



European
Crohn's and Colitis
Organisation

Lymphocyte activation gene (LAG)-3 on T cells is a potential therapeutic target in ulcerative colitis

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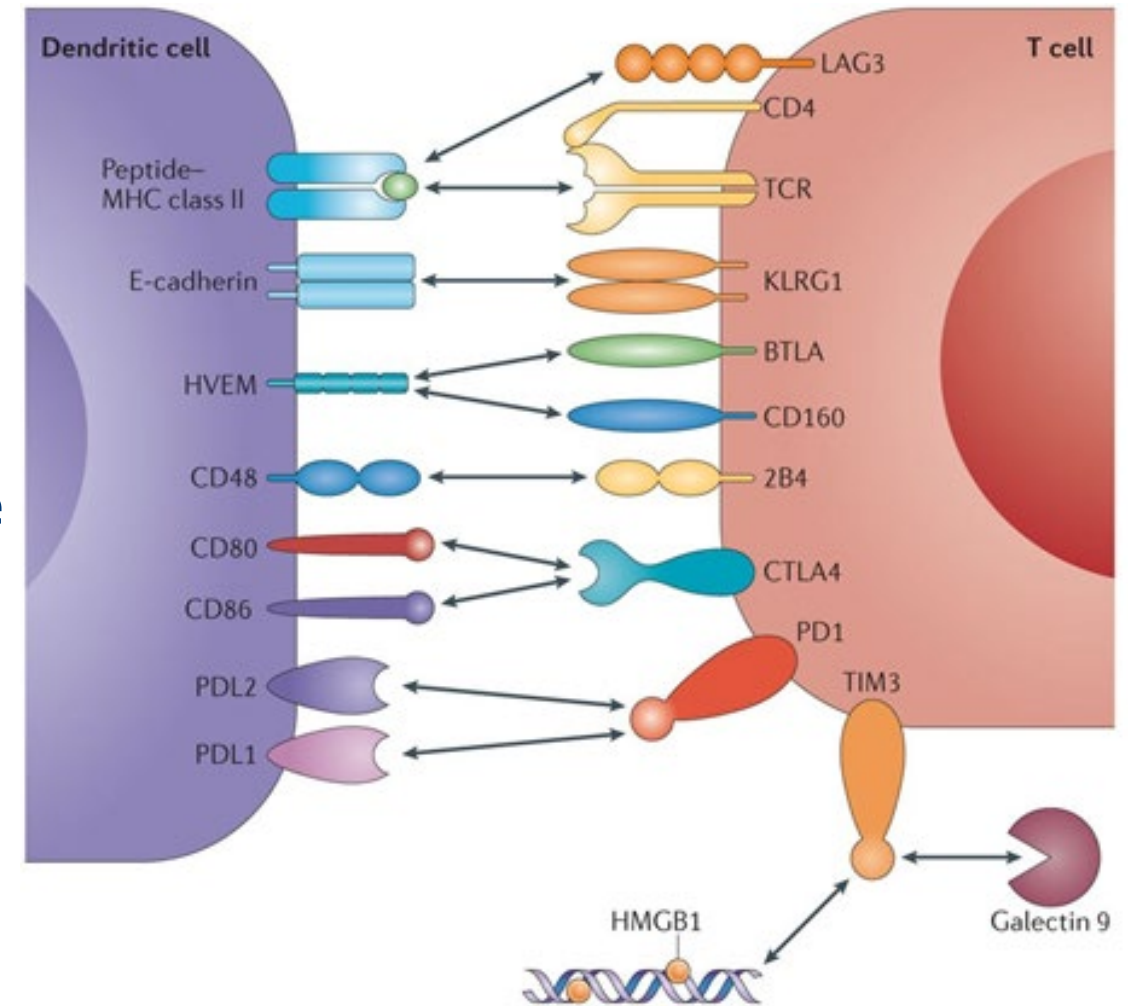


