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Supplementary Materials for

Glycerol monolaurate induces filopodia formation by disrupting the association between LAT and SLP-76 microclusters

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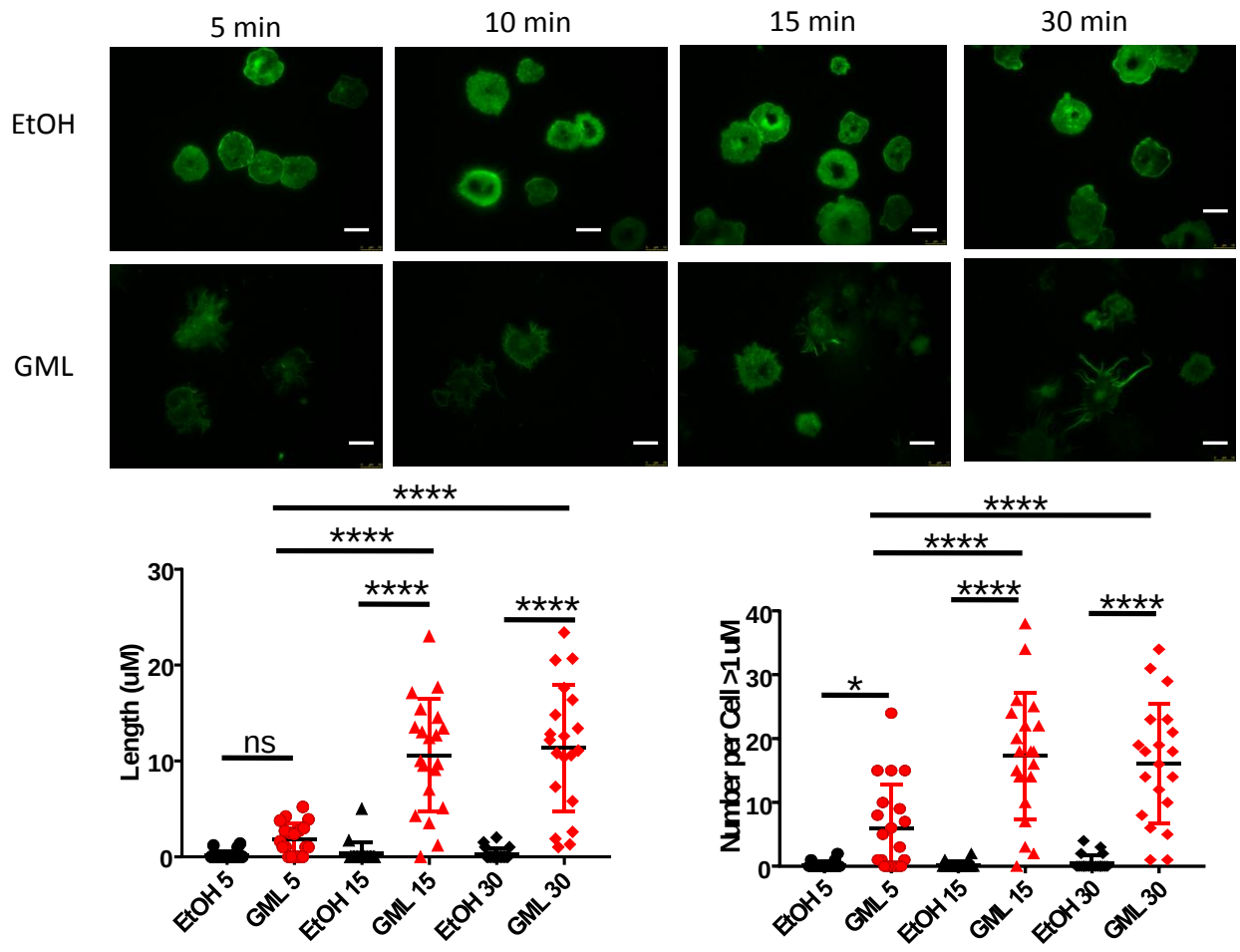

Fig. S1. Time course of GML-induced filopodia formation. Epifluorescence microscopy of activated T cells treated with ethanol or GML that were stimulated with anti-CD3 for the indicated times and stained with TMR-conjugated phalloidin. Top: Images are representative of 2 independent experiments. Bottom: Filipodia length and numbers. Data are means ± SEM of 20 cells from 2 donors. Scale bar, 10 μm. *P < 0.05 and ****P < 0.0001 by one-way ANOVA.

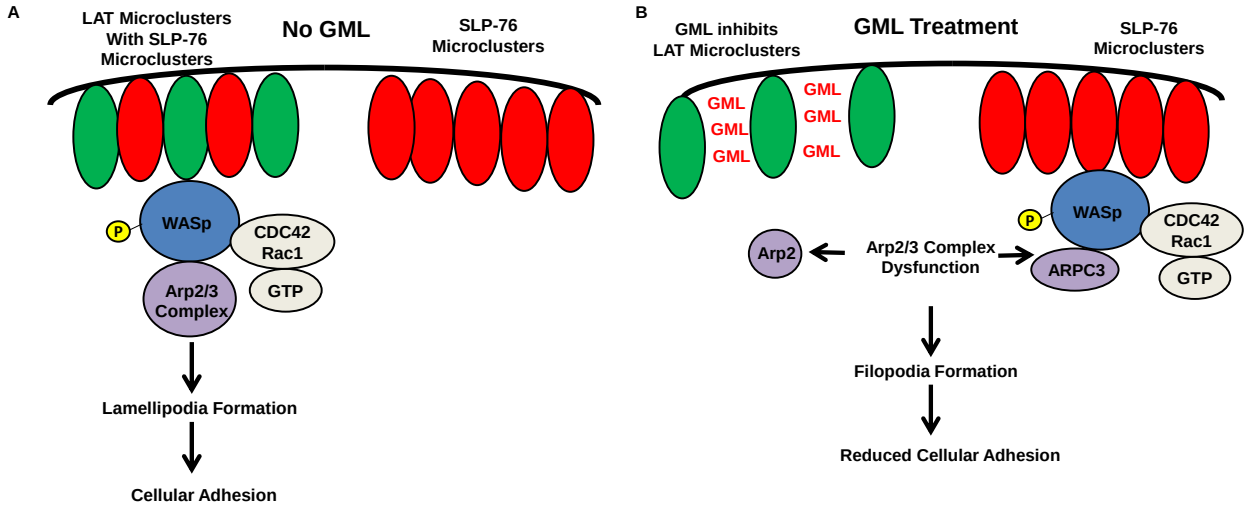

Fig. S2. Model depicting the effects of GML on T cell adhesion. (**A**) LAT and SLP-76 microclusters regulate T cell adhesion under normal conditions. LAT microclusters (green) associated with SLP-76 microclusters (red) induce the activation of WASp (blue) in the appropriate context. This leads to the appropriate activation of the Arp2/3 complex and polymerization of actin in a wave-like manner to form lamellipodia, which ultimately results in cellular adhesion. (**B**) GML alters the interaction between LAT and SLP-76 microclusters, which leads to reduced cellular adhesion. GML inhibits the formation of LAT microclusters, which prevents the association between LAT and SLP-76 microclusters. SLP-76 microclusters alone activate WASp inappropriately, leading to the altered localization of the Arp2/3 complex components Arp2 and ARPC3. This results in defective Arp2/3 complex activity, abnormal filopodia formation, and ultimately decreased cellular adhesion.