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751 **Supplemental Figure 1. Structures** are shown for (A) cromolyn (Crom), (B) flavone  
752 backbone, (C) luteolin, (lut) (D) 3',4',5,7-tetramethoxyluteolin (methlut).

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754 **Supplemental Figure 2. Purity of methlut.** Analysis was done by mass spectrometry as  
755 detailed in the Methods.

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757 **Supplemental Figure 3. Cromolyn loses its inhibitory effect on LAD2 cells**  
758 **degranulation if used as pretreatment.** MC were pre-incubated with cromolyn (100  
759  $\mu\text{M}$ ) for 30 min before stimulation with either SP (2  $\mu\text{M}$ ) or anti-IgE (10  $\mu\text{g}/\text{mL}$ ) for an  
760 additional 30 min. (A)  $\beta$ -hex release and (B) histamine release. NS= No statistical  
761 significance.

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763 **Supplemental Figure 4. Methlut and lut inhibit intracellular calcium elevation.**  
764 LAD2 cells were loaded with Fura-2 AM (30 nM, 20 min) and then pre-incubated with  
765 lut or methlut (10 and 50  $\mu\text{M}$ , 30 min). Immediately after stimulation with SP (2  $\mu\text{M}$ ),  
766 fura-2 fluorescence was monitored at an excitation wavelength of 340 nm and 380 nm  
767 and emission wavelength of 510 nm. Control cells were treated with 0.1% DMSO. The  
768 curve shown is representative of five experiments of similar results.

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770 **Supplemental Figure 5. Lut and methlut do not affect intracellular ATP levels.** After  
771 incubation with lut (A) or methlut (B) (10-100  $\mu$ M, up to 24 h),  $1 \times 10^6$  LAD2 cells were  
772 lysed and intracellular ATP contents were determined.

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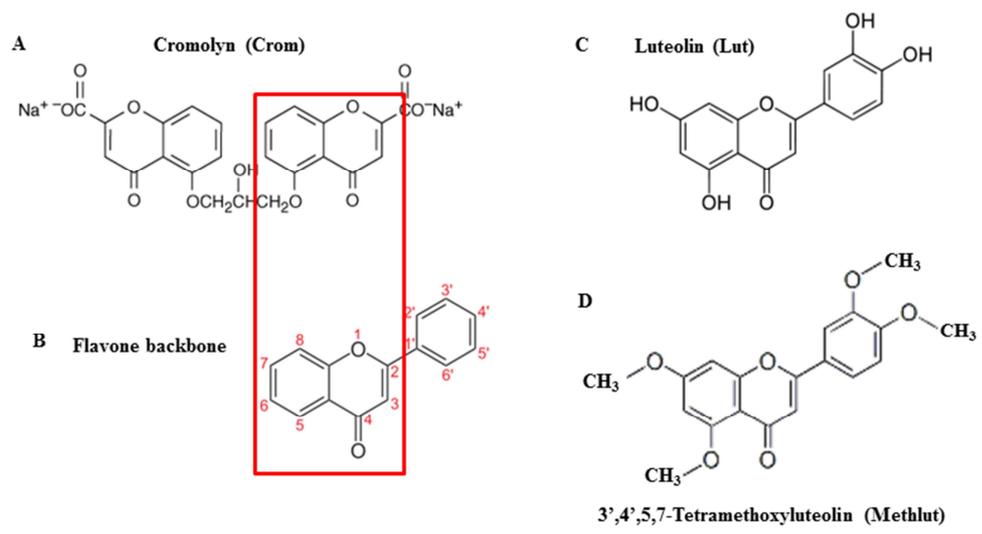


