Alveolar macrophage P2Y6 receptors counterbalance leukotriene-dependent type 2 lung immunopathology priming function

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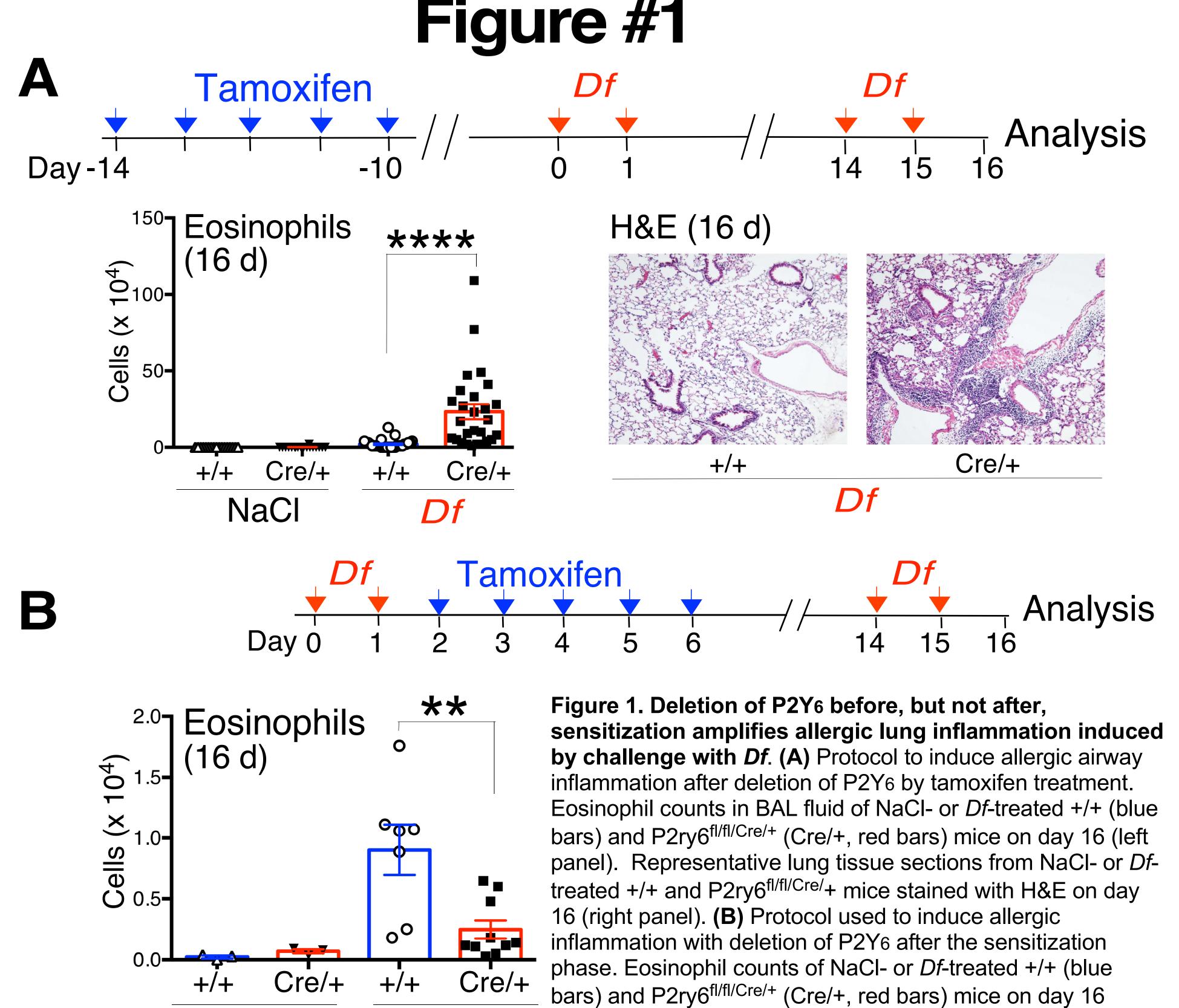
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Introduction

