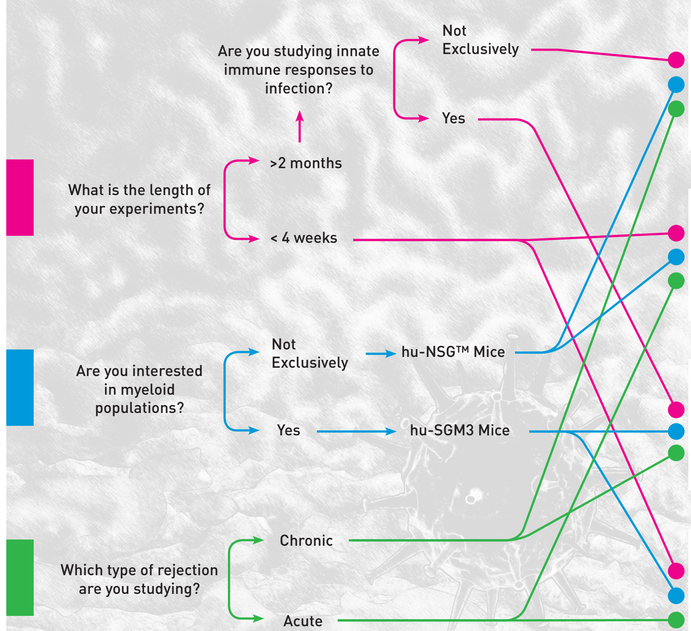
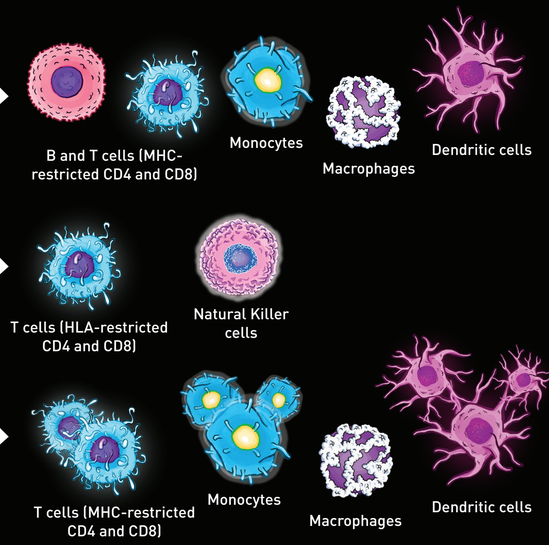


MODELS	BENEFITS	LIFESPAN	THERAPEUTIC WINDOW
hu-CD34-NSG™	• A functional immune system. • T cell-dependent inflammatory responses. • No donor cell immune reactivity towards host.	Long-term > 12 months	> 48 weeks
hu-PBMC-NSG™	• Enables short-term studies requiring human T cells. • Strong effector and memory T cell function. • T cell-driven GvHD.	Short-term < 3 months	6 - 8 weeks
hu-CD34-SGM3	Additional to hu-CD34-NSG™: • Faster immune cell repopulation*. • Higher myeloid cell engraftment*. • Faster lymphoid cell engraftment*. • Higher T cell and dendritic cell populations*.	Long-term > 12 months	> 48 weeks
hu-PBMC-SGM3	Additional to hu-PBMC-NSG™: • Coming soon.	Short-term < 3 months	Coming Soon

* When compared to hu-CD34-NSG™

IMMUNE DEVELOPMENT



Under Development

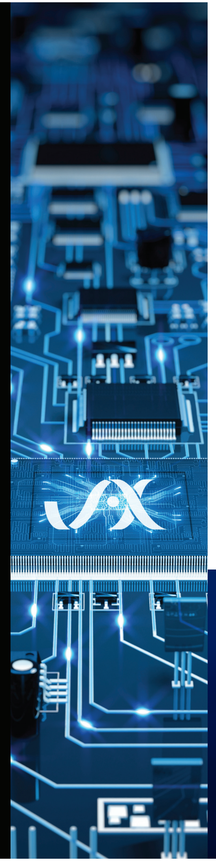
PDX MICE

DATA. FASTER.

NSG™ strains engrafted with patient-derived tumors (PDX) offer improved retention of tumor heterogeneity and architecture, thereby providing a platform for compound efficacy testing that is more reflective of patient response.

Our extensive collection of over 400 predictive preclinical models makes rapid efficacy testing achievable.

