

## Supplementary Data Legends

File Name: Supplementary Data 1

Description: *P. coatneyi* infection and MB treatment efficiency on rhesus macaques.

File Name: Supplementary Data 2

Description: Comparative histopathology of Pcoat<sup>+</sup> MB<sup>+</sup> vs. Pcoat<sup>+</sup> MB<sup>-</sup>.

File Name: Supplementary Data 3.1

Description: DEGs in the brainstem of Pcoat<sup>+</sup> MB<sup>+</sup> groups (MB-treated *P. coatneyi*-infected rhesus macaques).

File Name: Supplementary Data 3.2

Description: DEGs of brainstem between 10mg/kg vs. 6mg/kg computed using DESeq2.

File Name: Supplementary Data 3.3

Description: DEGs of brainstem between 17mg/kg vs. 6mg/kg computed using DESeq2.

File Name: Supplementary Data 3.4

Description: DEGs of brainstem between 17mg/kg vs. 10mg/kg computed using DESeq2.

File Name: Supplementary Data 4.1

Description: List of DEGs in macaque brainstem (our dataset) analysed using DESeq2.

File Name: Supplementary Data 4.2

Description: List of DEGs in macaque blood (Cordy et al. dataset) analysed using DESeq2.

File Name: Supplementary Data 4.3

Description: List of DEGs comparing mild malaria and cerebral malaria in human blood (Thiam et al. dataset). Microarray data was analysed for differential expression between MM and CM using limma (by us) and ANOVA (by Thiam et al. Supplementary Table S1, sheet Anova\_Results\_MM vs CM).

File Name: Supplementary Data 4.4

Description: List of DEGs of each compartment in Venn Diagram.

File Name: Supplementary Data 4.5

Description: Common biomarker genes ranked based on their importance in discriminating sample groups using PLS-DA.

File Name: Supplementary Data 5.1

Description: DEGs of brainstem between Pcoat<sup>+</sup> MB<sup>-</sup> vs. Pcoat<sup>-</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.2

Description: DEGs of brainstem between Pcoat<sup>+</sup> MB<sup>+</sup> vs. Pcoat<sup>+</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.3

Description: DEGs of brainstem between Pcoat<sup>+</sup> MB<sup>+</sup> vs. Pcoat<sup>-</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.4

Description: DEGs of cerebellum between Pcoat<sup>+</sup> MB<sup>-</sup> vs. Pcoat<sup>-</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.5

Description: DEGs of cerebellum between Pcoat<sup>+</sup> MB<sup>+</sup> vs. Pcoat<sup>+</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.6

Description: DEGs of cerebellum between Pcoat<sup>+</sup> MB<sup>+</sup> vs. Pcoat<sup>-</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.7

Description: DEGs of heart between Pcoat<sup>+</sup> MB<sup>-</sup> vs. Pcoat<sup>-</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.8

Description: DEGs of heart between Pcoat<sup>+</sup> MB<sup>+</sup> vs. Pcoat<sup>+</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.9

Description: DEGs of heart between Pcoat<sup>+</sup> MB<sup>+</sup> vs. Pcoat<sup>-</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.10

Description: DEGs of kidney between Pcoat<sup>+</sup> MB<sup>-</sup> vs. Pcoat<sup>-</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.11

Description: DEGs of kidney between Pcoat<sup>+</sup> MB<sup>+</sup> vs. Pcoat<sup>+</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.12

Description: DEGs of kidney between Pcoat<sup>+</sup> MB<sup>+</sup> vs. Pcoat<sup>-</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.13

Description: DEGs of liver between Pcoat<sup>+</sup> MB<sup>+</sup> vs. Pcoat<sup>-</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.14

Description: DEGs of thalamus between Pcoat<sup>+</sup> MB<sup>-</sup> vs. Pcoat<sup>-</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.15

Description: DEGs of thalamus between Pcoat<sup>+</sup> MB<sup>+</sup> vs. Pcoat<sup>+</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 5.16

Description: DEGs of thalamus between Pcoat<sup>+</sup> MB<sup>+</sup> vs. Pcoat<sup>-</sup> MB<sup>-</sup> groups analysed using DESeq2.

File Name: Supplementary Data 6.1

Description: Summary of samples from our datasets for comparative transcriptomics.

File Name: Supplementary Data 6.2

Description: Summary of samples from Cordy et al., 2019 datasets for comparative transcriptomics.

File Name: Supplementary Data 6.3

Description: Summary of samples from Thiam et al., 2019 datasets for comparative transcriptomics.

File Name: Supplementary Data 7

Description: Additional data supporting the findings of this study.