



Apr 14th, 9:00 AM - 10:00 AM

# The Development of A Novel Therapeutic for the Treatment of Sickle Cell Disease

Cody Wynn

*Illinois Wesleyan University*

Brian Brennan, Faculty Advisor

*Illinois Wesleyan University*

Follow this and additional works at: <http://digitalcommons.iwu.edu/jwprc>

---

Wynn, Cody and Brennan, Faculty Advisor, Brian, "The Development of A Novel Therapeutic for the Treatment of Sickle Cell Disease" (2012). *John Wesley Powell Student Research Conference*. 22.  
<http://digitalcommons.iwu.edu/jwprc/2012/posters/22>

This Event is brought to you for free and open access by The Ames Library, the Andrew W. Mellon Center for Curricular and Faculty Development, the Office of the Provost and the Office of the President. It has been accepted for inclusion in Digital Commons @ IWU by the faculty at Illinois Wesleyan University. For more information, please contact [digitalcommons@iwu.edu](mailto:digitalcommons@iwu.edu).

©Copyright is owned by the author of this document.

Poster Presentation P43

**THE DEVELOPMENT OF A NOVEL THERAPEUTIC FOR THE TREATMENT OF SICKLE CELL DISEASE**

Cody Wynn and Brian Brennan\*  
Chemistry Department, Illinois Wesleyan University

Sickle Cell Disease is a genetic blood disorder caused by a point mutation in the gene which codes for hemoglobin in red blood cells. This mutation in the protein leads to the formation of long polymeric strands of hemoglobin that cause the red blood cells to misform into the characteristic sickled shape. These sickled red blood cells are too large to fit through capillaries and thus cause the problems associated with sickle cell disease such as anemia and tissue damage. Our approach towards developing novel therapeutics involves the production and screening of large libraries of small peptides which target the point mutation in an effort to discover ligands for the protein. Once ligands have been identified, we can determine if their interactions are sufficient to prevent protein polymerization. We will present some recent progress that we have made on this challenging biochemical problem.