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B1 B cell progenitors

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Online response:

We read with interest the manuscript from Graf and colleagues reporting that adult B2 B cells can undergo conversion to B1 B cells. We acknowledge the elegance of the transgenic used to support this conclusion, but our concern is that a balanced view of the field is not presented, which may lead investigators new to this area to conclude that B1 cells, particularly the CD5+ B1a subpopulation, typically develop from mature B2 cells. This issue arises because the authors marginalize numerous studies showing that B1 cells arise from committed progenitors by labeling them “controversial.” Multiple laboratories have identified surface immunoglobulin negative B1-restricted progenitors whose numbers peak prenatally in normal mice (1–5)…. It is important to emphasize that Graf et al. present no data to refute studies showing that B1 cells represent a separate B cell lineage that arises from distinct progenitors. Thus, the results from this elegant paper should not be overinterpreted to support the view that B1 cells typically arise from mature B2 cells.

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