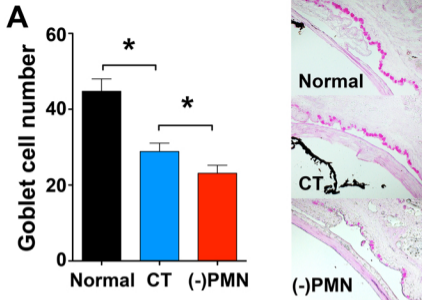


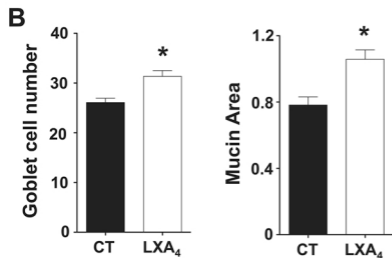
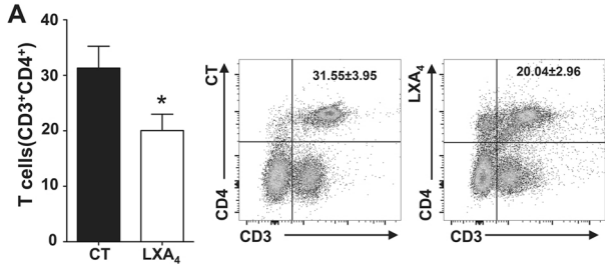
**Table S1 Primer sequences**

<b>Target genes</b>	<b>Forward sequence</b>	<b>Reverse sequence</b>
<b><math>\beta</math>-Actin</b>	5'-ACGGCCAGGTCATCACTATTG-3'	5'-AGGGGCCGGACTCATCGTA-3'
<b>5-LOX (<i>Alox5</i>)</b>	5'-ACTACATCTACCTCAGCCTCATT-3'	5'-GGTGACATCGTAGGAGTCCAC-3'
<b>12/15-LOX (<i>Alox15</i>)</b>	5'-GCGACGCTGCCCAATCCTAATC-3'	5'-ATATGGCCACGCTGTTTTCTACC-3'
<b>ALX1 (<i>Fprl-1</i>)</b>	5'-CATTGGTTGGTTCATGTGCAA-3'	5'-AATACAGCGGTCCAGTGCAAT-3'
<b>ALX2 (<i>Fpr-rs2</i>)</b>	5'-GCCAGG ACTTTCGTGGAGAGAT-3'	5'-GATGAACTGGTGCTTGAATCACT-3'
<b>COX-1</b>	5'-AGTGCGGTCCAACCTTATCC-3'	5'-GCAGAATGCGAGTATAGTAGCTC-3'
<b>COX-2</b>	5'-TGAGCAACTATTCCAAACCAGC-3'	5'-GCACGTAGTCTTCGATCACTATC-3'



### Desiccating Stress (3 days)

Figure S1. Depletion of tissue-PMN in females exacerbates conjunctival goblet cell loss. (A) Female mice were injected with PMN-depleting antibodies or control IgG 24h prior to subjecting mice to 3 days of desiccating stress. Quantification of goblet cell density in conjunctiva from normal healthy mice, 3 days dry eye with IgG treatment (CT) or 3 days dry eye after PMN depletion ((-)PMN) (n=6). REpresentative images of PAS staining are shown. (\* $p < 0.05$ , Normal versus CT, or CT vs (-)PMN, unpaired  $t$  test)



### Desiccating Stress ( 10 days)

Figure S2. LXA<sub>4</sub> treatment attenuates CD4<sup>+</sup> T cell activation in draining lymph nodes and dry eye pathogenesis. Female mice were treated with LXA<sub>4</sub> topically (100 ng, *tid*) and systemically (1 μg, *qd*) for 10 days after initiating dry eye disease or PBS alone (CT), n=5. (A) Left panel, frequencies of CD3<sup>high</sup>CD4<sup>high</sup> T cells among absolute number of cells from cervical lymph nodes. Right panel, representative flow cytometry data dot plots. (B) Quantification of goblet cell density and total mucin area in conjunctiva (n=10). Representative images of Periodic Acid Schiff (PAS) staining of conjunctiva show the number of goblet cells from PBS treated (CT) and LXA<sub>4</sub> treated (LXA<sub>4</sub>) mice. (\* *p* < 0.05, CT versus LXA<sub>4</sub>, unpaired *t* test).