

# ImmunoTools IT-Box-139 Award 2012



**Aude Burlion**

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## Anti-ICOS immunotherapy in humanized mice

I start my first year of PhD project. The aim of this project is to validate an anti-ICOS monoclonal antibody for human breast cancer immunotherapy.

ICOS<sup>+</sup> Treg cells are highly enriched in tumor areas (breast cancer) and the presence of Foxp3<sup>+</sup> cells in tumors is a poor prognosis factor. Our hypothesis is that the anti-ICOS mAb may favor tumor rejection by neutralizing Treg.

We use a humanized mice model to assess the anti-ICOS mAb effect on T cell homeostasis and especially Tregs. To analyse it, I currently use 12 human markers for flow cytometry: CD45, CD19, CD3, CD4, CD8, CD25, Foxp3, ICOS, CD45RA/RO, Ki67, CCR7. A 5 color matrix (including CD45, CD19, CD3, CD4 and CD8) is used to follow human hematopoietic reconstitution in mice. We'll next monitor tumor growth: mAb treatment is expected to slow down tumor growth in correlation with Tregs depletion. pDC population is also analysed (HLA-DR, CD123, CD303, ICOS-L staining) as they are involved in ICOS costimulation.

In a second part, as we need to evaluate mAb effect on Tregs function, we'll measure Teff proportion and activation status (CD62L, CD69, CD45RA, CD45RO staining) in a xeno-GVH model.

### ImmunoTools IT-Box-139 for Aude Burlion include 100 antibodies

**FITC** - conjugated anti-human CD1a, CD3, CD4, CD5, CD6, CD7, CD8, CD14, CD15, CD16, CD19, CD21, CD25, CD29, CD35, CD36, CD41a, CD42b, CD45, CD45RA, CD45RB, CD45RO, CD49d, CD53, CD57, CD61, CD63, CD80, CD86, HLA-DR, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

**PE** - conjugated anti-human CD3, CD4, CD8, CD11b, CD15, CD14, CD18, CD19, CD20, CD21, CD22, CD31, CD33, CD38, CD40, CD45, CD45RB, CD50, CD52, CD56, CD58, CD62p, CD72, CD95, CD105, CD147, CD177, CD235a, HLA-ABC, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

**PE/Dy647** -tandem conjugated anti-human CD3, CD4, CD8, CD14, CD19, CD20, CD25, CD54

**APC** -conjugated anti-human CD2, CD3, CD4, CD8, CD10, CD11a, CD11c, CD14, CD16, CD27, CD37, CD42b, CD44, CD45, CD59, CD62L, CD69, CD71, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

[DETAILS](#)