iScience, Volume *26*

Supplemental information

Leishmania mexicana centrin knockout parasites promote M1-polarizing metabolic changes

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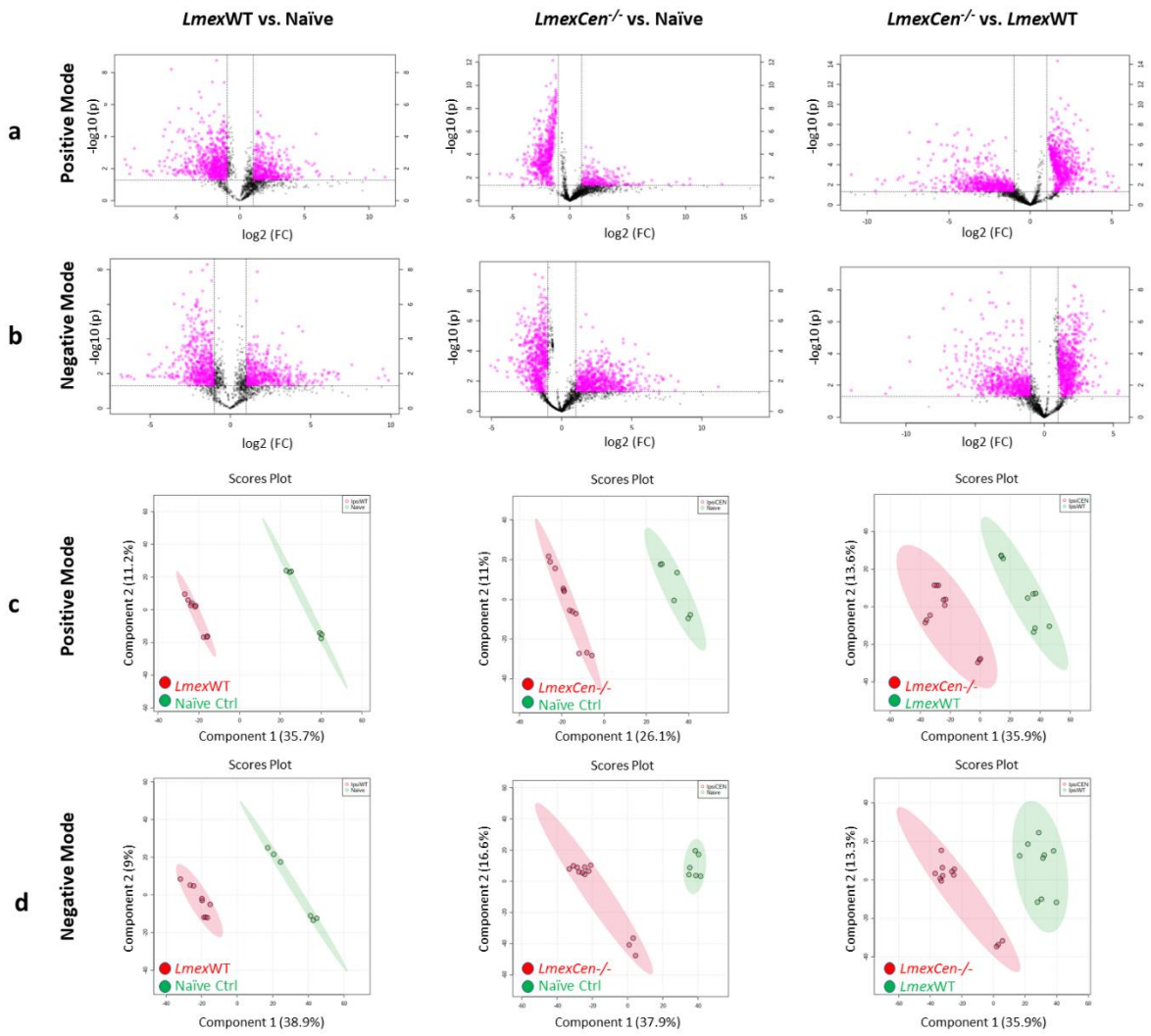

