



**Organoids for  
preclinical oncology  
drug development and  
validation**

## Characteristics of HUB organoids

- Extensively characterized by pathology, genomics, and sensitivity to drugs
- Highly patient relevant and can be used to develop biobanks that enable “clinical trials in a dish”
- Well maintained for long-term expansion and stability
- Closely recapitulate several properties of the original tumor, such as gene amplification, somatic copy number, and mutations
- Compared to PSC or iPSC-derived organoids, HUB organoids are more quickly established as they don’t require additional reprogramming and differentiation steps, or the passage of spheroid aggregates to Matrigel
- Amenable to co-cultures, allowing for prediction of immunotherapy responses

## Using HUB Tumor Organoids for Oncology Drug Development

Work with our team of experts to learn about our custom service offerings, including access to models and equipment not available at other facilities

- Simultaneously select lead candidates and identify target patient populations in a matrix high throughput screen
- Quantitatively evaluate compound efficacy across multiple models and indications, recapitulating patient population heterogeneity
- Rapidly test agent efficacy and off-target effects by running patient tumor and healthy tissue-derived organoids concurrently
- Large scale screens: Evaluate efficacy and test multiple drug combination strategies simultaneously
- Evaluate anticancer agent activity on a range of models across various patient ethnicities, different disease stages, as well as on primary tumor derived and metastatic models
- Make better informed decisions when transitioning from *in vitro* screening to *in vivo* validation with matched organoids and PDX models offering a range of patient-relevant mutational and pharmacological profiles
- Assess immunotherapies using the only *in vitro* I/O platform harnessing clinically-relevant organoid models in co-culture with TME components
- Evaluate resistance mechanisms and track drug response in real time with engineered organoids expressing rare human mutations, or bioluminescent or fluorescent probes
- Screen organoid panels in traditional viability assays or leverage our high content imaging capabilities to visualize drug effects across 500 morphological and phenotypic data points

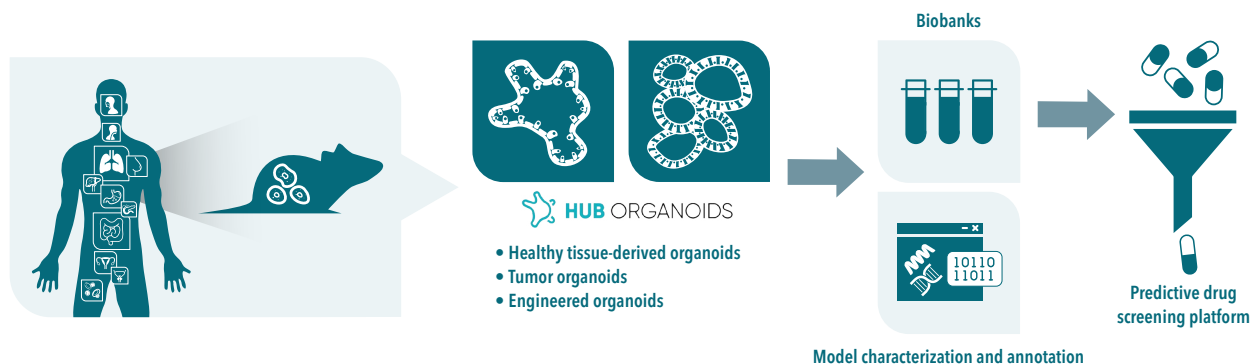
Select your organoid screening panel using OrganoidBase, our online database collating model characterization data including:

- PDXO patient information, light microscopy, histopathology, genomic (RNAseq and WES), and treatment response data
- PDO gene expression levels (RNAseq) and annotated somatic mutations (WES/WGS)

## The Only Tumor Organoid Platform Available for Oncology Drug Discovery

A Partnership that combines breakthrough organoid technology with the world’s largest PDX collection to create a unique patient-derived translational research platform

Crown Bioscience holds an exclusive license to provide preclinical oncology drug development and validation services using HUB Organoid Technology, including access to HUB’s highly characterized tumor organoid biobank. Crown Bioscience and HUB also have a collaborative research & development program, further accelerating development of Organoid Technology.



## Get in touch



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