Conflicts of Interest

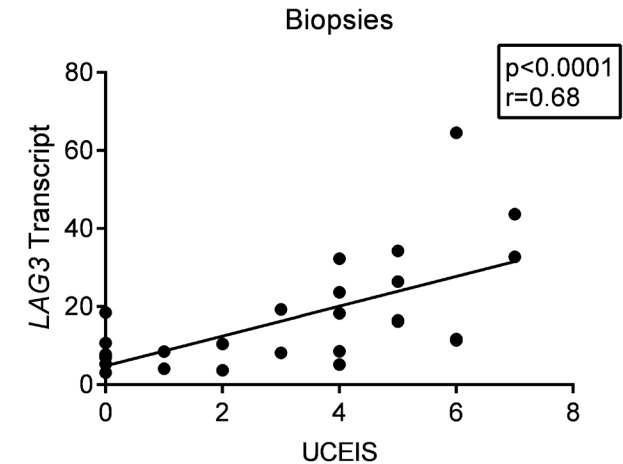
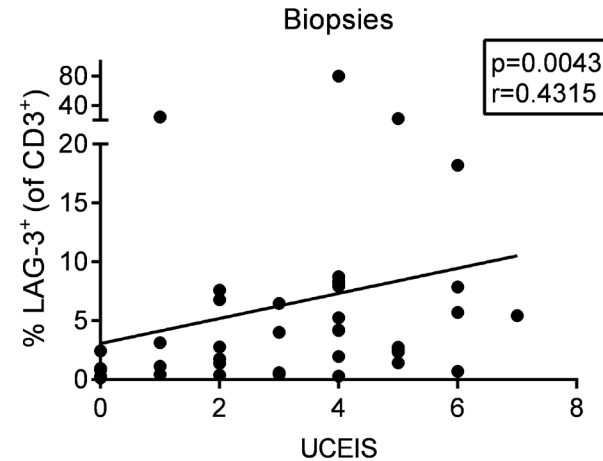
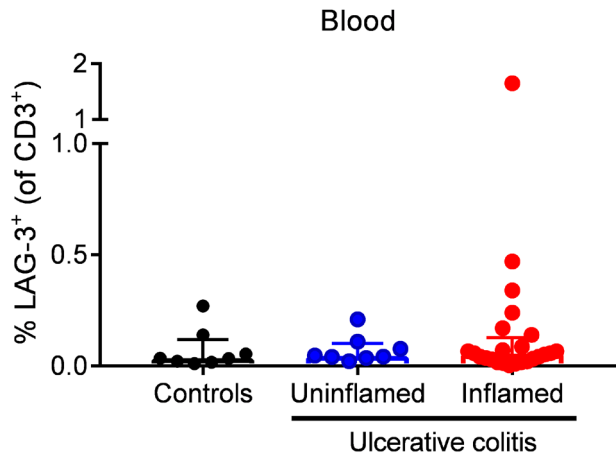
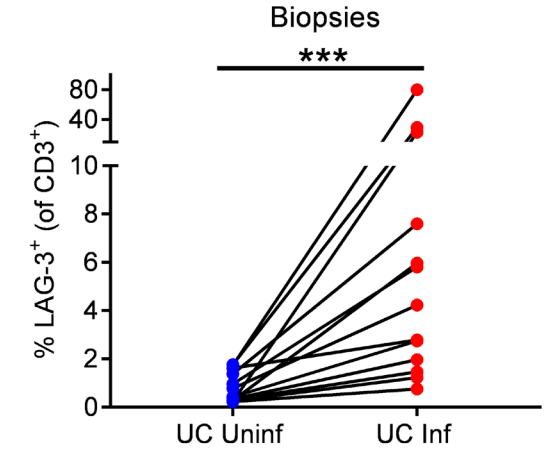
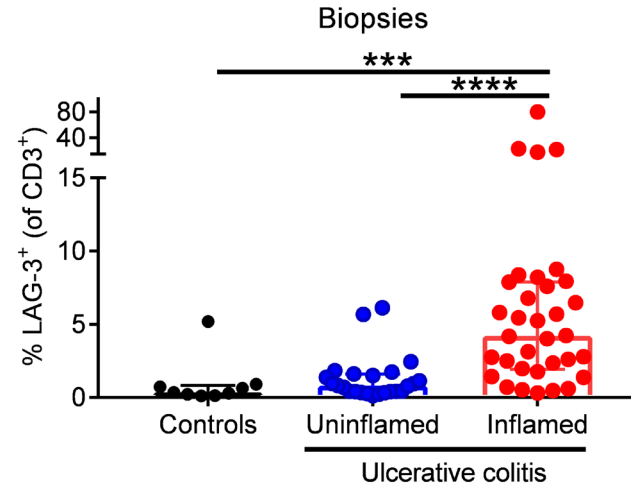
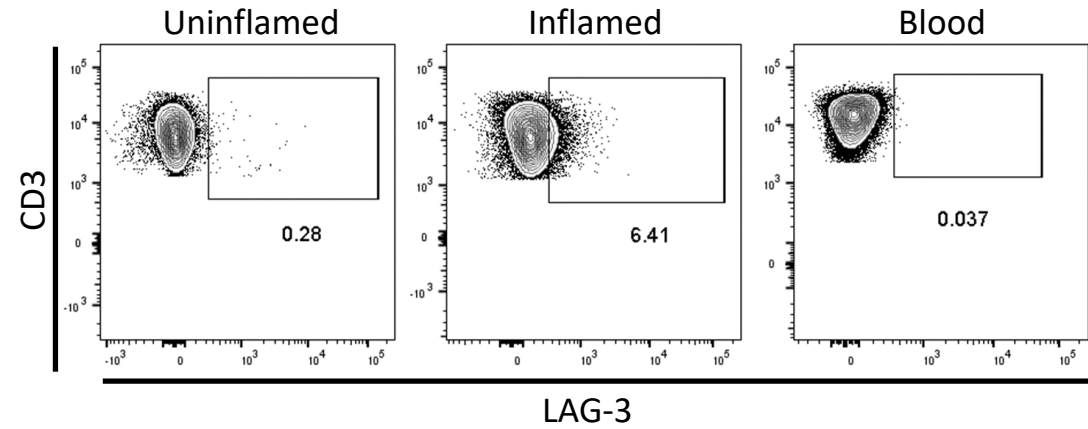
- Funded by GSK

