

Supplementary Materials for
**Supplementing HIV-ART with cannabinoids increases serotonin, BHB, and
Ahr signaling while reducing secondary bile acids and acylcholines**

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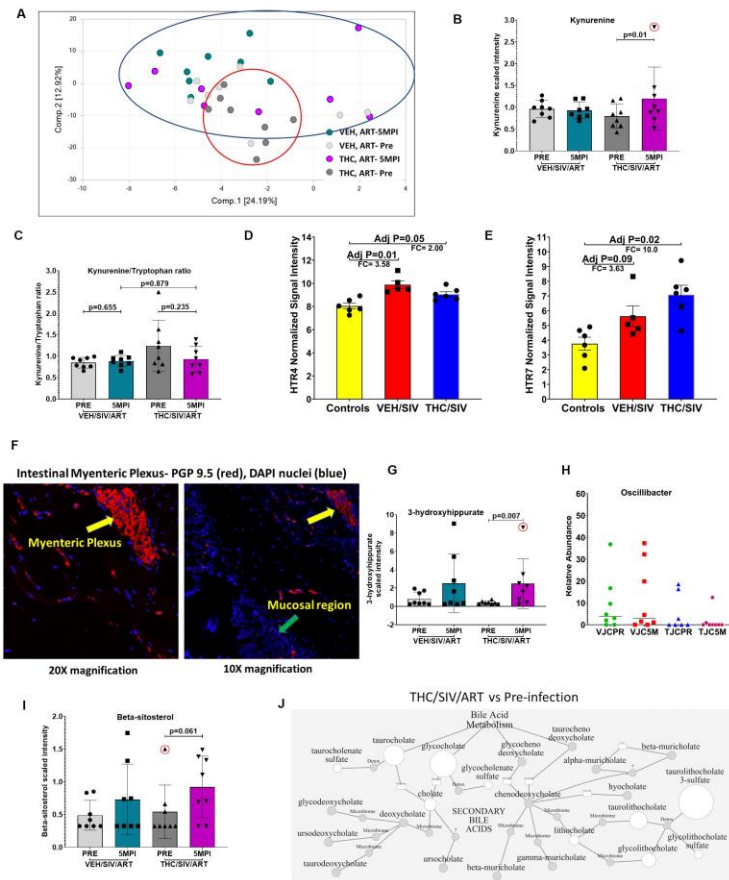
Table S1
Fig. S1

1. Supplemental Table

Table S1. Antibody information

Antibody	Manufacturer	Catalog #
Anti-Serotonin antibody [YC5/45]	abcam	ab6336
Anti-5HT4 Receptor antibody	abcam	ab219116
Anti-5HT7 Receptor antibody	abcam	ab61823
Anti-PGP 9.5 antibody – Neuronal marker	abcam	ab108986
Anti-NeuN antibody [1B7] - Neuronal Marker	abcam	ab104224
AHR Monoclonal antibody	proteintech	67785-1-Ig
Anti-AHR Antibody, Polyclonal Antibody against HUMAN AHR.	Atlas Antibodies	HPA029722

2. Supplemental figures



Supplemental Fig. S1.

(A) Principal component analysis (PCA) of plasma metabolome profiles showing minimal separation in THC/SIV/ART (pink) from pre-infection (dark grey) and greater separation in VEH/SIV/ART (green) from pre-infection (light grey). (B) Plasma kynurenine levels in VEH/SIV/ART and THC/SIV/ART groups compared to pre-infection controls. (C) Kynurenine/tryptophan ratio in VEH/SIV/ART and THC/SIV/ART groups compared to pre-infection controls. (D) Normalized signal intensity of the serotonin receptor HTR4 and (E) HTR7 in the colon epithelium of VEH/SIV and THC/SIV animals in an ART-naïve cohort. (F) Jejunum tissue sections showing PGP 9.5 [neuronal marker (red)] positive (yellow arrows) ganglion cell bodies in the myenteric plexus with DAPI (blue) showing nuclear staining. Green arrow points to the mucosal region. Representative immunofluorescence images were captured using a Zeiss 700 confocal microscope at 10X and 20X magnification. (G) Plasma 3-hydroxyhippurate levels in VEH/SIV/ART and THC/SIV/ART groups compared to pre-infection controls. (H) Relative abundance of *Oscillibacter* species in the jejunal contents of VEH/SIV/ART and THC/SIV/ART groups compared to pre-infection controls. (I) Plasma beta-sitosterol levels in VEH/SIV/ART and THC/SIV/ART groups compared to pre-infection controls. (J) Bile acid metabolism pathway highlighting differences between THC/SIV/ART and pre-infection controls. Plasma metabolite levels and HTR4/HTR7 mRNA expression levels were analyzed using one-way ANOVA in the Prism v9 (GraphPad prism software). A p-value of <0.05 was considered significant. Plasma kynurenine levels (B) were significant with an FDR of $q < 0.05$. Data represent mean $\pm$ SD.