Advice
Start early! Research has helped me so much in developing myself as a student, as well as in a professional manner. Don't be afraid to ask your professors for help, or apply to prestigious programs because you never know what you will get! Find what sparks your interest and run with it!

Current Research
Methotrexate is an essential chemotherapeutic agent used in the treatment of pediatric acute lymphoblastic leukemia (ALL), the most common malignancy in children and adolescents. However, methotrexate is associated with neurotoxicity, which may result in treatment disruptions and jeopardize treatment efficacy. As understanding central nervous system (CNS) metabolic processes in response to methotrexate therapy may yield new insights into the pathways underlying neurotoxicity, a global metabolomic approach was used to identify novel biomarkers of methotrexate-related neurotoxicity using cerebrospinal fluid (CSF) samples. Patients diagnosed with pediatric ALL (2012-2017) were prospectively followed for the incidence of methotrexate-related neurotoxicity, defined as neurologic events occurring within 14 days of intrathecal or intravenous methotrexate therapy. Global metabolomic profiling was conducted on CSF samples obtained during therapeutic lumbar punctures. This study identified novel biomarkers of methotrexate-related neurotoxicity, which were detectable in the CSF of patients prior to the clinical onset of symptoms, providing insight into potential mechanisms of methotrexate-related neurotoxicity.