LAG-3

- Lymphocyte activation gene (LAG)-3
- Upregulated on activated T cells
- Ligand is MHC class II
- Negative regulator of T cell expansion
- Role of LAG-3⁺ cells in inflammatory disease
- Possible therapeutic target

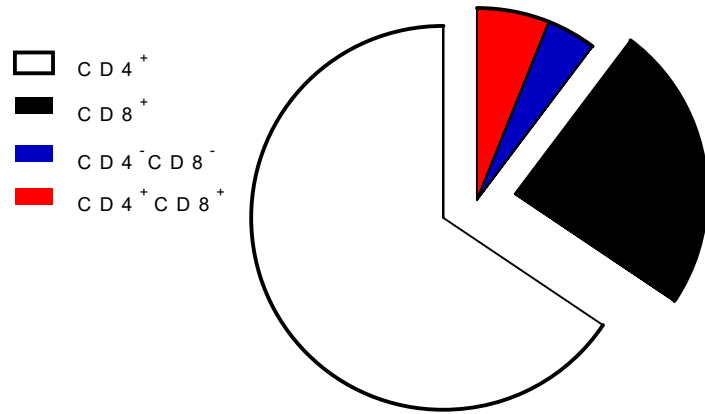


Increased LAG-3⁺ T cells in the inflamed colon