Our searchable PDX database:
tumor.informatics.jax.org/mtbwi/pdxSearch.do



Model Comparison Guide

MODEL	hu-CD34-NSG™	hu-PBMC-NSG™	hu-CD34-SGM3	hu-PBMC-SGM3
STRAIN	NSG™ (005557)	NSG™ (005557)	NSG™-SGM3 (013062)	NSG™-SGM3 (013062)
HUMAN CYTOKINE EXPRESSION	N/A	N/A	KITL (SCF), IL3, GM-CSF	KITL (SCF), IL3, GM-CSF
BENEFITS	• A functional immune system. • T cell-dependent inflammatory responses. • No donor cell immune reactivity towards host.	• Enables short-term studies requiring human T cells. • Strong effector and memory T cell function. • T cell-driven GvHD.	In addition to benefits of hu-CD34-NSG™: • Faster immune cell repopulation*. • Higher myeloid cell engraftment*. • Faster lymphoid cell engraftment*. • Higher T cell and dendritic cell populations*.	Coming Soon
LIFESPAN	Long-term >12 months	Short-term <3 months	Long-term >12 months	Short-term <3 months
THERAPEUTIC WINDOW	> 48 weeks	6 - 8 weeks	> 48 weeks	Coming Soon
IMMUNE DEVELOPMENT	B, T (MHC-restricted CD4 and CD8), Monocytes, Macrophages, Dendritic cells.	T cells (HLA-restricted CD4 and CD8), Natural Killer cells.	T cell (MHC-restricted CD4 and CD8), Monocytes, Macrophages, Dendritic cells.	Coming Soon
Availability	Readily Available	Readily Available	Readily Available	Coming Soon

* When compared to hu-CD34-NSG™

FOR MORE INFORMATION
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JAX® Mice, Clinical & Research Services

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Bar Harbor, Maine | Farmington, Conn. | Sacramento, Calif.

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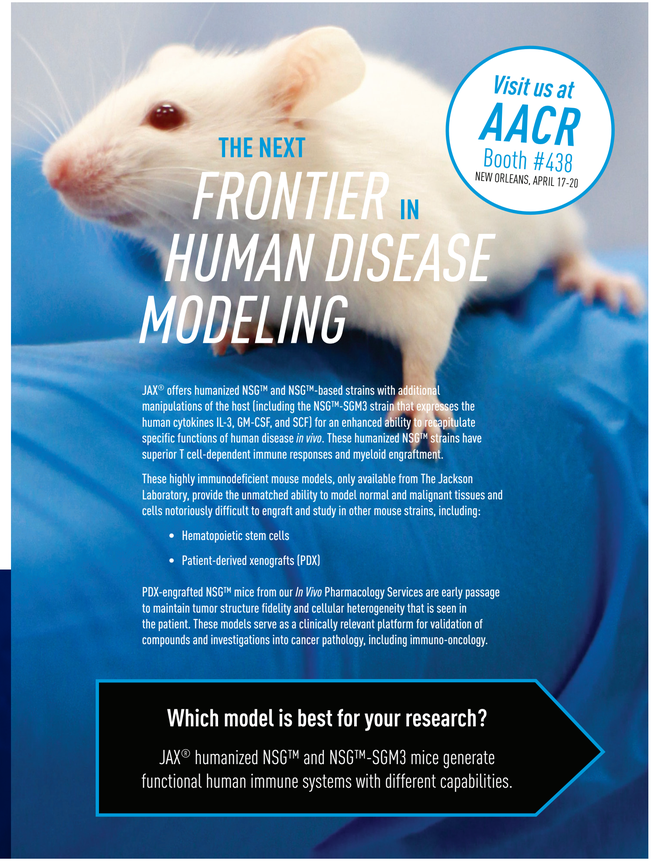
Leading the search for tomorrow's cures



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NEW ORLEANS, APRIL 17-20

THE NEXT *FRONTIER IN HUMAN DISEASE MODELING*

JAX® offers humanized NSG™ and NSG™-based strains with additional manipulations of the host (including the NSG™-SGM3 strain that expresses the human cytokines IL-3, GM-CSF, and SCF) for an enhanced ability to recapitulate specific functions of human disease *in vivo*. These humanized NSG™ strains have superior T cell-dependent immune responses and myeloid engraftment.

These highly immunodeficient mouse models, only available from The Jackson Laboratory, provide the unmatched ability to model normal and malignant tissues and cells notoriously difficult to engraft and study in other mouse strains, including:

- Hematopoietic stem cells
- Patient-derived xenografts (PDX)

PDX-engrafted NSG™ mice from our *In Vivo* Pharmacology Services are early passage to maintain tumor structure fidelity and cellular heterogeneity that is seen in the patient. These models serve as a clinically relevant platform for validation of compounds and investigations into cancer pathology, including immuno-oncology.

Which model is best for your research?

JAX® humanized NSG™ and NSG™-SGM3 mice generate functional human immune systems with different capabilities.

Empowering Clinically Relevant Modeling Using NSG™ Strains

Whether you are investigating the interactions between host immune cells and pathogens, tumors and immune cells, or require an oncological platform to test your therapeutic compounds, NSG™ strains have revolutionized how infectious disease and cancer research is conducted. By supporting the engraftment of human immune cells and tumors, NSG™ strains have transformed the approach taken by the biomedical community to understand human diseases.

RESEARCH FIELDS

Humanized NSG™ strains have transformed infectious disease research through more accurate modeling of many human-specific pathogens, allowing for the preclinical validation of treatment strategies.

OPEN

Do you need a functional immune system?

No

Yes **OPEN**

Functional and mature immune cell populations represented in humanized NSG™ strains have enabled the investigation of complex mechanisms involved in graft rejection.

OPEN