

Report On Joint Usage Program Report:

Control of T-cell Development By Thymic Epithelial Cells (September 2016-March 2017)

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The focus of this application was to support and foster collaborations between the Takahama and Anderson laboratories. Specifically, we are examining 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⁺ regulatory T-cell development. The Joint Usage Program award has been important to our success for several reasons.

1. 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 and powerful tool to examine thymus function, and it will form the basis of future collaborative efforts between Anderson and Takahama.
2. It provided a basis for collaborative interactions that have resulted a joint research review article recently published in 'Nature Reviews Immunology', which represents a highly respected and prominent peer-reviewed immunological journal.

Generation of diversity in thymic epithelial cells

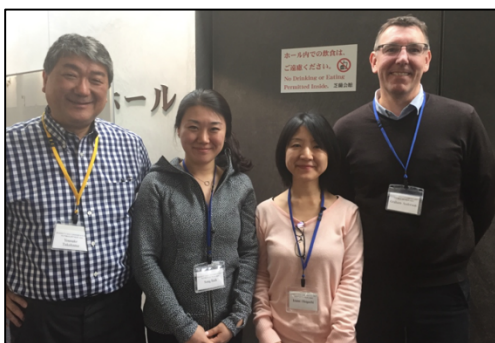
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3. The Anderson and Takahama laboratories were also able to attend the recent KTCC meeting held in Kyoto in March 2017. Here, we were able to discuss our recent research findings, and plan further collaborative work that will stem directly from the award of funds from The University of Tokushima.



KTCC meeting. Kyoto, March 2017

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