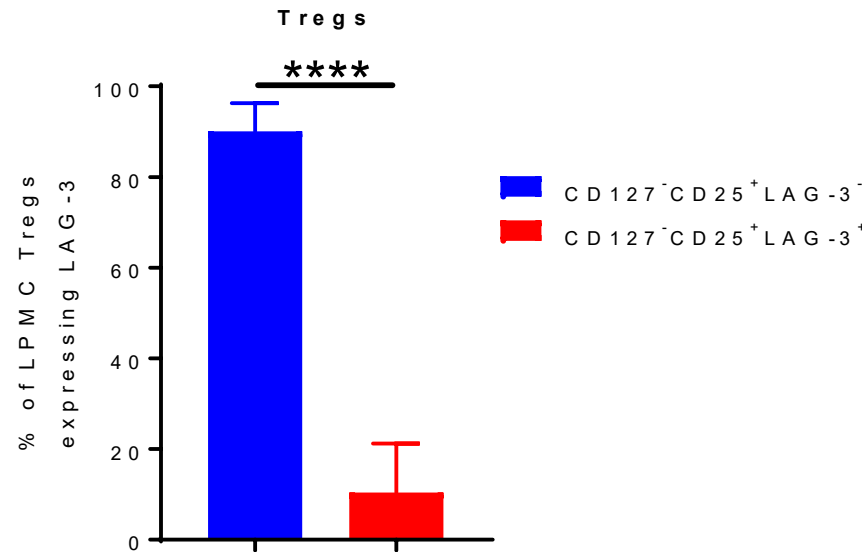
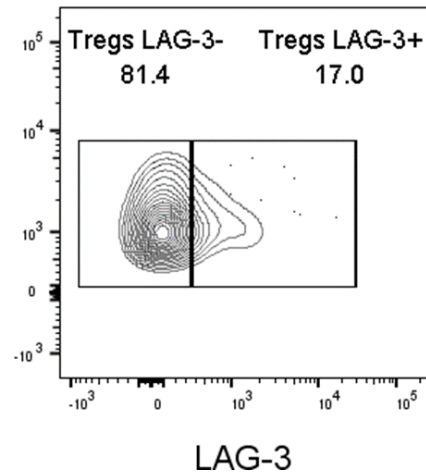
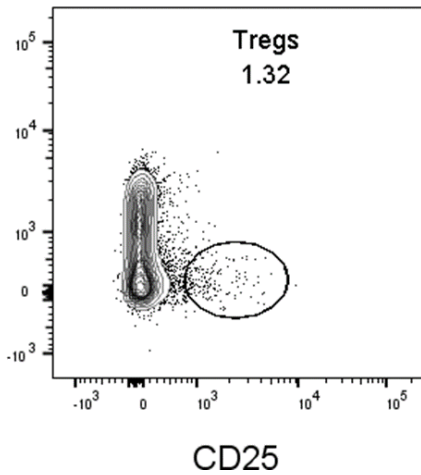
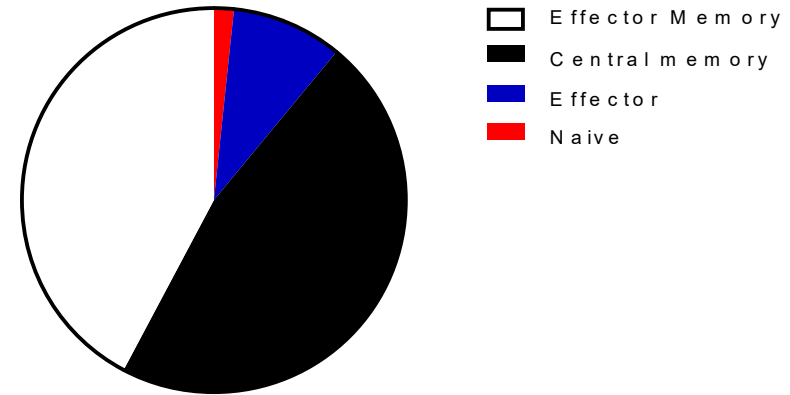


LAG-3⁺ cells are enriched within conventional memory T cells

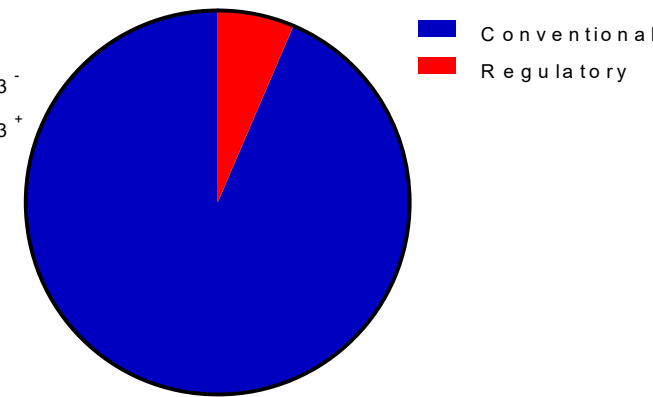
% of CD3⁺LAG-3⁺ cells that are:



% of CD4⁺LAG-3⁺ cells that are:

