Supplemental Materials for:

Lipid membranes influence the ability of small molecules to inhibit huntingtin fibrillization

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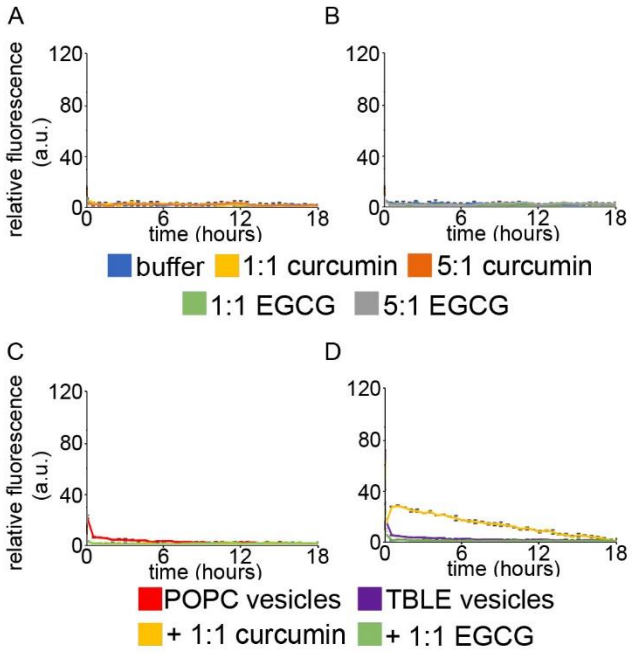
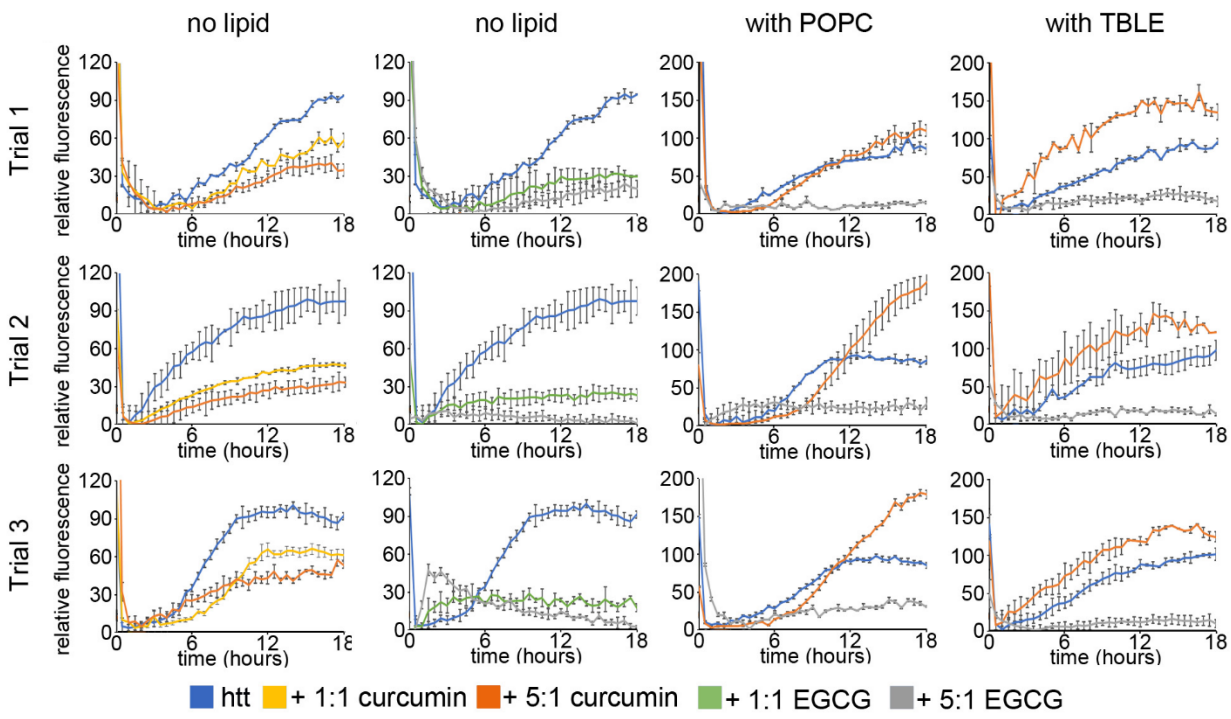
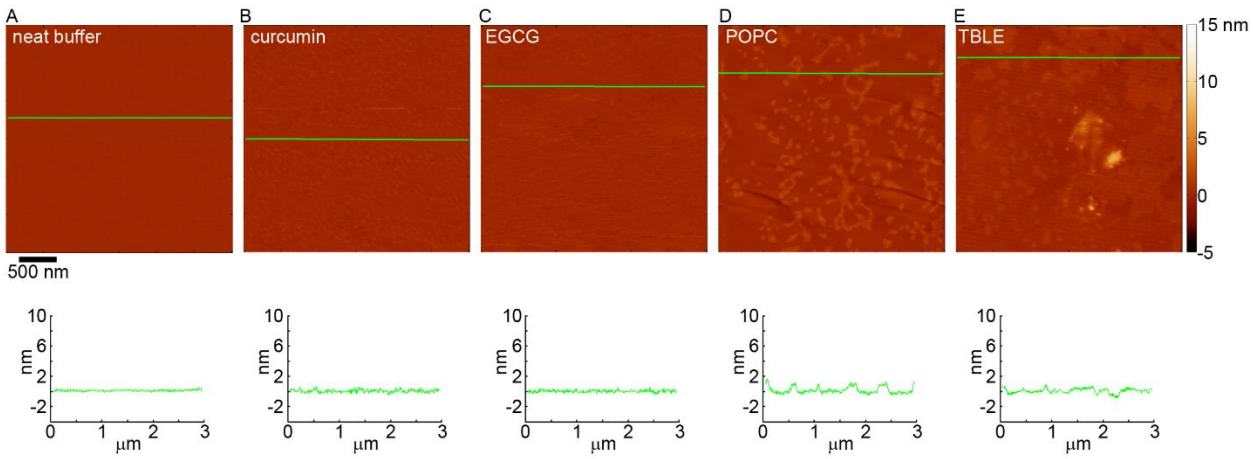


