The Jackson Laboratory is committed to providing you the most innovative pre-clinical models and services to delineate the mechanisms underlying disease and enable you to select efficacious drugs including a range of immunotherapeutics to treat targeted tumor types alone or in combination.

In collaboration with 25 national medical centers, JAX has banked over 400 Patient-Derived Xenograft (PDX) models with detailed clinical information including treatment history and extensive characterization, established in the highly immunodeficient NSG™ mice.

PDX models are available at earlier passage numbers than any other tumor collection available today, allowing more accurate recapitulation of primary human tumor biology.

**Better, Faster Delivery of Solutions**

Count on our extensive scientific expertise modeling human cancer. Our Ph.D. level scientists at JAX In Vivo Pharmacology Services offer consistent support with PDX model selection, study design and proprietary bioinformatics tools.

Our collection includes PDX Live™ tumor model cohorts readily available, allowing rapid study turnaround and faster evaluation of anticancer agents. Quickly access tumor engrafted mice to be delivered at your facility, or for efficacy study enrollment at ours.
ADVANTAGES OF JAX PDX MODELS

PDX models provide a relevant and translatable animal model to study human cancer biology compared to cell-line xenografts. Our PDX program provides tumor models at a lower passage than other providers, more accurately reflecting clinical samples than other PDX resources. Other advantages include:

- Early passage samples that retain cancer heterogeneity
- Models are grown directly from clinical samples, not cell lines
- Clinician-directed program includes current patient demographics
- Cancer models reflect a spectrum of relevant mutations

Explore PDX Data on the Mouse Tumor Biology (MTB) Database

Free access to detailed characterization data on PDX tumors to identify the right model for your drug candidate. jax.org/mtb

Typical characterization data includes clinical descriptions, histological data, gene expression and gene variant data. Additional data on responses to standard of care treatments, as well as tumor growth rates, are available for some tumors.

- Genomics (RNA Seq, gene expression and SNPs)
- Standard of care (SOC) and growth data
- Pathology images
- Tumor samples available upon request jax.org/pdx

IMMUNOTHERAPEUTICS - PDX AND HUMANIZED NSG™ FOR IMMUNO-ONCOLOGY STUDIES

Our In Vivo Pharmacology Service is leading the field by engrafting PDX and cell-lines in humanized NSG™ mice and has the capability to evaluate immune checkpoint drugs alone or in combination.

Representative Data

Image 1: Mean Tumor Volume of TM00098 (BR1126P4) PDX in Hu-CD34+NSG™-SGM3 Mice

Image 2: Mean Tumor Volume of LG1306P4 in Hu-CD34+NSG™-SGM3 Mice
Figure 1. Upper panel: Human PDX Breast tumor TM00098 in hu-CD34+NSG™-SGM3 mice responds to Pembrolizumab (Keytruda). Lower panel: Lung PDX TM00302 (LG1306) in hu-CD34+NSG™-SGM3 mice responds to Keytruda and Yervoy.
GET EXPERIMENTAL DATA UP TO 80% FASTER WITH PDX LIVE™ TUMORS.

To streamline the execution of your PDX cancer studies, JAX® offers a collection of PDX Live™ tumor engrafted NSG™ mice ready for immediate enrollment in preclinical efficacy studies at our facility or shipment to yours. This valuable off-the-shelf resource can save your project more than 6-12 weeks.

Pre-clinical Efficacy Services for Drug Development

Simplify compound efficacy studies by partnering with JAX In Vivo Pharmacology Services. Our experienced oncology study directors are proficient using PDX platforms—including validated immuno-oncology models—to predict the effectiveness of your novel or existing therapeutics.

NSG™ PDX mice represent an excellent fast and cost-effective platform to simulate trials, evaluate multiple drugs along or in combination and produce predictive data.