Figure S1. Infection with *Lmex*WT and immunization with *LmexCen*$^{-/-}$ display different metabolic signatures in the draining lymph nodes. ***Related to Figure 1.*** Normalized data from draining lymph nodes from C57BL/6 mice after 7 days of infection with *Lmex*WT, inoculation with *LmexCen*$^{-/-}$, or naïve control was used to perform statistical analysis. **A, B)** Features selected by volcano plot from positive (**A**) and negative (**B**) modes for draining lymph nodes of *Lmex*WT vs. naïve, *LmexCen-/-* vs. naïve, and *LmexCen-/-* vs. *Lmex*WT mice using LC/MS with fold change threshold (x) 2 and t-tests threshold (y) 0.05. Both fold changes and p-values are log transformed. **C, D)** PLS-DA from positive (**C**) and negative (**D**) mode for draining lymph nodes of *Lmex*WT vs. naïve, *LmexCen-/-* vs. naïve, and *LmexCen-/-* vs. *Lmex*WT mice.

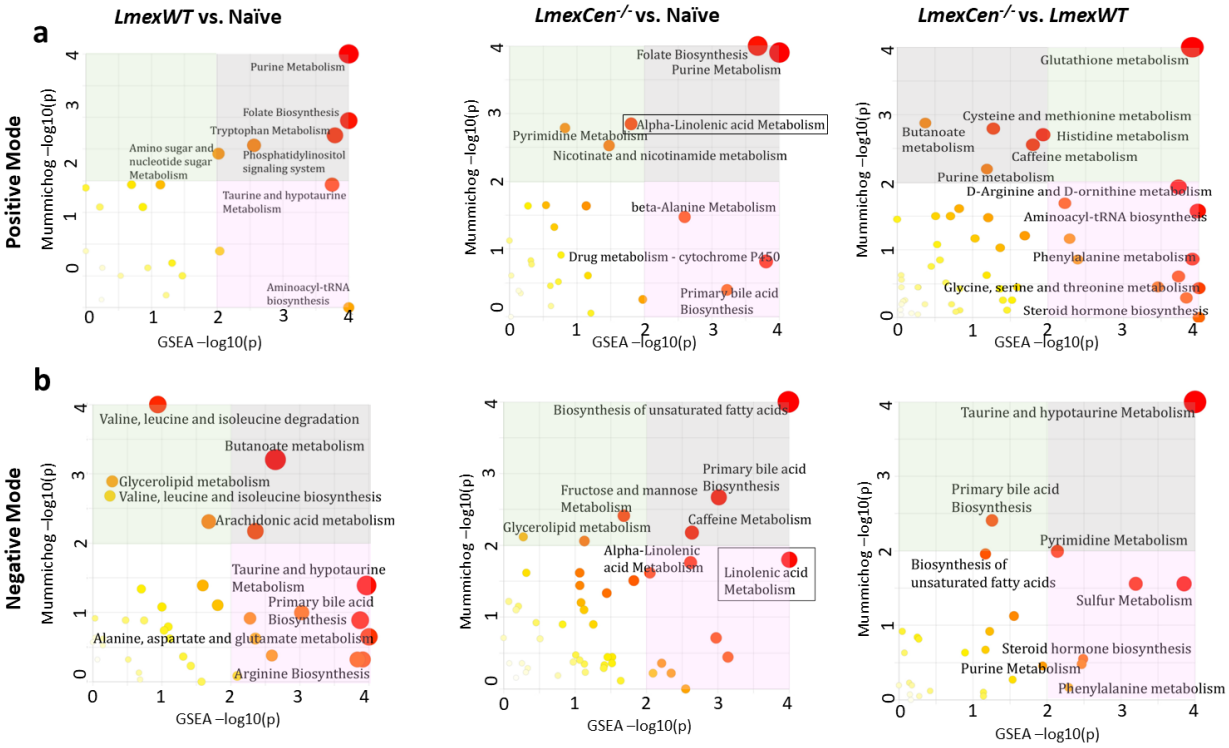

Figure S2. Metabolic pathways enriched in mice infected with *Lmex*WT or immunized with *LmexCen*$^{-/-}$ in the draining lymph nodes. ***Related to Figure 2.