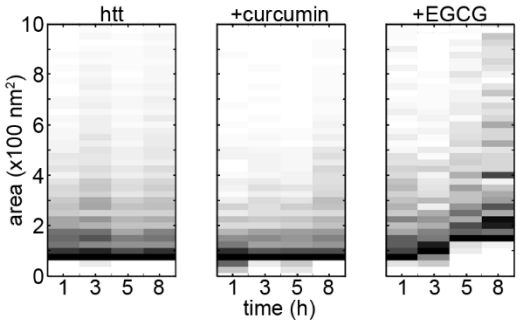
Supplemental Figure S1. ThT fluorescence assay controls of (A) curcumin and (B) EGCG alone, as well as controls of the small molecules in the presence of (C) POPC or (D) TBLE vesicles.



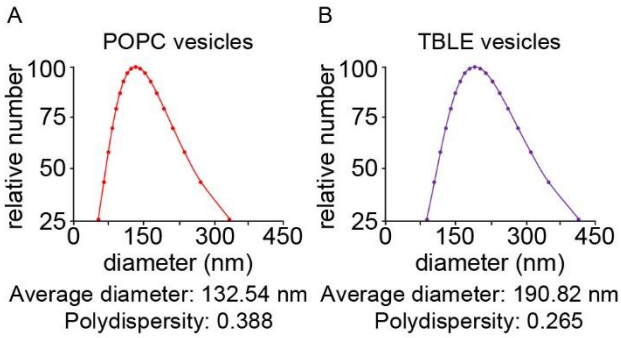
Supplemental Figure S2. Individual trials for ThT assay for 20 µM htt (blue) in the presence of 1:1 curcumin (yellow), 5:1 curcumin (orange), 1:1 EGCG (green), or 5:1 µM EGCG (gray). All ratios are provided as small molecule to htt protein. ThT curves were performed without lipids or in the presence of either POPC or TBLE vesicles. Three independent plates were run for each condition.



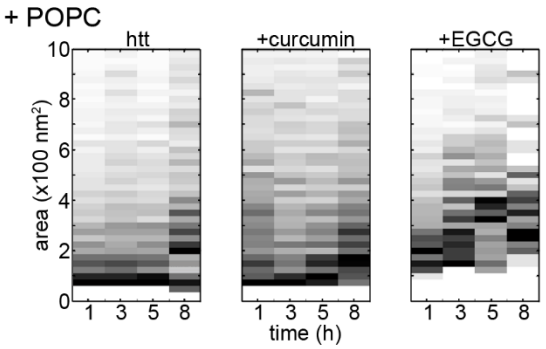
Supplemental Figure S3. Representative AFM images of the backgrounds associated with (A) neat buffer, (B) curcumin, (C) EGCG, (D) POPC lipid vesicles, and (E) TBLE vesicles. The line in each image corresponds to the height profile provided below each image.



