

GemPharmatech

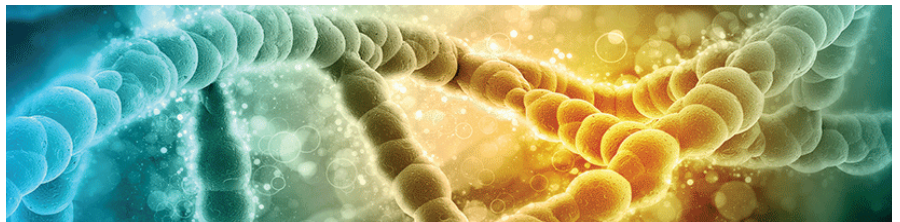


Knockout All Project (KOAP)

Mouse knockout technology provides powerful means of elucidating gene function in vivo. GemPharmatech realized a publicly available genome-wide collection of mouse knockouts would significantly accelerate biomedical discovery. In 2018, GemPharmatech launched a Knockout All Project (KOAP) to accelerate the delivery of cKO/KO mouse models. To date, published knockouts exist for only about 10% of mouse genes. GemPharmatech has successfully generated over 15,000 cKO/KO mouse models, covering genes in different research fields such as tumor immunity, autoimmune, metabolic, neurodegenerative, DNA and protein modification. KOAP is aiming to generate cKO/KO strains for all 22,951 protein-coding genes. It is time to harness phenotype knockouts for all mouse genes and place these resources into the public domain. Our KOAP aims to realize this in the next few years.

GemPharmatech Contributes to Accelerating Drug Discovery and Preclinical R&D in the US

GemPharmatech, Co., Ltd. (GPT) is a leading provider of animal models and pre-clinical services, especially in the development of humanized animal models for the global preclinical R&D communities. Its global headquarter is in Nanjing, China. The company has opened new operations in the United States to house more than 6,000 research mouse models. GPT specializes in generating mouse models using innovative gene-editing technologies with a large collection of conditional knockouts (cKO), knockouts (KO), humanized, immune deficient and germfree mice. GPT provides a one-stop service in model customization, breeding, phenotyping, and pharmacology services including drug efficacy testing and safety evaluation. The company has developed one of the world's largest collections of over 17,000+ different mouse models. GemPharmatech, LLC is a wholly owned US subsidiary of GemPharmatech Co., Ltd., with a business office located in Wilmington, Delaware, the heart of "Cellicon Valley" in Biotechnology.



MODELS TO DEFY THE IMPOSSIBLE

6000+

Annual Model
Generation Capability

17000+

Mouse Model
Resources

29000+

m² SPF
Facility

22000+

Mouse Cage
Capacity

AAALAC

Accreditation
Since 2006

ICLAS

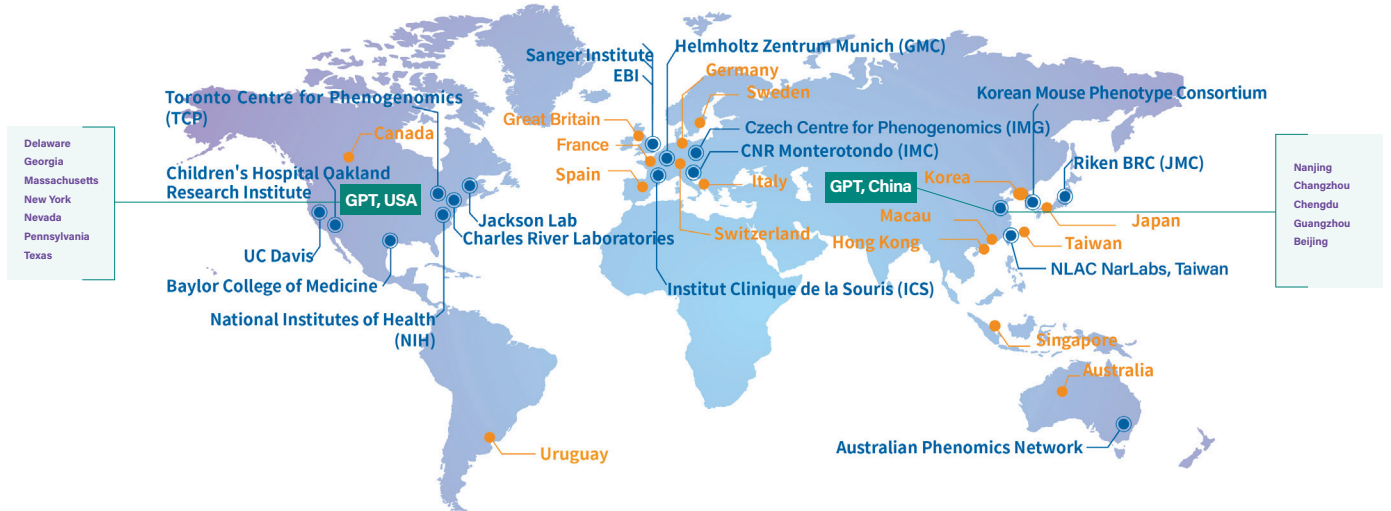
Accreditation
Since 2012

CORE PLATFORMS

- **Gene Editing** and **Stem Cell** Technologies
- **Tumor Tissue Biobank** and Immune System Humanized Mouse Models
- **Humanized** Mouse Models
- **Germfree** Mouse Technology

OUR GLOBAL FOOTPRINT

- Regions and countries that GPT has successfully imported/exported living mice/non-living mice from/to.
- Resource libraries that GPT has successfully exported imported/exported living mice/non-living substances from/to.



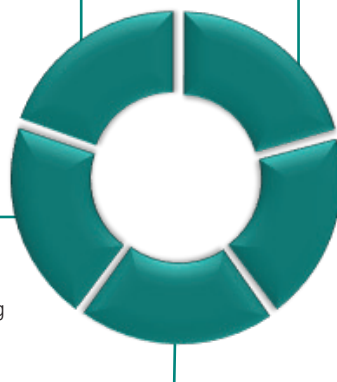
ONE STOP SOLUTIONS - Preclinical Research Using Mouse Models

Comprehensive Mouse Model Resources

- KOAP: cKO/KO Mice
- Humanized Mice
- Immune Deficient Mice
- Germfree Mice
- Cre Library

Preclinical Efficacy and Phenotyping

- Drug Efficacy and Safety Testing
- Mouse Phenotyping



Custom Model Generation

- CRISPR/Cas9
- ES HR
- Transgenic, BAC TG, Super TG

Mouse Breeding, Cryopreservation and Rederivation

- Cryopreservation and Rederivation
- Assisted Reproduction
- Customized Breeding and Rapid Expansion
- Colony Management

Import and Export

MILESTONES

