Review of: "Lin28b specifies an innate-like lineage of CD8+ T cells in early life"

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In this paper, Watson N.B. et.al. report the role Lin28b in the innate-like behavior of CD8+ T cells, similar to neonatal CD8+ T cells.

The article is interesting and results are compelling, yet quite unfortunately, the supplementary figures were not accessible for the review.

The authors highlight the role of IL-12/IL-18 stimulation to give rise to a potent cytokine production by the neonatal cells, including IFN-g, and cytotoxicity molecules, both of which are not easily expressed by the neonatal cells upon CD3/CD28 signaling. They propose that this activation is due to the downregulation of Bach2, acting as a transcriptional repressor of AP-1 transcription factors, which can bind after stimulation, leading to chromatin remodeling.

I suggest that they stress the importance of reaching this strong response and AP-1 binding with these cytokines, as this contrast with the general low response of neonatal cells to TCR signals and particularly low binding of AP-1 TF. I think authors should cite important reviews (10.3389/fimmu.2020.01089, 10.1146/annurev-immunol-091319-083608) about this previous work as this highlight the unique response to these cytokines and also cite initial reports on the innateness of neonatal CD8+ T cells (10.1016/j.celrep.2016.10.056).

Further the authors explore by single cell sequencing the complex mixing of different sorts of CD8+ T cells and their dynamic proportions at different ages. There is evidence however that innate-like neonatal CD8+ T cells are able to mature into adult-like cells in the presence of TCR+ IL-12 signals (10.3389/fimmu.2020.01089). A discussion about this should be addressed