Dysfunctional S-nitrosylation has been linked to various medical complications, including stroke, Alzheimer's, Lou Gehrig's disease, and potentially cancer. Understanding the selectivity of S-nitrosylation will help scientists to better understand the reaction between the NO molecule and proteins found in the human body as well as other organisms. Although little is known about where and why this process occurs in almost every living organism's body, researchers do not know why the process occurs at the specific cysteine that it does. The Whitefish Bay SMART Team is working on the computational model of S-nitrosylation and hypothesize that an arginine surrounds the S-glutathione molecule, which helps to find Arg 706 near the docked S-nitrosoglutathione molecule, which helps to clearly support their hypothesis by showing that there is a high probability to find Arg 706 near the docked S-nitrosoglutathione molecule, which helps to nitrosate the target cysteine. Computational experiments clearly support their hypothesis by showing that there is a high probability to find Arg 706 near the docked S-nitrosoglutathione molecule, which helps to nitrosate the target cysteine. Currently, they are conducting further research to find more data to support and explain their findings. Additionally, the researchers, the Whitefish Bay SMART Team, is also learning more about this process of S-nitrosylation and how it impacts the process of S-nitrosylation is not operating properly in the body scientists have found that it may lead to a variety of different cardiovascular diseases.