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## DESIGN AND SYNTHESIS OF POTENTIAL ANTIVIRAL DRUG CANDIDATE

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# Design and Synthesis of Potential Antiviral Drug Candidate

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## ABSTRACT

Design and Synthesis of Potential Antiviral Drug Candidates Jade Moore, Siva S. Panda  
Department of Chemistry and Physics, Augusta University As nonliving entities, viruses do not have organelles and rely solely on the host for survival and reproduction. Once in the body, viruses hijack the cells of the host and force them to reproduce more viral particles that will be used to spread the infection. As the infection spreads and symptoms arise and worsen, if not prevented, the virus will eventually kill the host. As a way to help strengthen the body's natural immune system, antiviral drugs and vaccines have been developed to combat viral infections. However, developing these treatments requires a lot of research, time, and money. The lack of organelles and heavy reliance on the host makes it challenging to develop antiviral drugs that only target and kill the virus and do not affect the host cells. In efforts to reduce time and cost, we have adopted the molecular hybridization approach using important medicinal scaffolds (indole, rhodanine, and phthalimide) to develop potential drug candidates for COVID-19. We have optimized the reaction condition and synthesized several hybrid molecules. All the synthesized molecules were characterized using spectral studies. The detailed biological outcomes will be discussed at the conference.

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