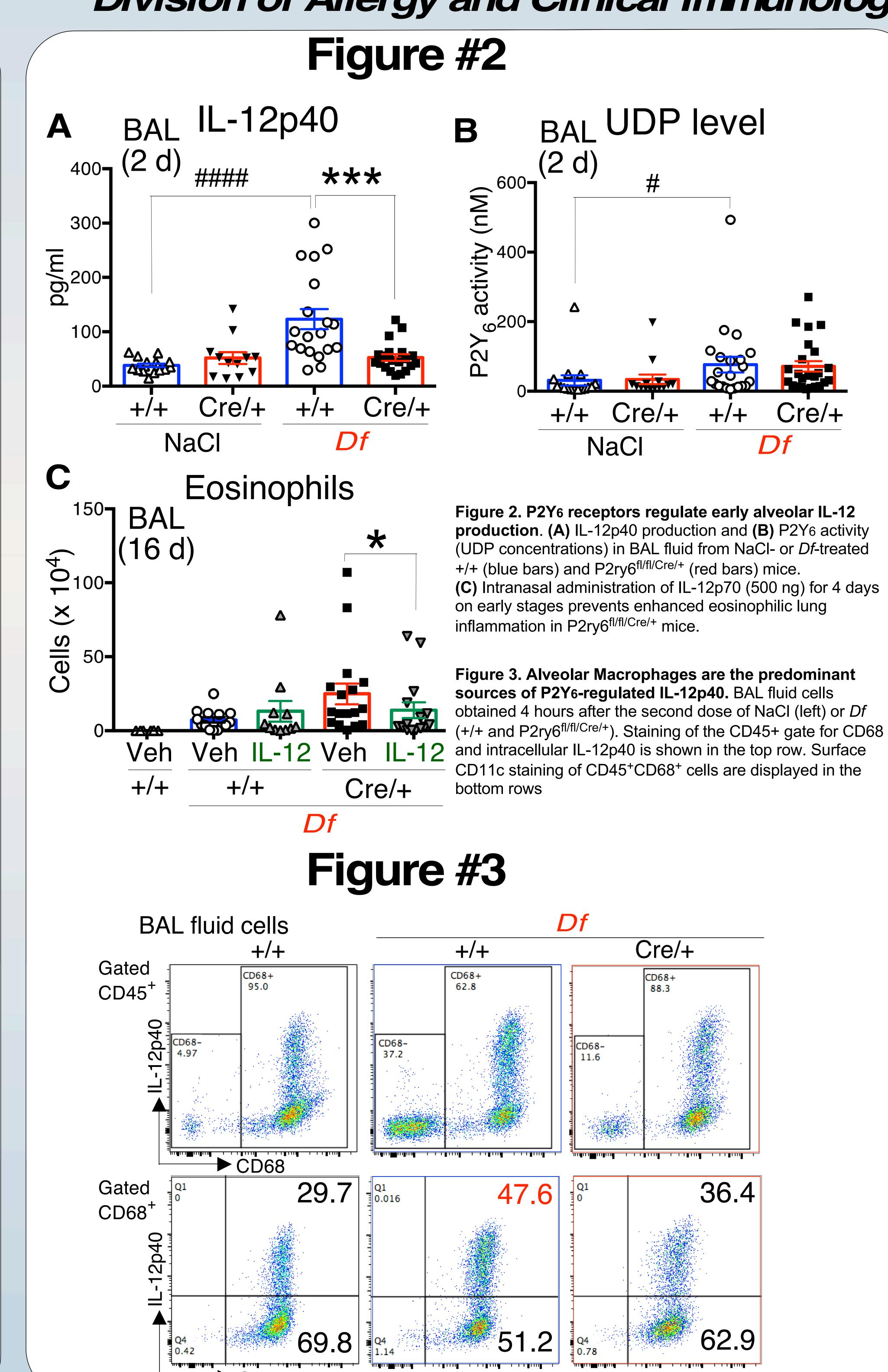
Type 6 purinergic (P2Y6) receptors are high affinity G proteincoupled receptors (GPCRs) for uridine diphosphate (UDP). Previously, we found that P2Y6 receptors inhibit type 2 immunity in lung allergic inflammation by incompletely understood mechanisms. In this study, we sought to identify key steps and cell types response for the protective effect of P2Y6 receptors. We also determined the potential consequence of P2Y6 receptor blockade by CysLT1-R antagonist off-target ex vivo and in vivo.

