Taconic Biosciences has the unique capability of combining the most experienced model generation team with a total comprehensive gene modification toolkit to provide customers the best solution to progress their program forward. Beyond superior skills, Taconic is the only company to offer a seamless integration between comprehensive model generation and the most experienced commercial breeder in the world.
THE COMPLETE SOLUTION

The only comprehensive and integrated model design and breeding services provider

- Repository
- Collaboration
- Embryology
- Custom Generation

- Pilot Cohorts
- Proof of Concept
- Phenotype
- Characterization
- Speed to Cohort and Data
- Creative Solutions

- Multiple Health Profiles
- Economical Options
- Managed Productions Colonies
- Reliable Delivery
- Reproducibility from Cohort to Cohort
- Flexible Breeding Plans

- Microbiome
- Backcrossing/Speed Congenics
- Fecal Microbiota Transplantation
- Custom Diets
- Transgene Mapping

- Move to a Repository
- Market the model
- Distribute the model
- License the model

CUSTOM MODEL GENERATION

COLONY MANAGEMENT SOLUTIONS

START BY UNDERSTANDING THE GOAL

Every step of the process is focused on the customer

Customer expresses an interest to the sales rep

Sales rep connects customer with a Taconic scientist

Taconic scientist and customer define the problem and align on success criteria

Taconic scientist assembles all relevant experts to create multiple solutions

Taconic team presents all options to the customer and their impact on success criteria

Taconic scientist and customer decide on scientific solution. Sales rep and customer define business solution

Agile project management allows quick decisions and flexibility

Project is kicked off with a specific goal and timeline

Learn more at: taconic.com/design | US: 1-888-822-6642 | EU: +45 70 23 04 05 | info@taconic.com
THE ONLY COMPLETE GENE-MODIFYING TOOLKIT

To make the right model, you need the right technology

<table>
<thead>
<tr>
<th></th>
<th>PRO</th>
<th>CON</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CRISPR</strong></td>
<td>CRISPR is fast, specific, cost effective, and allows for the modification of different genetic backgrounds. It can be applied to both mice and rats.</td>
<td>It is not flexible and does not allow for the insertion of complex alleles. Some CRISPR alleles might be more difficult to genotype.</td>
</tr>
<tr>
<td><strong>Easi-CRISPR</strong></td>
<td>Same as CRISPR, with additional capabilities to perform targeted transgenesis, insertion of site-specific recombinases and reporters</td>
<td>Although can insert complex alleles, it is still relatively inflexible and the alleles may be difficult to genotype</td>
</tr>
<tr>
<td><strong>HR</strong></td>
<td>Most versatile method of targeting the genome, the method of choice for complex modifications such as genomic humanizations or knock-in of long sequences</td>
<td>Longer timelines, need ES cells from specific background, limited to mice only (no rats)</td>
</tr>
<tr>
<td><strong>PNI</strong></td>
<td>Relatively short timelines, allows generation of allelic series, can do it on different backgrounds and in mice and rats</td>
<td>Integration of the transgene may affect the function of an important gene, increased risk for epigenetic silencing throughout generations</td>
</tr>
<tr>
<td><strong>shRNAi</strong></td>
<td>Preferred method to analyze the effect of downregulation of a specific target gene without deleting it from the genome, mimics the effect of an inhibitory drug</td>
<td>Dependent on the quality of the shRNA</td>
</tr>
</tbody>
</table>

ExpressMODEL®: A FASTER ROUTE TO RESULTS

**70 WEEKS:** Experimental Cohort (Traditional Approach)

**54 WEEKS:** Experimental Cohort (ExpressMODEL®)

**42 WEEKS:** 20 Heterozygous Mice (ExpressMODEL®)

<table>
<thead>
<tr>
<th>Process</th>
<th>Time (Weeks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vector Construction</td>
<td>8</td>
</tr>
<tr>
<td>ES Cell Targeting</td>
<td>10</td>
</tr>
<tr>
<td>Chimeras Production</td>
<td>12</td>
</tr>
<tr>
<td>G1 Heterozygous Generation</td>
<td>12</td>
</tr>
<tr>
<td>G2 Homozygous Cohort</td>
<td>12</td>
</tr>
</tbody>
</table>

**BENEFITS**
- Saves time
- Complies with 3Rs
- Saves money
CHOOSE TACONIC

Taconic Biosciences’ mission is to improve quality of life by providing the right animal model solutions to drive critical research from project to cure.

Taconic delivers this superior value by making its customers the focus of everything it does. From developing the most predictive models to drive key decisions, to custom design and breeding services generated for each specific project, Taconic’s expertise, superior products, and unique platforms empowers customers to progress their research further, faster.

YOUR COLLABORATIVE PARTNER
As a full-service biosciences company, Taconic can help you acquire, test, develop, breed, cryopreserve, prepare, and distribute highly relevant research lines worldwide. Whether you require custom geneticallyengineered, cell or tissue engrafted models, or traditional models, Taconic’s scientists will partner with you to rapidly and efficiently deliver the highest quality animals.

CONTACT US
Our scientific team is happy to meet and talk with you about the most efficient way to achieve your study goals. Working in partnership with clients all over the world, our scientific team offers expert advice that can help you speed up your research and reduce your overall costs.

For information, contact one of our customer service team members, who are here to help you make the right decisions and get the models you need fast. Contact us at info@taconic.com.

VISIT TACONIC.COM
For more information on the entire Taconic portfolio of products and services designed to help further your research, visit taconic.com

STANDING BY THE SOLUTION

Rigorous quality control in every step along the way

- High Germ Line Transmission
- Custom Cell Culture Robotics
- Robotic Sample Handling Reduces Human Error
- Variety of High-Quality ES Cell Lines
- PCR Genotyping Protocol for Validation
- Full Characterization of Founder Animals
- Validation by Southern Blot
- Transgene Mapping Analysis via Cergentis B.V. Partnership

>99% Success
Right Model, On Time

©Taconic Biosciences, Inc. All rights reserved. Contents of this publication may not be reproduced in any form without prior permission.
BR1108-EN-1805