

PHACS Adolescent Master Protocol  
Participant Summary

**Title:** Association of Vascular Biomarkers with Neurodevelopmental Outcomes in Perinatally HIV-Infected Children

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**Study Description:** Children and teens with HIV may have problems thinking and solving problems because the HIV virus can affect the brain. We did 9 lab tests in children with HIV. These lab tests look at factors that can influence the brain. Then we compared the lab results with scores on a neurodevelopmental test called the WISC. The WISC shows how well the children think and solve problems.

**Study Population:** We studied 89 children and teens with HIV since birth. The average age of these children was 12. They were between 7 and 16 years old. Just over half were girls, and most were Black or African American. These children were fairly healthy when they enrolled in the study, with high CD4 counts. Almost all were receiving HAART when we did the tests.

**Results:** Two of the nine lab tests, P-selectin and fibrinogen, predicted the WISC test scores. We looked at other factors like age, sex, education of the caregiver, and health status of the children to see if the WISC scores could be due to those factors instead. Even after we looked at these other factors, we were able to confirm that the relationship between the lab tests and WISC scores was true.

**Conclusions:** P-selectin and fibrinogen measure how well fluids flow through blood vessels and how the blood clumps. This might relate to how easily HIV gets into the brain. HIV in the brain may affect how well children think and learn. We need to do more research to see how these findings can help determine the best treatments for children and teens with HIV.

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