



Preclinical Drug Development ♦ Vivarium Services ♦ Biomarkers ♦ Protein Production

**Let our experts advance your preclinical cancer drug program.**

The Noble Life Sciences team has extensive experience in all facets of oncology drug development. With an intimate understanding of tumor pathways, drug targets, cell lines, xenograft models and biomarkers, we can work with you to determine the right experiments to advance your oncology program.

**In Development! PDMX Mouse Models**

Virtually all cancer drug development testing is based on activity in primary tumors whereas metastasis, not the primary tumor, is cause of death in over 90% of cancer cases. For this reason, our goal is to create patient-derived metastasis mouse (PDMX) models thereby establishing mouse avatars for preclinical testing of human metastatic tumors. Noble Life Sciences recently received a Maryland TEDCO Award for Development of *ex vivo* and *in vivo* assays for anti-Metastatic drug development using patented technology, called Cell Adhesion Matrix-Based (CAM) Enrichment of Invasive CTCs, licensed by Noble Life Sciences from Vitatex, Inc. to isolate metastasis-initiating circulating tumor cells (CTCs).

For more information contact us: [info@noblelifesci.com](mailto:info@noblelifesci.com)

**Human Cancer Xenograft Models**

Human-mouse xenograft models have been developed using Noble's cell line panel, which consists of a diverse collection of cell lines spanning multiple cancer indications. We also offer orthotopic & ectopic models, metastatic models, and leukemia models. These models are useful in biomarker discovery/screening and pathway interrogation and can be used to study the effect of combination therapies.

Tumor growth delay, tumor growth inhibition, log<sub>10</sub> cell kill, survival, combination or adjuvant design approaches may be used to assess your compound for:

- Drug potency (IC50)
- Apoptosis
- Cell Cycle
- Biomarker Discovery/Screening
- Pathway Interrogation
- Therapeutic Combinations
- Tumor Antigen Testing

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**About Noble Life Sciences**

Noble Life Sciences is a contract research organization (CRO) that provides integrated *in vitro* and *in vivo* preclinical services designed to accelerate drug development. With deep expertise in drug development, the company offers access to their top scientists who work collaboratively with researchers to expedite preclinical and clinical therapeutic development. Our years of extensive experience together with a focus in oncology, inflammation, autoimmune, and infectious diseases allow us to bring strong scientific insight to your discovery programs. For more information:

Visit: [www.noblelifesci.com](http://www.noblelifesci.com)  
e-mail: [info@noblelifesci.com](mailto:info@noblelifesci.com)

**Biomarker Discovery & Validation**

Noble's scientists have created a process for selection and validation of fit-for-purpose biomarkers. Our team of scientists can develop a biomarker discovery and/or validation strategy that may include:

*Discovery of RNA or protein-based biomarkers that track disease or drug activity*

*Identification of qualifying biomarkers using our extensive biomarker database and well-characterized cancer cell lines*

*Drug/biomarker pairing and validation studies*

*Pharmacodynamic modeling of response biomarkers in animal models for candidate selection, safety evaluation and patient dosing strategies*

*Evaluation of combination therapies for response in target pathways*

*Biomarker "fit for purpose" validation*

**Biomarker Selection & Verification with Molecular Tumor Profiling**

Noble's scientific team combines their experiential knowledge of cancer signaling pathways with public and proprietary genomic data across a compendium of cell lines and clinical samples to identify and validate biomarkers of drug response.

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**In Vivo Biomarker Validation**

Noble's expertise in animal models is used to provide *in vivo* validation of pharmacodynamic markers and to characterize on-target dependencies of the client's drug.

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