Research & Services | Model System for Chronic Inflammation-Induced Immunosuppression (Yissum)
code: 34-2009-2202
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A mouse model in vivo and ex vivo research tool

Categories	Inflammatory diseases, oncology, drug discovery

Objective/function

Research tools for disease investigation comprising n in vivo mouse model systems that mimic the immunosuppressive environment generated in individuals with chronic inflammatory diseases and ex vivo models based on the in vivo model that retain the chronic-inflammation induced immunosuppressive conditions

Research Provided

The model systems are research tools for the investigation of cancer, chronic infections and autoimmune diseases. In these pathologies, chronic inflammation develops leading to immunosuppression associated with a decreased expression of a specific T cell biomarker. This phenomenon is reversible upon recovery from the chronic inflammation.

- Platform for testing neutralizing agents for their capacity to restore the expression of the T cell biomarker and enhanced immune competence.
- The T cell biomarker expression may be used as a diagnostic/prognostic tool to detect chronic inflammation-induced immunosuppressive environment.

Advantages

- The mice in these models do not suffer from any pathology that interferes with their normal physiology.
- Results obtained from these systems reflect the interrelationships between the innate and adaptive immune systems under chronic inflammatory conditions, which are relevant to a wide range of inflammatory diseases.
- The model systems can be used as platforms for:
- *Testing reagents such as anti-inflammatory drugs and small molecules for their capacity to neutralize the inflammatory/immunosuppressive environment, restoring changes in the cell biomarker and gain immune competence*
- *Identifying immunosuppressive compounds*
- *Identifying T cell molecules involved in the induced immunosuppression*
- *Testing expression levels of the T cell biomarker for detecting the appearance of an immunosuppressive environment in tumor-bearing hosts and predicting immunotherapy timing and success*

Available equipment

The laboratory is equipped with all facilities required for in vivo and ex vivo experiments

Staff

Post doc, doctoral candidate, technician

Contact for more information:

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