

# Speed congenics

Animal models of disease are a critical component of most biomedical research programs. A major advantage for utilizing rodents in these paradigms is the ability to control most genetic contributions across generations. Accelerating the creation of a model with the required genetic background can allow you to begin your research and generate results much quicker.

## Features

- + 1449 SNP marker panel from Illumina
- + 3 SNPs per 5 megabase intervals across the genome
- + Access to a variety of genotyping applications based on client needs
- + Colony maintenance in flexible-film isolators

Envigo utilizes a 1449 Single Nucleotide Polymorphism (SNP) panel to score all recipient, donor, and experimental samples for genotype across the entire genome. This information is then used to determine which animals are the closest genetically to your recipient background and should be used as future breeders for the next generation of backcrossing.

Traditional backcrossing		Speed congenic backcrossing	
Backcross generation	~% Concordance to recipient strain	Backcross generation	~% Concordance to recipient strain
F1	50.00%	F1	50.00%
N2	75.00%	N2	80.00%
N3	87.50%	N3	94.00%
N4	93.75%	N4	99.00%
N5	96.88%	N5	100.00%
N6	98.44%		
N7	99.22%		
N8	99.61%		
N9	99.81%		
N10	99.90%		