**Proteins for Treatment of Human Iron Overload**

*Technology #2652*

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Chronic iron overload treatment uses protein to bind iron: Iron overload disorders can lead to excessive deposition of iron in organs which can be damaging. Chronic iron overload can lead to heart failure, cirrhosis and death. Iron overload can occur due to diseases including sickle cell anemia, Thalassemia, hemochromatosis, or exogenous causes such as excessive dietary iron intake and IV blood transfusions. Treatment of iron overload involves using medications called chelators to bind iron that can then be excreted in urine, sweat or feces. There are chemical drugs available now to treat human iron overload disorders; however, they are associated with toxicity and side effects including the donation of iron to microbes.

Small protein binds iron to treat iron overload: We have created a small protein that binds iron with extremely high affinity and excretes it in the urine in a red-ox inactive form. Because the iron is so tightly bound it will not encourage bacterial growth.

Applications: • Therapeutic treatment of human iron overload disorders • Infusion prior to surgery, transfusions, and infections

Advantages: • This technology uses protein instead of chemical drug, and endogenous compound. It is non toxic and non redox active. • Will not donate iron to microbes as does some of the commercially available chelators.

Patent Status: Patent Pending

Licensing Status: Available for Licensing and Sponsored Research Support ”

**Inventors**

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