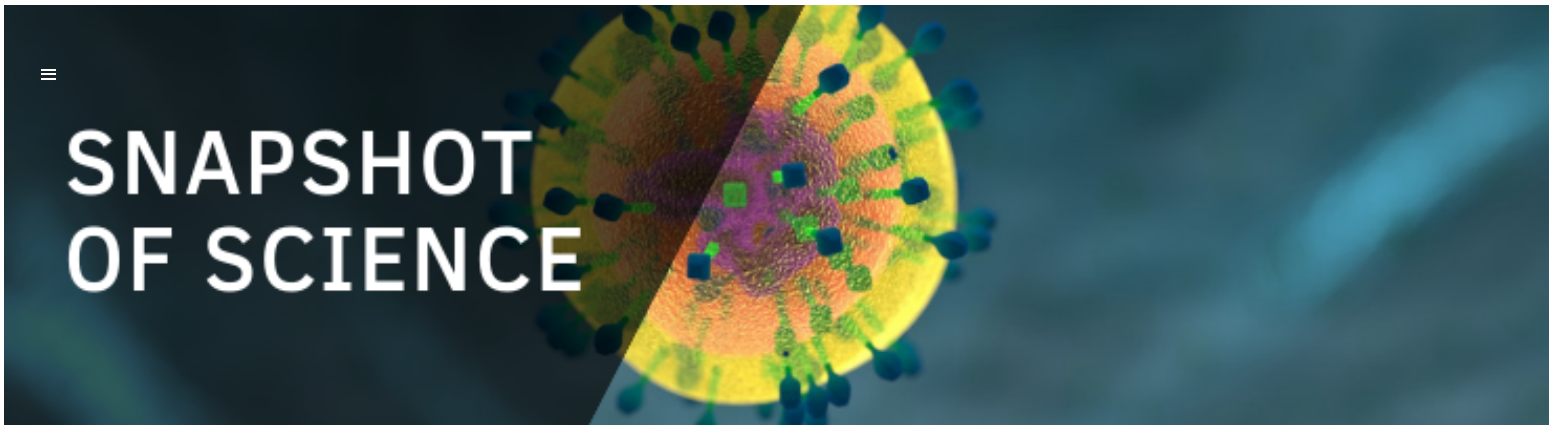

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Snapshot of Science for June 2019

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Publication Summaries

MI-2β IS CRITICAL FOR PRODUCING B CELLS

Chromatin Restriction by the Nucleosome Remodeler Mi-2β and Functional Interplay with Lineage-specific Transcription Regulators Control B-cell Differentiation

Yoshida T, Hu Y, Zhang Z, Emmanuel AO, Galani K [et al.], Georgopoulos K.

Published in *Genes & Development* on May 23, 2019

Coordinated induction and repression of genes is critical in the developing immune system. In this study, we show that Mi-2β, an enzyme that controls chromatin accessibility, is critical for production of B cells, the mediators of humoral immunity. Mi-2β physically and functionally interacts with B cell-lineage transcriptional regulators to control B cell differentiation. Mi-2β induces genes regulated by IL-7-receptor signaling and promotes growth and survival in collaboration with EBF1. In partnership with IKAROS, Mi-2β represses genes involved in adhesion signaling, normally active in earlier progenitors. These positive and negative effects of Mi-2β on gene expression are critical for normal B cell differentiation and function.

(Summary submitted by Toshimi Yoshida, PhD, Cutaneous Biology Research Center, Department of Dermatology)