



Medical Education and Research Grant Outcome Report

Name: Wnt/Frizzled Signals in Normal and Malignant Lymphoid Development

Principal Investigator: Erik A. Ranheim, MD, PhD

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Department: Pathology and Laboratory Medicine

Program: New Investigator Program

Grant Duration: 04-01-2006 to 03-31-2009 (36 months)

Expenditures: \$100,000 (100%)

Use of Funds (Taxonomy): Basic research

Research Keywords: Leukemia, Lymphoma, Beta-catenin, Signaling, B Cells

► **Description:** Chronic lymphocytic leukemia is the most common type of leukemia in Western countries and is currently incurable. This research studies the cells involved in leukemia, and is aimed at understanding the pathways by which normal cells in the immune system develop and how that process might be abnormally turned on in leukemia.

► **Contributions/Results:** The investigators examined the effects of a specific signaling system – the Wnt-Frizzled set of proteins – on development of normal and cancerous B lymphocytes. They successfully demonstrated in mice that the Wnt-Frizzled signaling cascade is important in normal B-cell development. This is especially true at key moments of development, which may play a role in at least one type B cell leukemia/lymphoma. The similarities to human leukemia/lymphoma were quite striking, and set the stage for further research.

► **Met Objectives:** Project completed.

► **Timeline for Application of Results:** Unknown

► **New Partnerships or Collaborations:** This project has helped form the basis for a translational lymphoma “super group” at the University of Wisconsin. This group includes Brad Kahl, Peimanhn Hematti, and Julie Chang from the SMPH Dept. of Medicine; Catherine Leith, David Yang, and Ken Young from the SMPH Dept. of Pathology and Laboratory Medicine; and Shigeki Myamoto from the SMPH Dept. of Pharmacology.

► **Matched Dollars (cash or in-kind):** None.

► **Dissemination:**

- Articles: *Blood*
- Oral presentation: 2007 American Society of Hematology Meeting.

► **Additional Funding:** Received \$100,000 from the Jimmy V. Foundation and \$50,000 from the Forward Lymphoma Award to further the translational aspects of this research.