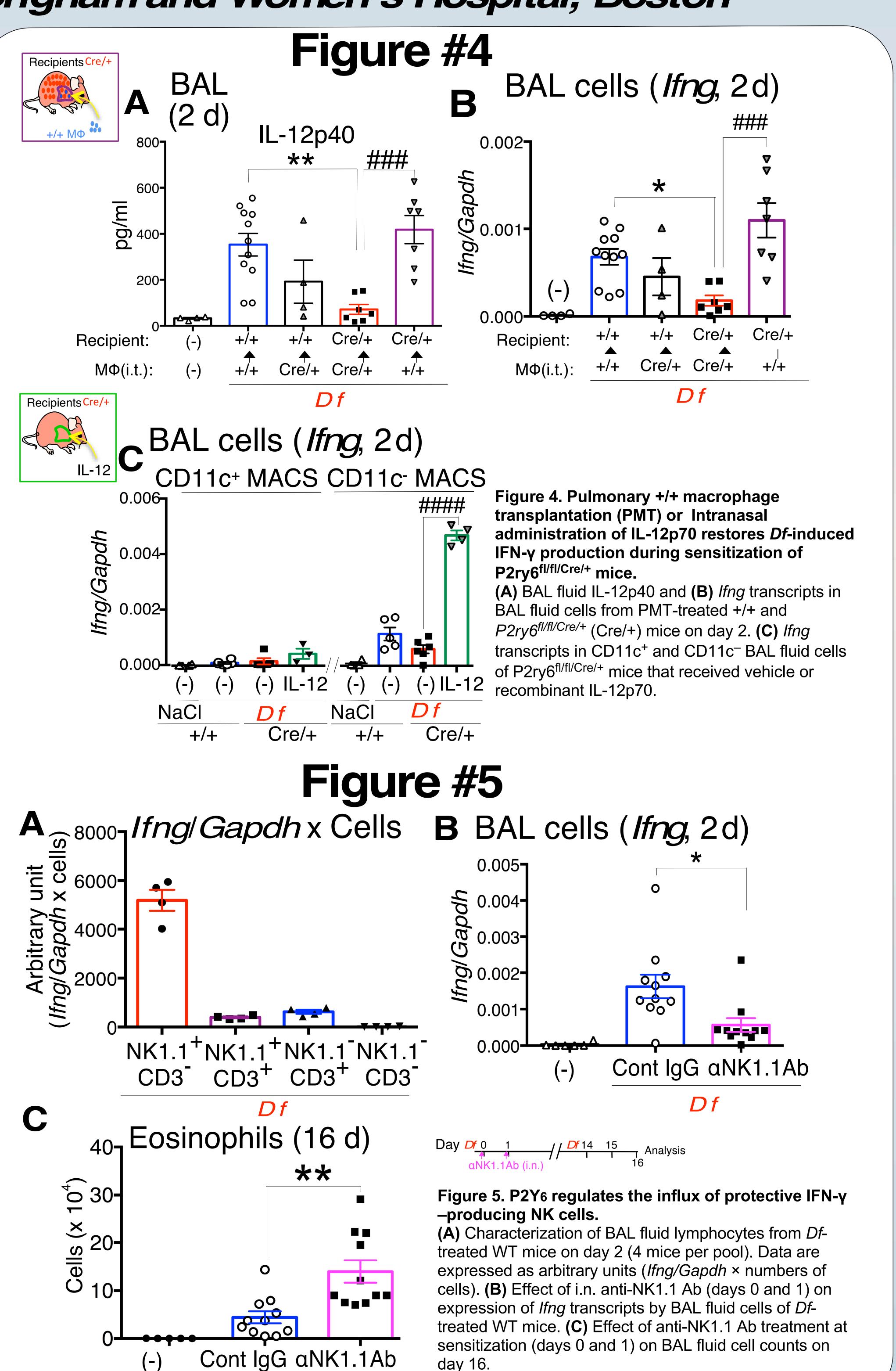
Methods

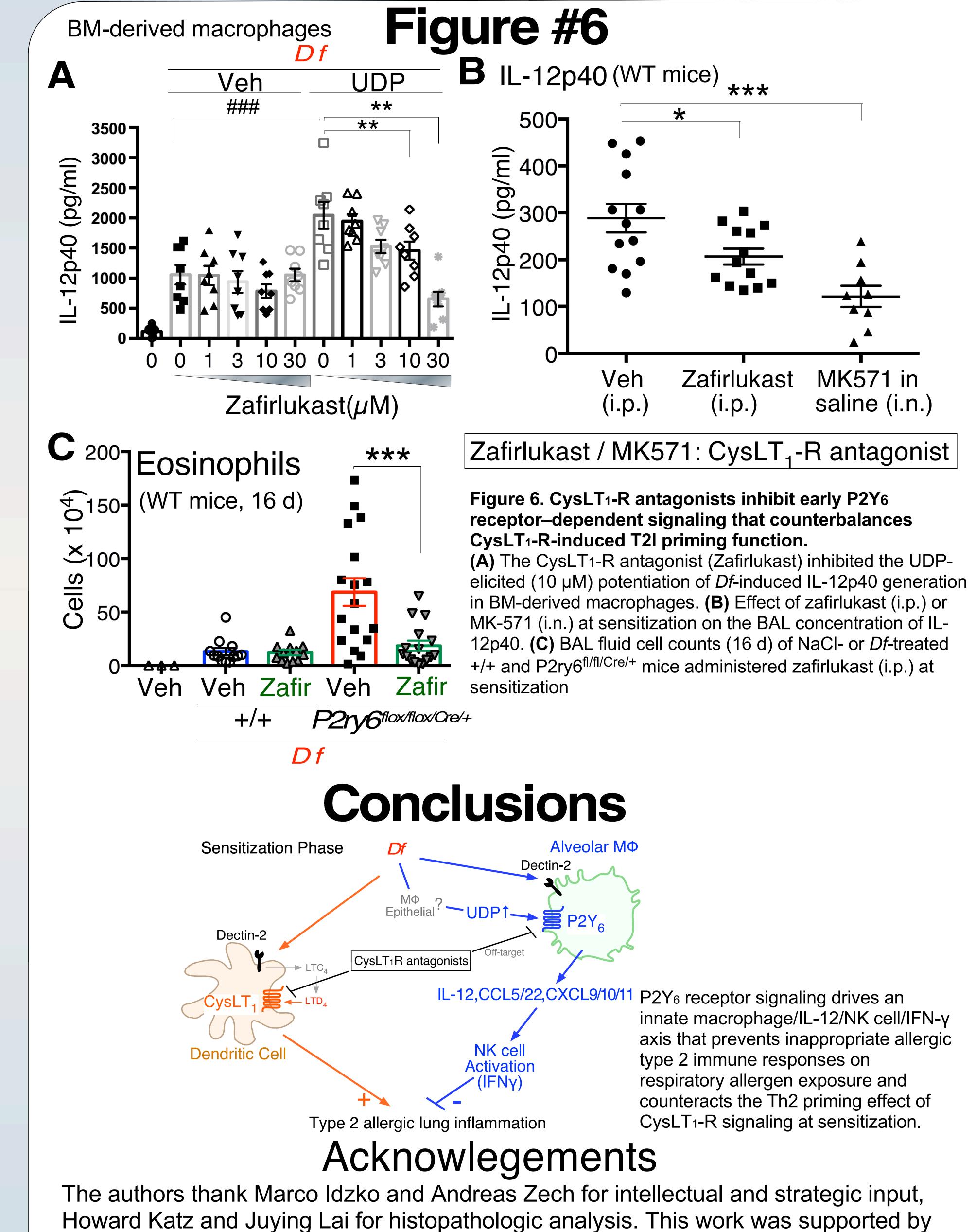
P2ry6flox/flox/rosa26creER/+ (Cre/+) and p2ry6flox/flox/+/+ controls were treated with tamoxifen before or after the initial sensitization. The mice were sensitized with an extract from Dermatophagoides farinae (Df) intranasally (i.n.) on days 0,1, 14, and 15. We examined the physiologic functions of alveolar macrophage P2Y6 at sensitization using cell depletions, adoptive transfers, CysLT1R antagonist (Zafirlukast, MK571).



when P2ry6 was deleted after the sensitization phase.







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Reference

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