

Single-cell and spatial profiling of cellular composition and signaling changes following icotrokinra treatment in ulcerative colitis: Results from ANTHEM-UC



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Background

Icotrokinra (ICO) is a first-in-class targeted oral peptide that precisely blocks the IL-23 receptor (IL-23R). In the ANTHEM-UC Phase 2b study, ICO demonstrated efficacy and a favorable safety profile in participants with moderately to severely active ulcerative colitis (UC).^{1,2}

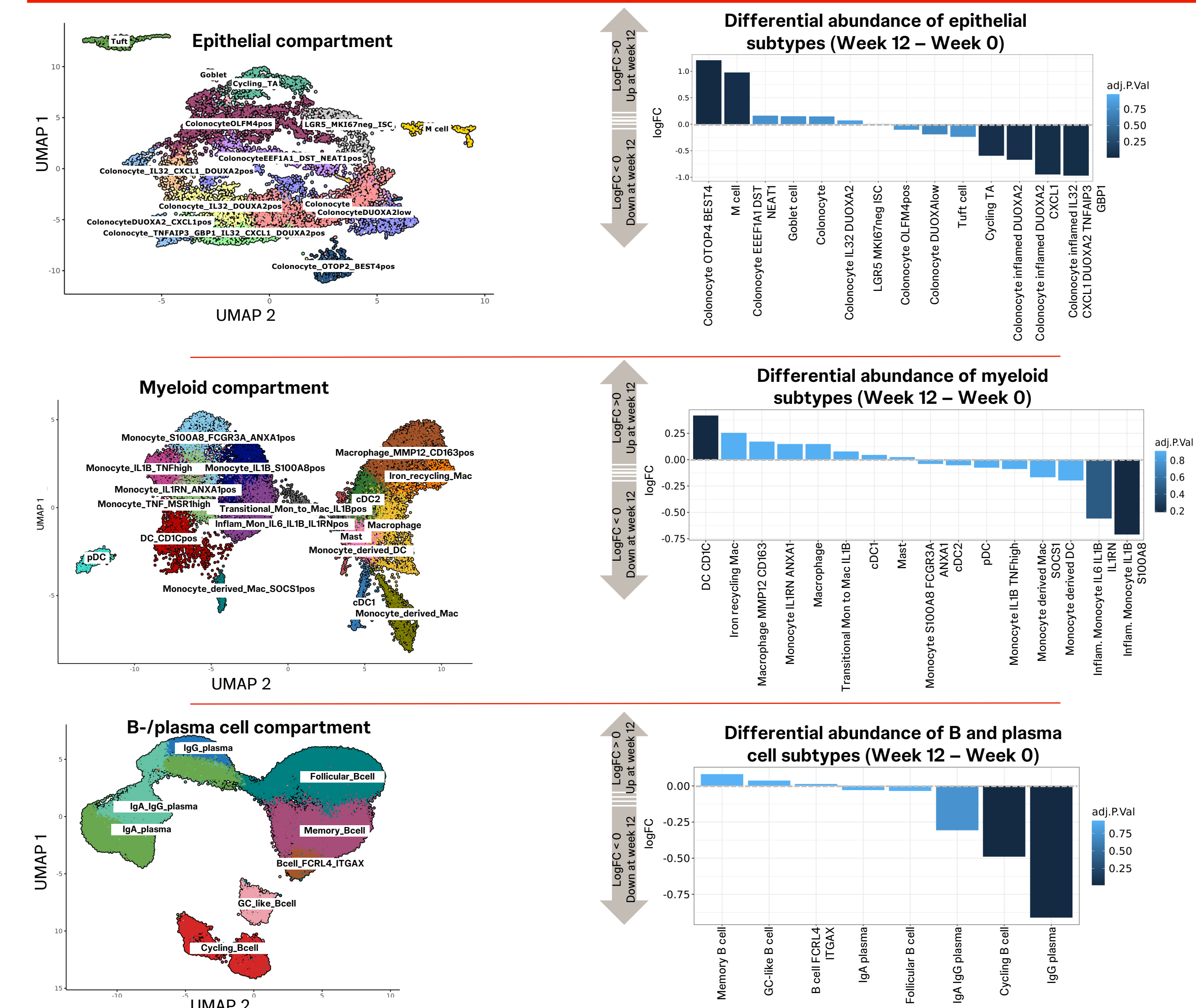
Here, we report ICO treatment-associated changes identified by single-cell RNA sequencing (scRNA-seq) and spatial transcriptomic approaches in colonic tissue from ANTHEM-UC study participants.

