

E0040

Hemophilia A, a Bleeding Disorder Involving Coagulation Factor VIII. Beneva Myrick, Mike Piotrowski, Maixiong Thao, Yangyeo Thao, and Dean Dolence, Rufus King High School SMART Team, Milwaukee, WI 53209-6898, Mentor: Dr. Phil Kroner, Medical College of Wisconsin, Milwaukee, WI 53226-0509.

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Factor VIII is connected to the hereditary bleeding disorder hemophilia. People with hemophilia may have absent or dysfunctional Factor VIII, a clotting protein. Factor VIII travels with Von Willebrand factor (VWF) through the bloodstream and is activated when a blood vessel is broken. Factor VIII is a key component in the blood coagulation process. Factor VIII consists of six domains. When the protein is activated, the B domain is clipped. A lack of healthy factor VIII results in symptoms such as swelling in the joints and hemorrhaging. Treatments include blood transfusions and soon gene therapy