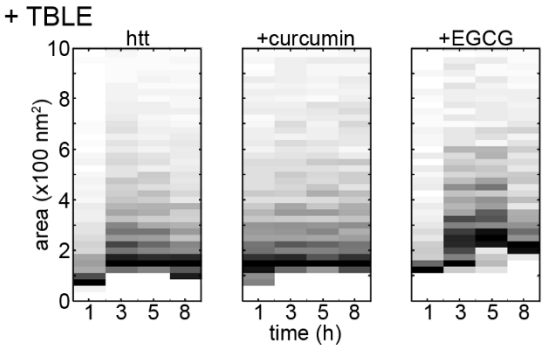
Supplemental Figure S4. Histograms of the surface area occupied by individual oligomers observed for htt-exon1(46Q) incubated alone, with curcumin, or EGCG.



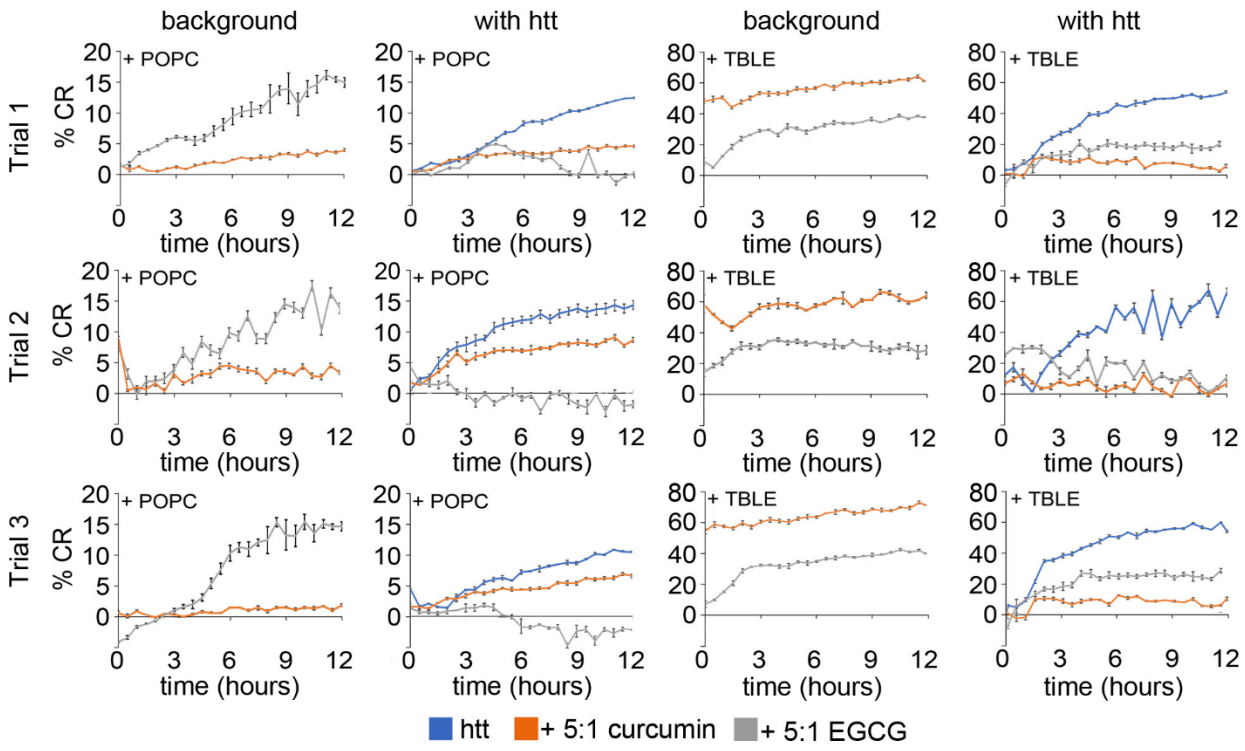
Supplemental Figure S5. Representative DLS analyses of (A) POPC and (B) TBLE vesicle size. Vesicle size distributions were calculated by assuming a lognormal distribution. Each plot is a combination of three runs.



Supplemental Figure S6. Histograms of the surface area occupied by individual oligomers observed for htt-exon1(46Q) incubated alone, with curcumin, or EGCG in the presence of POPC lipid vesicles.



Supplemental Figure S7. Histograms of the surface area occupied by individual oligomers observed for htt-exon1(46Q) incubated alone, with curcumin, or EGCG in the presence of TBLE vesicles.



Supplemental Figure S8. Individual trials of the PDA lipid binding assay are presented. Background plots of the lipid/PDA vesicles in the presence of 100 μM curcumin (orange) or EGCG (gray). Assays performed with htt have subtracted out the appropriate small molecule background, so the signal shown is that associated specifically with the htt in the presence of the curcumin (orange) or EGCG (gray).