

Dr. Susan Perrine initiated clinical and basic studies of short chain fatty acids as agents that may reverse the γ -globin to β -globin chain switch and impair the polymerization of sickle hemoglobin. The specific aims of this study were to determine if addition of pulse butyrate increases percent HbF and percent F-cells in patients with sickle cell anemia, by absolute levels of 5% and 10% respectively, above these levels on standard therapy with hydroxyurea; whether several minor endpoints are different between the two treatment arms; and whether clinical events are decreased with addition of the second therapeutic compared to standard treatment with hydroxyurea alone. These studies will begin to develop an additional agent that could increase HbF levels in sickle cell anemia and might synergize with hydroxyurea.