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Role of the DBP Gene in the Regulation of Circadian and Cyclic Hematopoiesis: A Case for Potential Linkages

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ABSTRACT D-site albumin promoter binding protein (DBP) is a member of the PAR leucine zipper family of transcription factors and is known to be a clock controlled gene (CCG) hardwired back to the core clock components. Genetic loss of function studies in mice with DBP have shown that DBP null mice exhibit 0.5hr shorter circadian rhythms and altered locomoter activity. However, it is not known whether DBP plays any role in the regulation of hematopoiesis. This review presents the evidences from the literature which point out a role for DBP in the regulation of hematopoiesis. Further, the evidences also suggest that DBP may be associated with the etiology of the myeloproliferative disorder polycythemia vera (PV).