The NOG Portfolio

EXTENDING THE LIMITS OF ENGRAFTED HUMAN IMMUNE SYSTEM MODELS

The development of animal models capable of mimicking human immune responses is crucial to study the pathophysiology of disease and to generate new therapeutic methodologies. Significant advances in immunology modeling have been made utilizing the super immune-deficient CIEA NOG mouse®, but the full application of engrafted human immune models depends upon overcoming some cross-species differences.

The NOG Portfolio includes key strains designed to overcome limitations in existing human immune system models.

**NOG**
- The original super immunodeficient model
- Excellent model for a variety of xenograft and human cell engraftment studies
- Applications in research involving cancer, infectious disease (HIV, malaria), immuno-oncology, CAR-T, iPS, and humanization immune system engraftment
- Now available pre-engrafted with human hematopoietic stem cell (hHSC) as huNOG for immediate delivery at 16 weeks post-engraftment

**NOG-EXL**
- NOG mouse expressing human GM-CSF and IL-3
- Supports higher overall engraftment and superior myeloid cell differentiation after human HSC engraftment
- Now available pre-engrafted with HSCs as huNOG-EXL for immediate delivery at 10 weeks post-engraftment
- May be a suitable host for human acute myeloid leukemia (AML) xenografts

**hIL-2 NOG**
- NOG mouse expressing human IL-2 cytokine
- Predominant differentiation of human NK cells following hHSC engraftment

**hIL-6 NOG**
- NOG mouse expressing human IL-6 cytokine
- Enhanced expansion of human monocytes following hHSC engraftment
- May be a suitable host for human multiple myeloma (MM) xenografts

**hIL-15 NOG**
- NOG mouse expressing human IL-15 cytokine
- Engraftment and expansion of human NK cells following engraftment with CD56+ NK cells derived from peripheral blood mononuclear cell (PBMC)
HEMATOPOIESIS AND HUMAN IMMUNE SYSTEM ENGRAFTED MICE

HEMATOPOIETIC STEM CELL

COMMON MYELOID PROGENITOR
- IL-1
- IL-3
- GM-CSF
- SCF

COMMON LYMPHOID PROGENITOR
- IL-2
- IL-7
- IL-12
- SDF-1

B LYMPHOCYTE PROGENITOR
- GM-CSF

BASOPHIL
- SCF
- G-CSF
- GM-CSF
- IL-3
- IL-6

NEUTROPHIL
- SCF
- G-CSF
- GM-CSF
- IL-3
- IL-6

EOSINOPHIL
- SCF
- GM-CSF
- IL-3
- IL-5

MONOCYTE
- SCF
- M-CSF
- G-CSF
- GM-CSF
- IL-3
- IL-6

T LYMPHOCYTE PROGENITOR
- GM-CSF
- IL-3

NK CELL
- IL-15
- IL-7

hNOG-EXL (hGM-CSF/hIL-3 NOG)
hIL-6 NOG
hIL-2 NOG, hIL-15 NOG
huNOG