

We invite you to the seminar of

Dr. Marjorie Pion

**Gregorio Marañón Health Research Institute (IISGM),
Laboratory of Immuno-regulation, Madrid, Spain**

**“Adoptive cell therapy with Treg cells obtained from thymic tissue
(thyTreg): from a clinical trial using autologous cells to preclinical
research exploring allogeneic applications”**

Regulatory T cells (Treg) are immunosuppressive cells that maintain immune system homeostasis. These cells are being investigated as immunotherapies for inflammatory diseases, and previous studies have demonstrated their feasibility and safety. However, peripheral Treg cells from adult patients present limitations such as phenotypic instability, leading to potential conversion into pro-inflammatory subsets, and insufficient numbers for therapeutic dosing. The Laboratory of Immuno-regulation (LIR) has developed a novel protocol to isolate Treg cells from human thymic tissue. These thymic-derived Treg cells (thyTreg) exhibit higher yield, enhanced functionality, and greater stability, making them ideal candidates for therapeutic use. With this protocol, LIR is leading a pioneering clinical trial, the first of its kind globally, using these cells as an autologous therapy in infants undergoing heart transplantation, with the goal of preventing graft rejection. Given their abundance and functionality, a key question now arises: Could these cells be used in allogeneic therapies for adult transplantation or other inflammatory diseases? The LIR group is currently exploring the possibility of developing such an off-the-shelf immunosuppressive therapy.

The seminar will be held

on Thursday 3rd July 2025 at 15:00

in the Lecture room 0.195 at IMG

(Institute of Molecular Genetics of the Czech Academy of Sciences, Vídeňská 1083, Prague 4)