Objectives

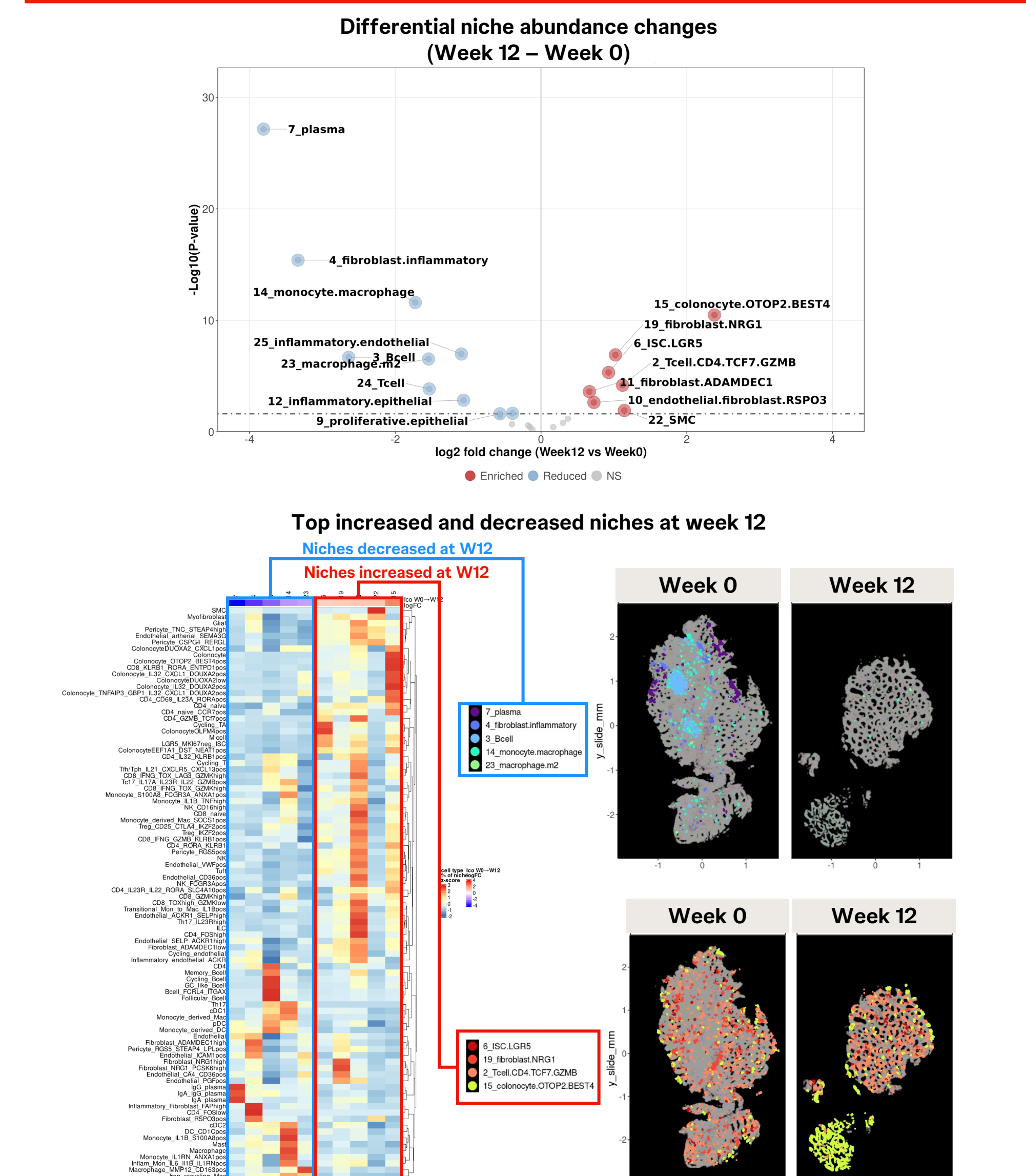
To better characterize the molecular mechanism of action of ICO in tissue by examining changes in colonic cellular abundance and intercellular signaling.

