

## **JSPS Bilateral Joint Research Project: “Development and function of thymic medullary epithelial cells”**

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The focus of this application was to support and foster collaborations between the Takahama and Anderson laboratories. The collaboration started when both laboratories realised their shared mutual interests in thymus biology by meeting at scientific meetings. In this joint research project, we examined the ways in which thymic epithelial cells within the thymic medulla (mTEC) differentiate and regulate key stages in T-cell development that include negative selection and Foxp3<sup>+</sup> regulatory T-cell development.

This Joint award (April 2016 - March 2018) was important in making successful progress in our respective laboratories for several reasons. Firstly, it allowed the Anderson laboratory to import a novel mouse strain generated at The University of Tokushima into the UK. This mouse identifies CCL21-expressing mTEC using fluorescent reporter protein, and we will now cross these mice to RANK-Venus mice (generated in the Anderson lab) to create dual reporter mice. Consequently, this collaboration has generated a novel tool to examine thymus function, and it will form the basis of future collaborative efforts between Anderson and Takahama. The award also allowed the Anderson and Takahama laboratories to attend the recent Kyoto T Cell Conference (KTCC) held in March 2017. Here, we were able to discuss our recent research findings and plan further collaborative work that will stem directly from the award of funds from JSPS. Finally, the award enabled members of the Takahama laboratory to visit Birmingham in May 2017, and gain valuable experience in the manipulation of embryonic thymus *in vitro*. In all cases matched funding was provided by an MRC programme grant to Graham Anderson, and a JSPS/MEXT grant to Yousuke Takahama.

Since the award, the two laboratories have continued to work closely, collaborating on thymus biology. The labs met most recently at a thymus conference in Australia in March 2018, to plan further collaborative projects based on the work performed in a JSPS application.



KTCC meeting. Kyoto, March 2017

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