

Peer Review

Review of: "Thrombospondin Regulation Differentiates HIV Patients with Natural and Therapy-Mediated Control of Plasma Viremia: A Genome-Wide Transcriptomic Analysis"

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The manuscript "*Thrombospondin Regulation Differentiates HIV Patients with Natural and Therapy-Mediated Control of Plasma Viremia: A Genome-Wide Transcriptomic Analysis*" presents a well-designed transcriptomic comparison between LTNP and HAART-treated HIV patients, identifying THBS1 as a potential biomarker for disease progression. The study is original and contributes meaningful insights into the molecular mechanisms underlying natural versus treatment-induced viral control. I commend the authors for including functional validation, such as localization studies by confocal imaging and cell population analysis using flow cytometry.

While the limitations regarding sample size and the use of whole PBMCs are appropriately acknowledged, the following additional analyses could further strengthen the study:

1. A comparative analysis with existing transcriptomic datasets from LTNP and HAART-treated patients would help validate the current gene expression and pathway findings.
2. Cell composition estimation using CIBERSORT, a deconvolution algorithm that infers immune cell proportions from bulk gene expression data, would provide insights into whether observed transcriptomic differences are driven by shifts in immune cell populations.

Declarations

Potential competing interests: No potential competing interests to declare.