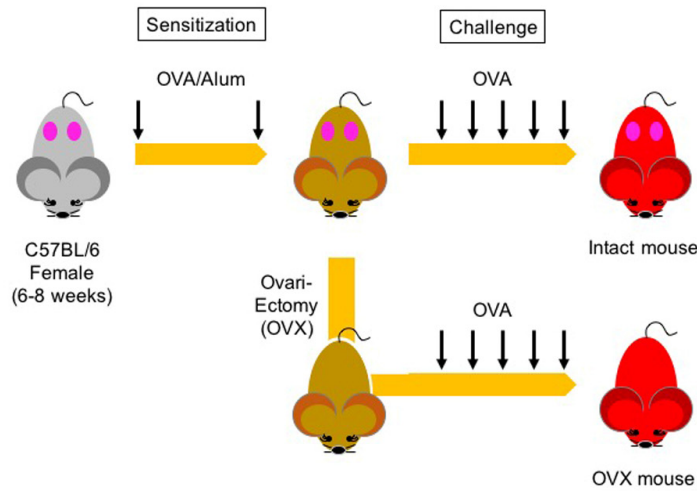
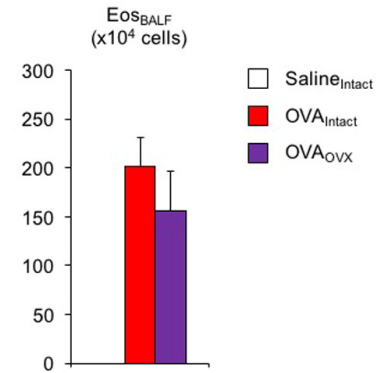


SUPPLEMENTARY FIGURES

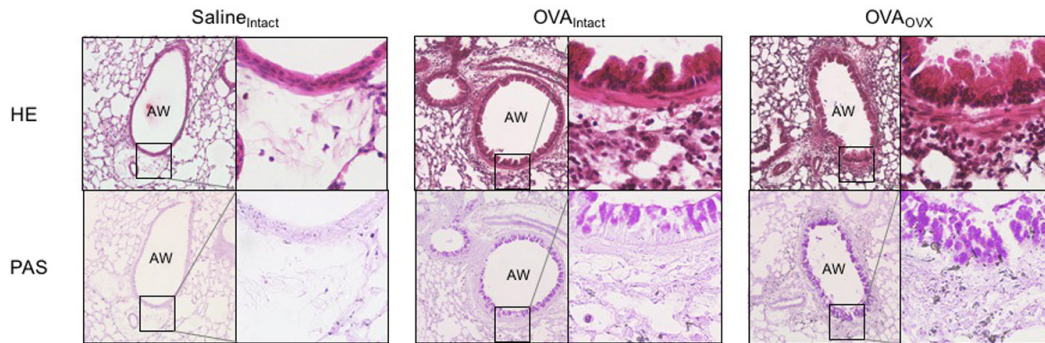
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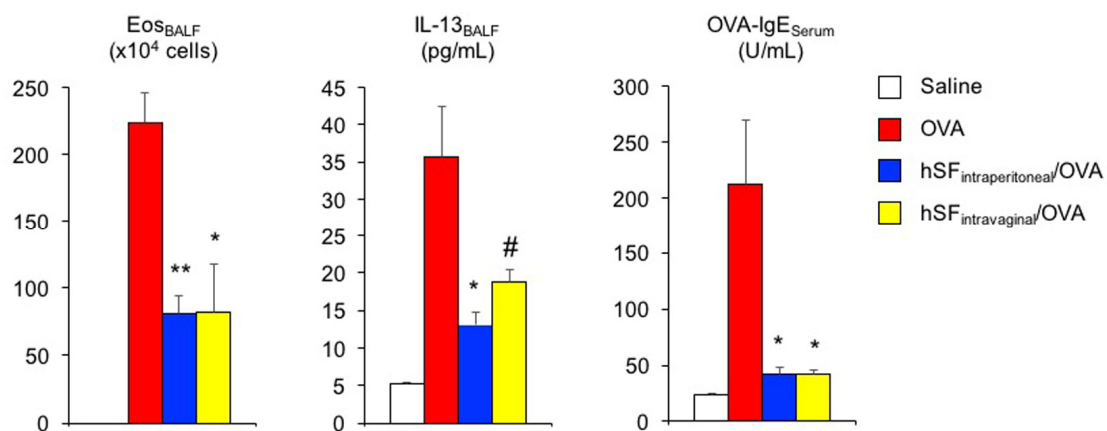
B



C



**Supplementary Figure 1. Ovariectomy in sensitized adult female mice does not improve asthma development upon antigen inhalation.** (A) Schematic representation of the experimental design for ovariectomy (OVX). Bilateral OVX was performed in 2-month-old young adult female mice sensitized with ovalbumine (OVA). Sensitized OVX mice were then challenged with OVA 3 weeks after the surgery. (B) Numbers of eosinophils in bronchoalveolar lavage fluid (BALF) of asthmatic OVX mice. White boxes: Saline groups (n = 3 each); Colored boxes: asthma groups (n = 6 - 8). Data are presented as means ± SEM. (C) Representative images of lungs from asthmatic OVX mice. Haematoxylin-Eosin (HE, upper) and Periodic acid-Schiff (PAS, lower) staining reveals immune cell infiltration and mucus-producing cell hyperplasia, respectively. Magnified images are shown on the right of each panel. AW: airway.



**Supplementary Figure 2. Improvement of asthmatic features in asthmatic female mice exposed to human seminal fluid intravaginally.** Changes in Th2 cell-driven allergic responses in asthmatic female mice exposed to human seminal fluid (hSF). White boxes: control group (n = 3); Colored boxes: asthma groups (n = 5 - 10). Data are presented as means ± SEM. \*\**P* < 0.01, \**P* < 0.05, and #*P* < 0.1 versus OVA asthma group.