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The Synthesis of a Peptoid for Use as a Novel Therapeutic in the Treatment of Sickle-Cell Disease

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Poster Presentation P9

**THE SYNTHESIS OF A PEPTOID FOR USE AS A NOVEL
THERAPEUTIC IN THE TREATMENT OF SICKLE-CELL DISEASE**

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Sickle cell disease is a disorder of the body's red blood cells, characterized by their sickled shape. The cause of this disease is a single mutation in the protein hemoglobin, a molecule serving as the primary means of oxygen transport within the body. In hypoxic conditions, this mutant hemoglobin is capable of binding to other hemoglobin molecules leading to the formation of long polymeric strands and leaving the resultant red blood cell with a crescent shape. My research is focused on designing a molecule that can bind to the mutant hemoglobin and thereby disrupt the formation of polymeric strands and the subsequent misformation of the cell.