

CHOP Research Institute Summer Scholars Program



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Hematology

Basic Research: Research most often conducted in a laboratory setting that is designed to enhance our scientific knowledge base (does not involve human subjects)

Molecular Mechanisms Responsible for Maintaining Normal Hemostasis

Injuries that cause bleeding require a rapid molecular response to stop blood from leaking from the wound site. My laboratory studies the molecular process of blood clotting (hemostasis) and we have projects that attempt to understand the biochemistry of this process and develop therapies to treat bleeding or thrombosis.

- **Potential summer research project:**
 - (1) Investigating new variants of clotting factor IX and VIII as protein therapeutics for hemophilia; and
 - (2) Understanding how clotting factor V is regulated by different components released from platelets.
- **Students will learn the following techniques:**
 - (1) Design and construct different mutants of FIX and FVIII.
 - (2) Use PCR and different molecular biology techniques to make final plasmids;
 - (3) Culture mammalian cells and collect conditioned media; and
 - (4) Purify clotting factors from conditioned media using chromatography and perform functional assays to detect protein.

Please click [here](#) to read more about Dr. Camire