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## Solid-Phase Peptide Synthesis

Elisabeth Sonta

*Illinois Wesleyan University*

Brian Brennan, Faculty Advisor

*Illinois Wesleyan University*

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Poster Presentation P47

## **SOLID-PHASE PEPTIDE SYNTHESIS**

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Sickle cell disease is a genetically inherited blood disorder that leads to the aggregation of hemoglobin in the absence of oxygen. This aggregation leads to the formation of the characteristic sickled shape of red blood cells, which is the cause of the symptoms of the disease. There are currently few treatments for the disorder, with the only cure being a risky bone marrow transplant. Previous studies in the lab have determined fifteen peptides that bind to deoxygenated hemoglobin; these peptides may prevent the aggregation of hemoglobin and therefore the sickled shape of the red blood cell. My research is focused on the synthesis and purification of these peptides for their use in future studies involving their interaction with deoxygenated hemoglobin. The results of this study will be presented.