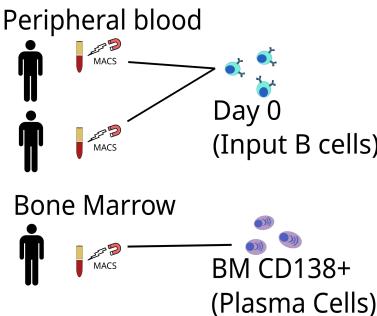
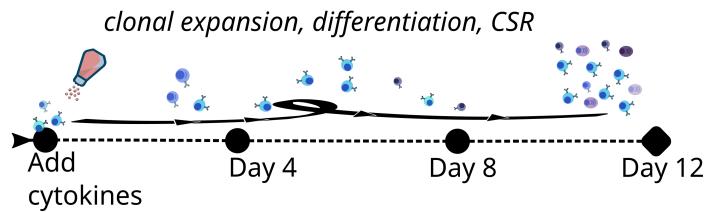


a.

1. Obtain B cells from donors



2. Perform in vitro differentiation on B cells



3. Analyze samples with single cell genomics

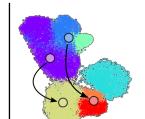
Samples

this study		public
<i>in vivo</i>	<i>in vitro</i>	<i>in vivo</i>
Day 0 BM CD138+	Day 4 Day 8 Day 12	BMMNC PBMC

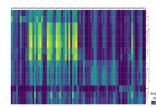
Measurement



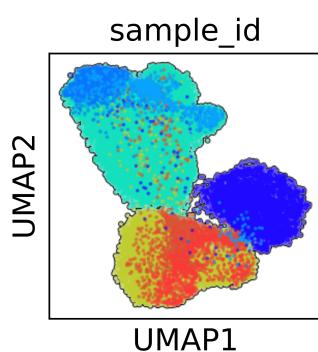
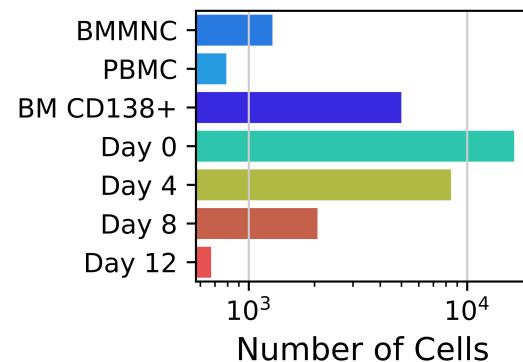
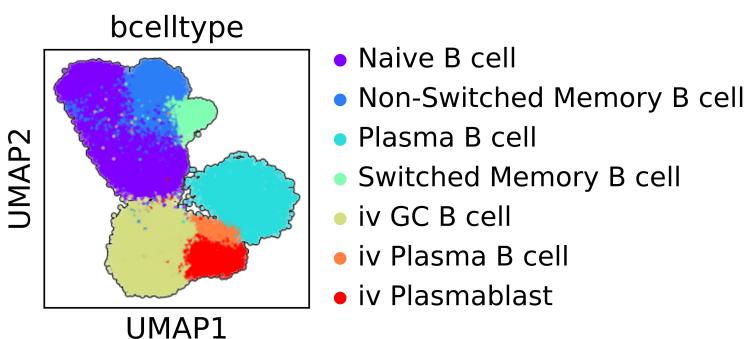
expressed lineage-barcode



lineage & clonal fate mapping



transcriptome

b.**c.****d.****e.**