inflammatory potential of CD38 positive memory T lymphocytes after stimulation and performed single-cell RNA sequencing analyses.

**Results:** CD38 Expression is increased on certain immune cell subsets: Plasma blasts and unswitched Memory B cells, as well as plasmacytoid dendritic cells and CD16+ non-classical monocytes. We observed a drastic increase CD38 in both memory CD4 and CD8 T lymphocytes in SLE patients. These cells were mostly effector T cells (and not regulatory T cells) and expressed other markers of T cell activation and proliferation. We found an enrichment of CD38+ memory T cells in the urine of patients with lupus nephritis. After polyclonal stimulation of T cells, CD38+ produced less inflammatory cytokines. Preliminary single-cell sequencing results indicate that CD38+ T-lymphocytes have decreased clonal diversity and that these cells express genes associated with exhaustion and type 1 interferon response.

**Conclusion:** Increased CD38 expression on various lymphocyte subsets provides an additional rationale for investigating CD38-directed therapies in SLE. Increased CD38 can potentially deplete plasma cells but also has the potential to target interferon alpha producing plasmacytoid dendritic cells and modulate inflammatory T cell functions.

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