No two people are alike. From the inside out, the human body is as individual as fingerprints. When sick, the body’s immune system has its own unique way of responding. By unlocking the code to the body’s “alarm system,” Pure Protein is making monumental medical advances to fight diseases, better match transplant patients, make the blood supply safer and predict susceptibility to and fight autoimmune diseases.

Dr. William Hildebrand’s fascination with human leukocyte antigen (HLA) alarm systems led him to create Pure Protein. The company produces and types HLA proteins and is developing applications that will have a major impact on human health. Dr. Hildebrand’s research is also conducted in collaboration with the University of Oklahoma Health Sciences Center.

Using HLA proteins to differentiate between healthy and infected cells, therapies can be designed to target only the infected cells. Vaccines to combat cancer and viruses including West Nile, influenza and human immunodeficiency virus (HIV) are being moved from the lab to the market with the support of OCAST. The company also uses these proteins to better understand autoimmune diseases such as diabetes and arthritis.

Nationally recognized as a leader in HLA transplant typing, Pure Protein has designed a kit that includes tools, instructions and software to distribute to labs around the world. This kit will be used by labs to teach technicians to analyze HLA data to reduce transplant rejection and better match patients.

Additionally, the company is working to make the blood supply safer. Donated blood is screened for HIV and hepatitis. But there is no test in place to screen for transfusion related acute lung injury (TRALI), a potentially fatal lung infection that can be contracted by people receiving blood transfusions. This fatal infection can be identified in HLA typing, and Pure Protein is working to incorporate it into blood bank screenings.

Read more about Pure Protein