Figure 1. Supplemental

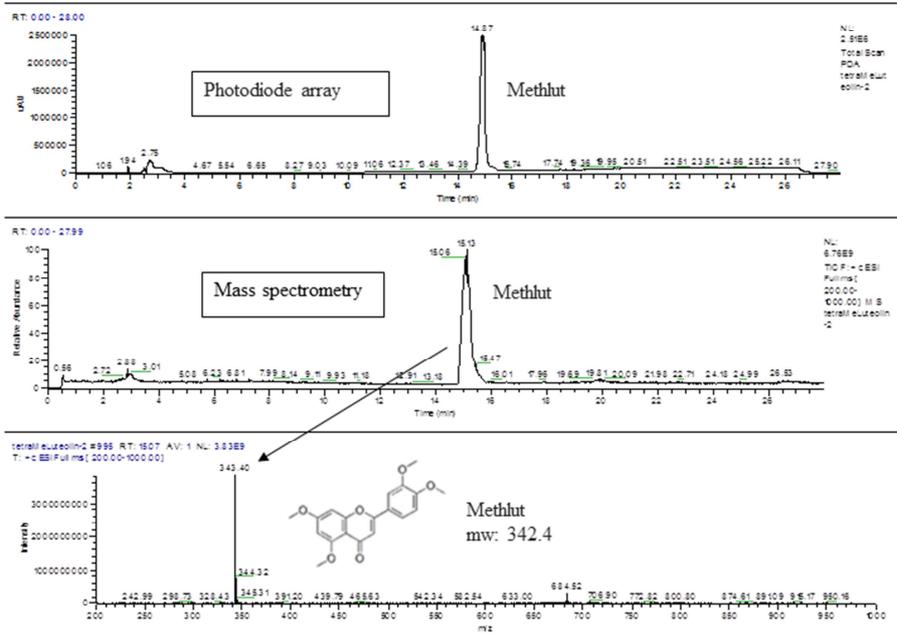


Figure 2. Supplemental

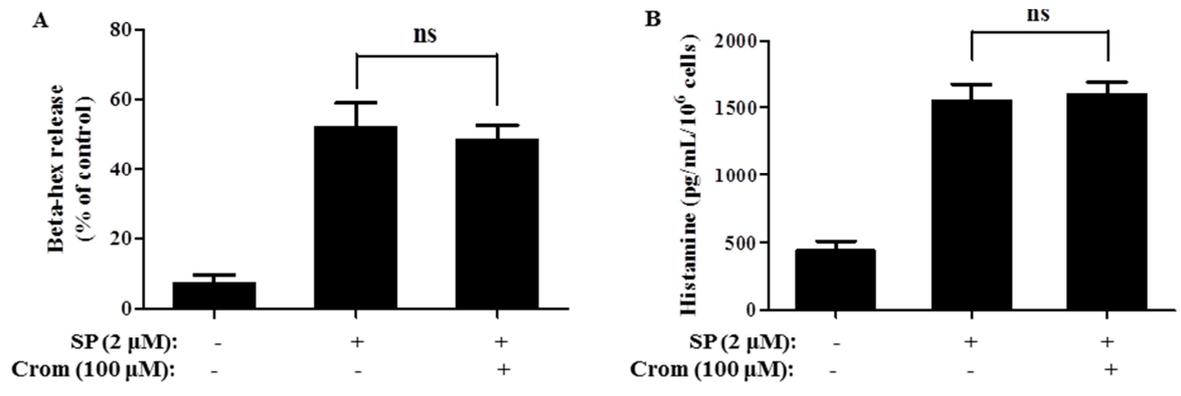


Figure 3. Supplemental

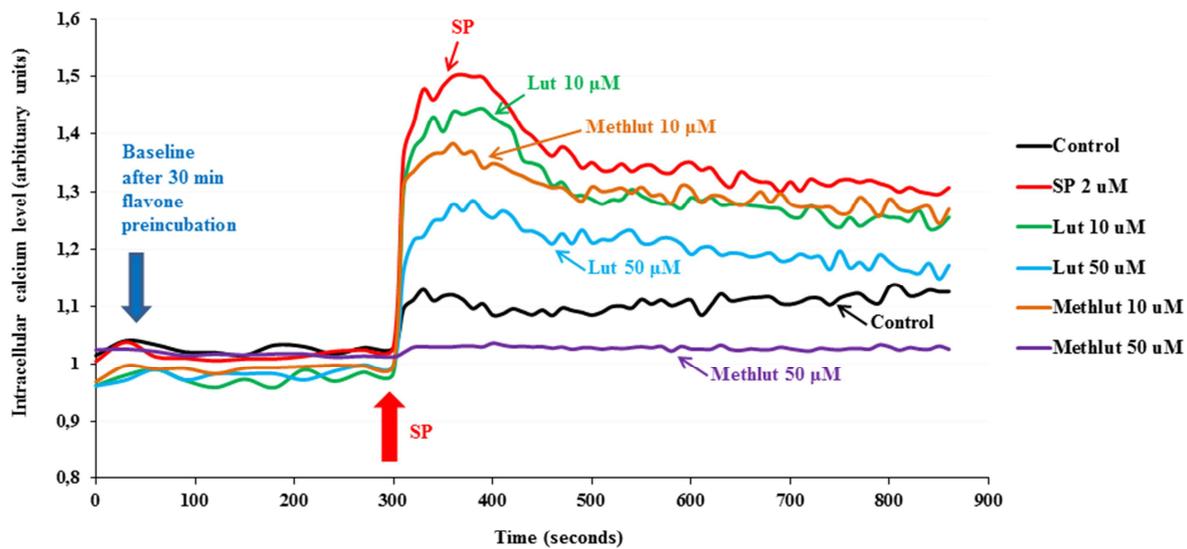


Figure 4. Supplemental

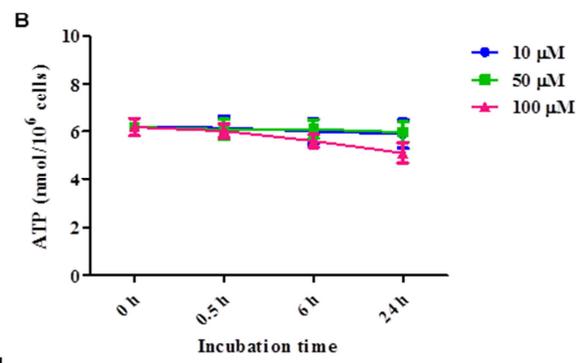
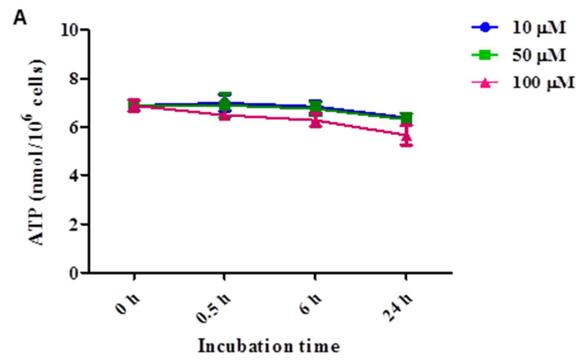


Figure 5. Supplemental