Results

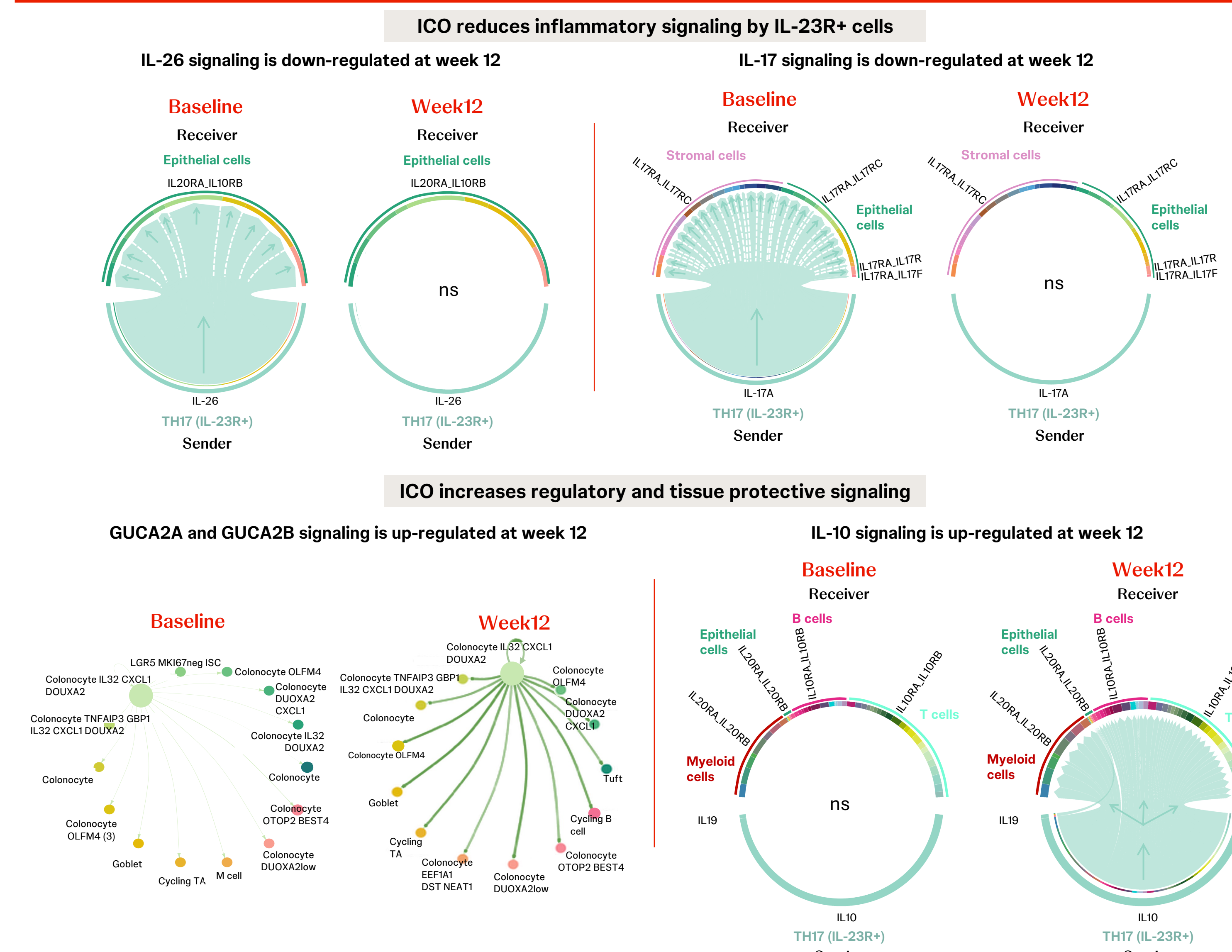
Reduction of pro-inflammatory cell states and expansion of populations involved in tissue repair following ICO treatment



Contraction of inflammation-associated and emergence of pro-resolution epithelial and stromal spatial niches following ICO treatment



Attenuation of inflammatory cytokine signaling and enhancement of tissue-protective communication programs following ICO treatment



Shift from inflammatory monocyte activity toward resolution-associated macrophage programs following ICO treatment

