Washington University in St. Louis Group members: Julie Knowles, Andrew Chang, Nicole Ensz, Braden Perkins.

Design summary:

ZnDermal: The team is developing a transdermal zinc delivery system to both treat and help prevent diarrheal diseases in developing countries where these are a leading cause of death for young children. The current treatment for diarrheal disease is Oral Rehydration Therapy and daily oral zinc tablets. Oral zinc administration is ineffective at being absorbed due to the distressed state of the gastrointestinal system during diarrhea. One ZnDermal patch will allow for zinc to enter the body through the bloodstream for the entire treatment period allowing for a more efficient, user-friendly treatment.