

Simon P. Hogan, PhD

Assistant Professor

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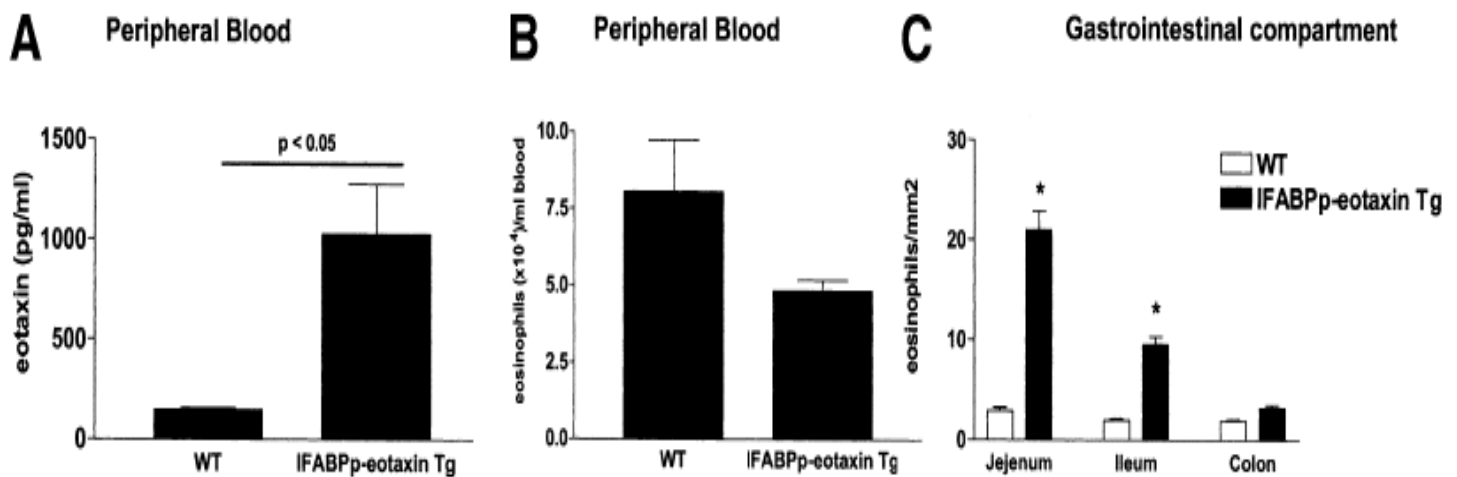
Description of Research:

Dr. Hogan's research is focused on cellular and molecular networks that underlie the development of gastrointestinal inflammation and associated dysfunction in gastrointestinal disorders. Current projects focus on the role of individual Th2 cytokines and eosinophils in disease pathogenesis and characterization of the downstream signaling pathways employed by these molecules and cells to induce disease. Dr. Hogan's experimental approach is integrative, employing state-of-the-art molecular genetic techniques in association with model systems to identify the role of inflammatory cells and molecules in the events that underpin disease.

Collaborations:

Dr. Hogan has used the **Microarray and Bioinformatics Cores** in collaboration with Dr. Aronow to identify the role of Relm-beta in colonic injury. He has also used the **Integrative Morphology Core** to detect eotaxin in the gastrointestinal tract, and collaborates with Drs. Denson, Mishra, and Rothenberg studying eosinophils.

Representative Figure:



Peripheral blood, pulmonary, and gastrointestinal eosinophil levels in intestinal rat fatty acid-binding protein promoter (IFABPp)-eotaxin transgenic mice (Tg) and wild-type (WT) mice. (A) Eotaxin levels in serum of IFABPp-eotaxin Tg mice and WT mice by ELISA. Eosinophil levels in (B) peripheral blood and (C) the gastrointestinal compartment of IFABPp-eotaxin Tg mice and WT mice. Eosinophils were identified by immunohistochemistry. Eosinophils were quantitated by counting 20 similar high-power fields (HPF; magnification 32 X) for each group. Data represent the mean \pm SEM of 4–5 random sections per mouse for 4–5 mice per group from duplicate experiments. The statistical significance of differences ($P < 0.05$) was determined with the Student unpaired t test. Fig. 6 from *Gastroenterology*, 2004; 127:105-118.