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## **Role of endogenous and induced Foxp3<sup>+</sup> Treg in the control of infections**

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In order to maintain immune homeostasis, the intestinal immune system has evolved redundant regulatory strategies. In this regard, the gut is home to a large number of regulatory T cells, including Foxp3<sup>+</sup> T<sub>reg</sub>. We hypothesized therefore that the gut environment preferentially supports extrathymic T<sub>reg</sub> development. [We](#) showed that peripheral conversion of CD4<sup>+</sup> T cells to Treg occurs primarily in gut associated lymphoid tissue (GALT). *Dendritic cells (DC)* purified from the lamina propria (LpDC) of the small intestine were found to promote a high level of T<sub>reg</sub> conversion relative to lymphoid organ derived DC. This enhanced conversion by LpDC was dependent on retinoic acid, a vitamin A metabolite highly expressed in GALT. Together the data demonstrate that the intestinal immune system has evolved a self-contained strategy to promote T<sub>reg</sub> neo-conversion. We will discuss how gut flora and microbial infections can favor or inhibit this pathway to support their life cycle.

### References:

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