*** Normalized data from draining lymph nodes from C57BL/6 mice after 7 days of infection with *Lmex*WT, immunization with *LmexCen*$^{-/-}$, or naïve control was used to perform peaks to pathway analysis. Using MS Peaks to Paths module in MetaboAnalyst5.0, the mummichog and GSEA p-values are combined. The Integrated MS Peaks to Paths plot summarizes the results of the Fisher's method for combining mummichog (y) and GSEA (x) p-values from the positive (**A**) negative (**B**) mode data sets, indicating the metabolic pathways enriched. The size and color of the circles correspond to their transformed combined p-values. Large and red circles are considered the most perturbed pathways. The colored areas show the significant pathways based on either mummichog (blue) or GSEA (pink) and the purple area highlights significant pathways identified by both algorithms. Highlighted by the black boxes are pathways associated with a protective immune response against leishmaniasis.

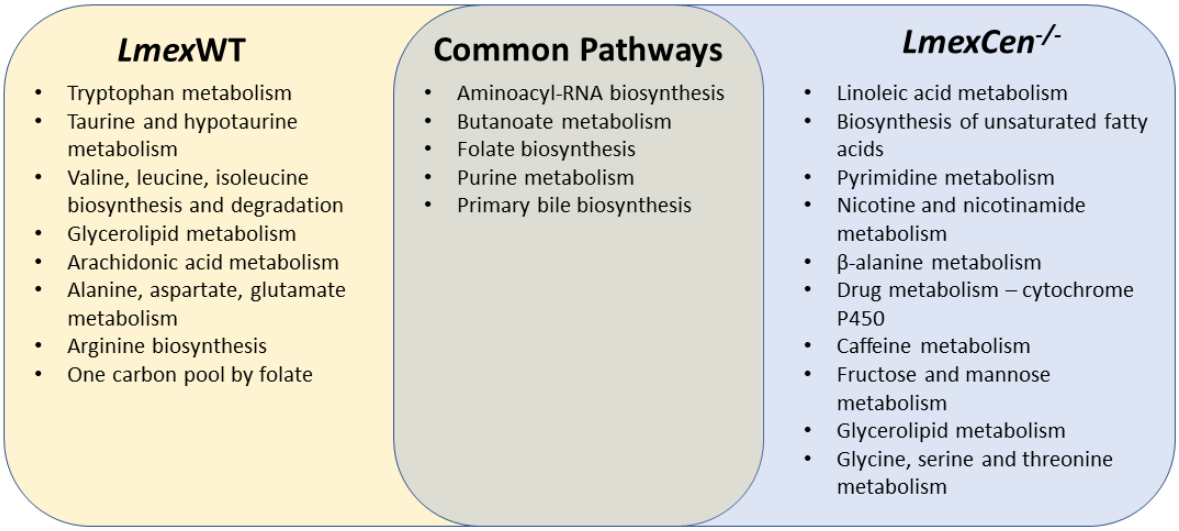

Figure S3. Unique and common pathways enriched in the draining lymph nodes following *LmexCen*$^{-/-}$ immunization or *Lmex*WT infection. *Related to Figure 6.* Venn diagrams of the metabolic pathways enriched based on mummichog and GSEA analysis in the draining lymph nodes of C57BL/6 mice after 7 days of infection with *Lmex*WT or immunization with *LmexCen*$^{-/-}$, compared to uninfected naïve mice.