

## Research & Services | Model System for Chronic Inflammation-Induced Immunosuppression (Yissum)

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### A mouse model in vivo and ex vivo research tool

|                           |                                                 |
|---------------------------|-------------------------------------------------|
| <b>Categories</b>         | Inflammatory diseases, oncology, drug discovery |
| <b>Objective/function</b> |                                                 |

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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