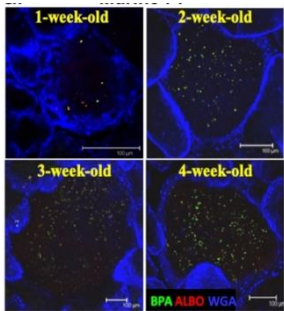
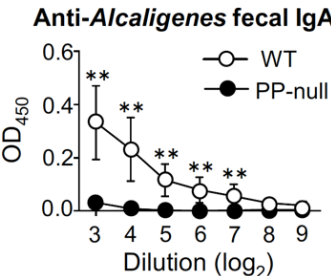


ID No.	K3002
Project Title	Intratissue cohabitation of commensal bacteria for immunity and symbiosis
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Report	OCU research group received the ethical committee approval for the research and started to collect human blood and fecal samples and small intestinal tissues.  Since commensal bacteria play a role in the development of the gut mucosal immune system, we wanted to see whether ICB played a similar role. We detected <i>A. faecalis</i> in the PP of 1-week-old murine pups, an age that corresponds to early infancy (preweaning) in humans (Fig 1). Fig 1. ICB colonization of PPs begins in early infancy. Whole-mount FISH was used to detect <i>A. faecalis</i> in murine PPs before and after weaning. <i>A. faecalis</i> were found in PPs starting at 1 week of age. CD11c⁺ DC are essential for inducing intratissue <i>A. faecalis</i> cohabitation. In other words, <i>A. faecalis</i> likely sustain their life as a form of <i>A. faecalis</i>-induced sDC. <i>A. faecalis</i>-specific intestinal IgA Abs are absent from PP-null mice (Fig 2), suggesting that PP are also essential for intratissue <i>A. faecalis</i> cohabitation. The numbers of intratissue <i>A. faecalis</i> increase as PP develop in murine pups (Fig 1), suggesting that <i>A. faecalis</i>-induced symbiotic DC are involved in PP maturation.  Anti-<i>Alcaligenes fecal</i> IgA ○ WT ● PP-null OD₄₅₀ Dilution (log₂) Fig 2. <i>A. faecalis</i>-specific fecal IgA is not detected in PP-null mice. PP-null mice were generated by treating pregnant mice with an anti-IL-7Rα mAb. The absence of PPs was histologically confirmed. Fecal <i>A. faecalis</i>-specific IgA Ab were measured by ELISA.