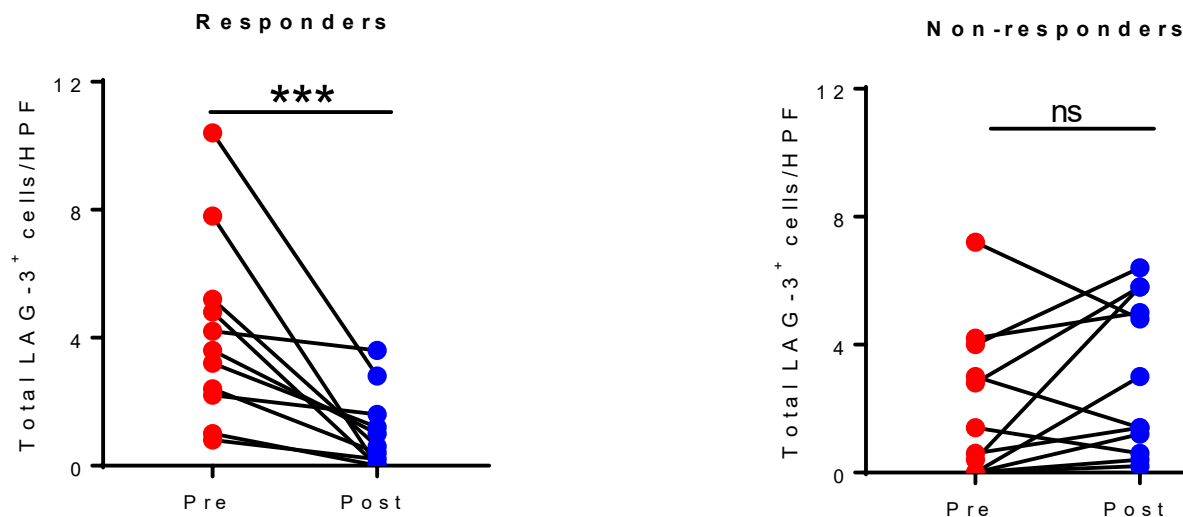
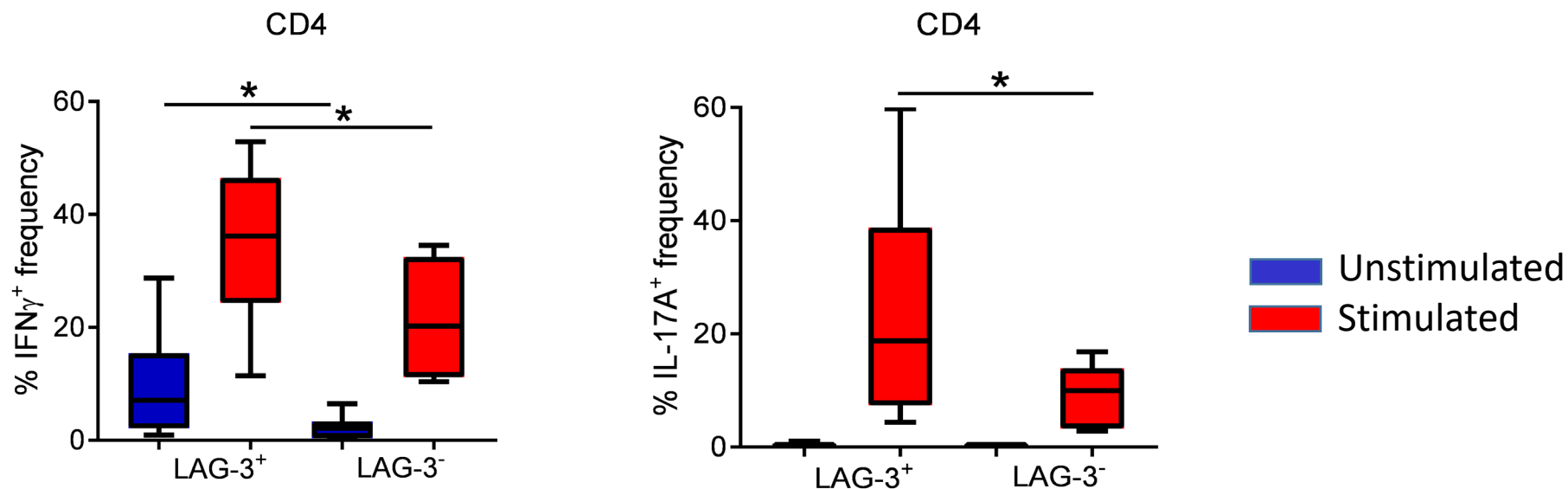


% of CD4⁺LAG-3⁺ memory cells that are:



Data is parametrically distributed; Students paired t-test was performed. *p, 0.05, **p, 0.01, ***p, 0.001 and ****p<0.0001.

Enrichment of IFN γ ⁺ and IL-17A⁺ cells within the LAG-3 compartment



Paired analyses were performed using the Wilcoxon test. **p*, 0.05, ***p*, 0.01, ****p*, 0.001



Conclusions

- LAG-3⁺ cells are increased in the inflamed mucosa
- They are predominantly effector memory T cells with gut homing properties
- LAG-3 cells produce pro-inflammatory cytokines like IFN γ and IL-17A
- LAG-3⁺ cell numbers correlate with disease activity, decline in response to treatment, and remain elevated when disease activity persists
- LAG-3 is therefore an attractive potential therapeutic target in UC



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