



# Professor Steven Gerondakis

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Monash Biomedicine Discovery Institute  
Infection and Immunity Program

## OTHER PROGRAM AFFILIATIONS



Cancer



Development and Stem Cells

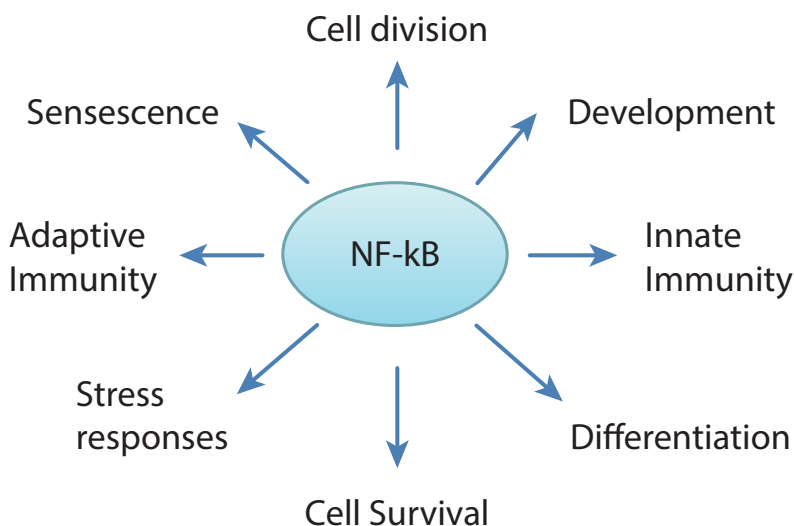
## EMAIL

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The Nuclear Factor of kappa B (NF- $\kappa$ B) signal transduction pathway plays a key role in the immune system and features prominently in disease-associated pathology. Our group focuses on the use of genetically modified mice to understand how NF- $\kappa$ B regulates normal development, differentiation and cellular functions particularly in the immune system, as well as its roles in autoimmune disease and cancer. The long-term goal of our research is to identify ways of manipulating NF- $\kappa$ B transcription factor activities for therapeutic purposes.

## Research Projects

1. NF- $\kappa$ B signaling, inflammation and aging
2. Roles of NF- $\kappa$ B signalling in gastric cancer and B cell malignancies
3. NF- $\kappa$ B functions in T cell development and differentiation
4. The epigenetics of NF- $\kappa$ B transcription factor function



NF- $\kappa$ B regulation of cellular functions.

## Selected significant publications:

1. **Gerondakis S**, Fulford TS, Messina NL, Grumont RJ. 2014. NF- $\kappa$ B control of T cell development. *Nat Immunol* 15(1): 15-25.
2. Gugasyan R, Horat E, Kinkel SA, Ross F, Grigoriadis G, Gray D, O'Keeffe M, Berzins SP, Belz GT, Grumont RJ, Banerjee A, Strasser A, Godfrey DI, Tschlis PN, **Gerondakis S**. 2012. The NF- $\kappa$ B1 transcription factor prevents the intrathymic development of CD8 T cells with memory properties. *EMBO J* 31(3): 692-706.
3. Isomura I, Palmer S, Grumont RJ, Bunting K, Hoyne G, Wilkinson N, Banerjee A, Proietto A, Gugasyan R, Wu L, McNally A, Steptoe RJ, Thomas R, Shannon MF, **Gerondakis S**. 2009. c-Rel is required for the development of thymic Foxp3+ CD4 regulatory T cells. *J Exp Med*. 206 (13): 3001-14.
4. Grumont R, Lock P, Mollinari M, Shannon FM, Moore A, **Gerondakis S**. 2004. The mitogen induced increase in T cell size involves PKC and NFAT activation of Rel/NF- $\kappa$ B-dependent c-myc expression. *Immunity* 21(1): 19-30.
5. Grumont RJ, Strasser A, **Gerondakis S**. 2002. B cell growth is controlled by phosphatidylinositol 3-kinase-dependent induction of Rel/NF- $\kappa$ B regulated c-myc transcription. *Mol Cell* 10(6): 1283-94.