



Figure 11. Developmental Plasticity of B Lymphocytes

Ectopic expression of Bcl6 and MTA3 in established plasma cell lines silences the transcription of plasma-cell-specific genes and simultaneously reactivates the expression program of B cells (*orange arrow*) (Fujita et al. 2004). CD19⁺ B lymphocytes, which were not further characterized with regard to their developmental stage, undergo rapid transdifferentiation in vitro to macrophages in response to forced C/EBP α expression (*red arrow*) (Xie et al. 2004). Conditional *Pax5* deletion allows committed pro-B cells and even mature B cells to retrodifferentiate in vivo to uncommitted progenitors, which then develop into other hematopoietic cell types in the bone marrow or T cells in the thymus (*black arrows*) (Mikkola et al. 2002; C. Cobaleda and M. Busslinger, unpublished data). The blue color denotes Pax5 expression during B-cell development.