

Licensing / Technology Offer

Marker tolerant Mouse Model for cell tracking

Keywords

Regenerative medicine, cancer research, long term preclinical safety studies using labeled cells, marker tolerance, immunocompetence, in vivo cell tracking, multi-detection models, transgenic dual mouse model, in vivo fluorescent imaging, bioluminescent imaging

Background

The offered technology provides the possibility to study in vivo the fate of labeled cells in the complete absence of immune-mediated rejection. Furthermore the marker tolerant mouse model allows performing unbiased long-term studies using labeled cells in normal immunocompetent animals.

Technology & Advantages

This in vivo cell tracking technology is based on a system of a transgenic donor mouse line and a transgenic marker tolerant recipient mouse line. This mouse system represents the next generation of cell tracking models, combining several important advantages:

- Stable genetic labeling of cells of interest
- Unlimited source of genetically tagged cells
- Immunocompetent host
- Absence of immune-mediated rejection of labeled cells allowing in vivo long-term studies
- The heterozygous transgenic donor and recipient mice can be interbred with gene targeted knockout or knock-in mice of the same strain.
- The present cell tracking system might be based on most widely used protein markers like GFP, LacZ, Luciferase
- Bioluminescent protein markers permit non-invasive in vivo imaging
- Possibility to establish a multi-detection cell tracking system

Development Status

Several mouse lines tolerant to human placental alkaline phosphatase were successfully established.

IP Status

International Patent application WO 2006/113962A1
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Cooperation Options

License agreement, collaboration

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