- Models derived from both treatment naïve as well as treated patients
- Collection includes PDXs derived from metastatic lesions
- PDX models of both innate and acquired resistance
- Large cohorts of live PDXs of major disease to enable fast study execution
- Unique models of specific disease pathways for targeted therapy such as RET, ALK, EGFR, MET, IDH, RSPO, and HER2
- Large cohorts of live PDXs of major disease to enable fast study execution
- Unique collections of underrepresented indications, including GIST and prostate cancer
- Curated, online, searchable database (HuBaseTM) of phenotypic and genotypic data, patient information, growth curves, and SoC treatment data

Translationally Relevant Preclinical Models



Our collection of PDX models have been QC'd to determine whether they are "fit for efficacy" studies. They exhibit robust and consistent growth characteristics, are fully recoverable from cryogenic preservation, and have sufficient material banked down at multiple passages (master banked) to ensure our ability to perform multiple constant studies.

Extensive characterization data across the collection can be found in our searchable PDX database, HuBase, and includes: RNA-seq of over 1,500 models, whole exome sequencing of over 680 models, histology, growth kinetics, and SoC and investigative treatment data.

The full suite of technology platform annotations can include:

- RNA-seq
- Whole genome sequencing (WGS)
- U219 gene chip array analysis (mRNA)
- SNP6.0 array analysis
- miRNA profiling
- Whole exome sequencing (WES)
- Transcriptome sequencing
- Short Tandem Repeat (STR) genotyping
- Phenotyping, including HLA test
- Primary blood test results
- Primary marrow morphology
- Patient & model treatment and post treatment
- Gene fusion and mutation
- Growth curves
- SoC response curves

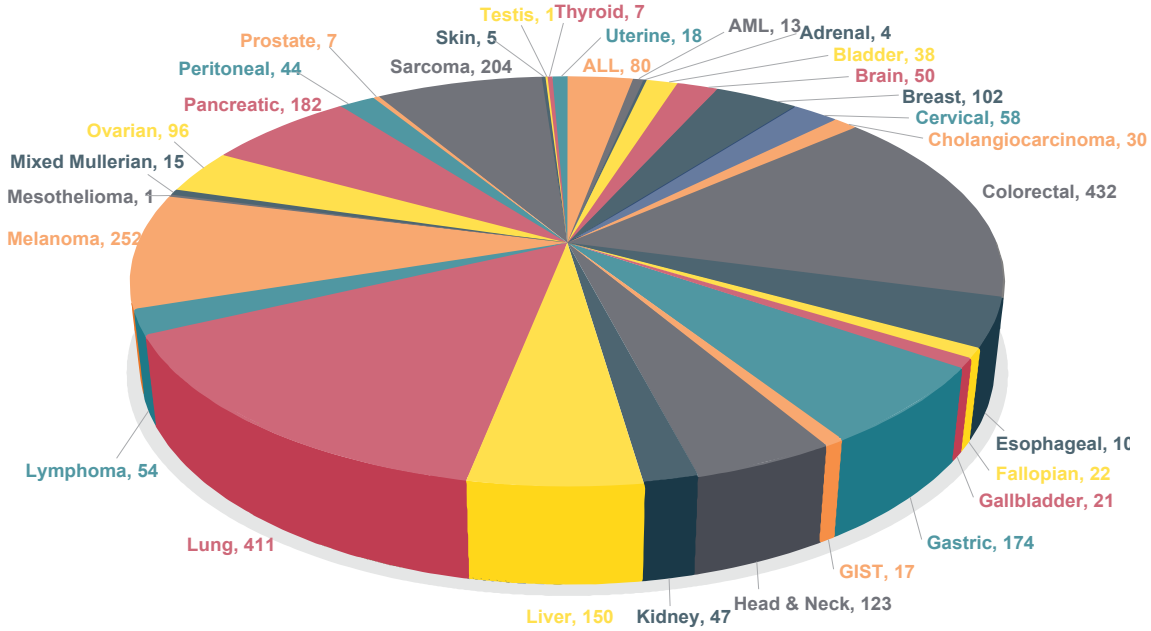
The PDX collection contains models from pretreated and treatment naïve patients, representative of the clinical situation. Tumor biopsy site (primary tumor vs metastatic lesion) is also specified for our models. It also includes unique PDX collections of prostate cancer, SCLC, lympoma, GIST, etc.

These models are seamlessly integrated with Crown Bioscience Translational Oncology platforms to provide a comprehensive suite of translational research tools such as Mouse clinical trials, and predictive biomarker discovery.

Collections by Cancer Type

Our PDX collection features many models which are of specific interest to researchers, example model subsets within the PDX collection are shown overleaf, with many more subsets and targets of interest available within.

This includes models with a specific gene mutation, amplification, or fusion of clinical relevance, which are particularly useful for novel agent evaluation. Our PDX models also include metastatic models; models of drug resistance; orthotopic (HCC, CRC, glioma, breast, lung, etc.) models; models recapitulating the tumor microenvironment; and cachexic models which can be used to support a wide field of specific research topics.



Example Subsets Within the PDX Collection

Cancer Type	Special Features							
	PIK3CA E545K Mutation	BRAF V600E Mutation	MYC Amplified	EGFR Amplified	FGFR Amplified	HER2 Amplified	MET Amplified	Additional Special Features
Bladder	•	•		•				
Brain		•		•				
Breast	•		•		•			Estrogen dependent, ER+, HER2+, TNBC
Cervical								AKT1 E17K mutation
Cholangiocarcinoma	•		•					FGFR2-BICC1 gene fusion, IDH1 R132C mutation
Colorectal		•	•		•	•		RET fusions including CCDC6-RET fusion, PTPRK-RSPO3 mutation, IDH1,2 mutation
Esophageal				•	•	•	•	
Gallbladder	•		•					
Gastric			•	•	•	•	•	HER2 mutation
Head and Neck			•	•				AKT1 mutation
Liver			•					
Lung			•	•	•		•	EGFR mutation, KRAS mutation, AKT1 mutation, LKB1 mutation, PTEN deletion/null, FGFR2-MCU gene fusion
Melanoma		•						
Ovarian			•					
Pancreatic						•		KRAS mutation
Sarcoma		•						

Many more subsets of interest are available within the collection.

Get in touch

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