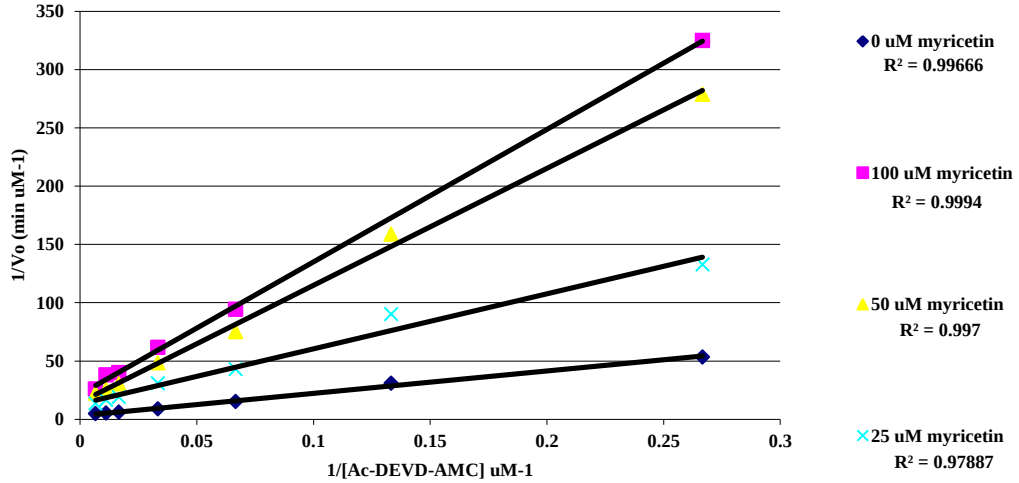
Supplemental Information

Figure S1. **Lineweaver-Burk Analysis of Caspase Inhibition.**

To determine the nature of inhibition of caspases 1, 3, and 7 by kaempferol, quercetin, luteolin, and myricetin, we measured the rate of caspase-catalyzed conversion of various concentrations of Ac-DEVD-AMC to AMC in the presence of three concentrations of each flavonoid (25 μM, 50 μM, and 100 uM). Representative data showing two extremes of inhibitory efficiency are shown. (A) Caspase 1 inhibition by myricetin and (B) Caspase 7 inhibition by kaempherol. In every case tested, the lines intersect on the $1/V_0$ axis, indicating that the flavonoids are competitive inhibitors of caspases 1, 3, and 7, although they are rather different in their effectiveness. Goodness of fit for each line at the different inhibitor concentrations is indicated.

A.



B.

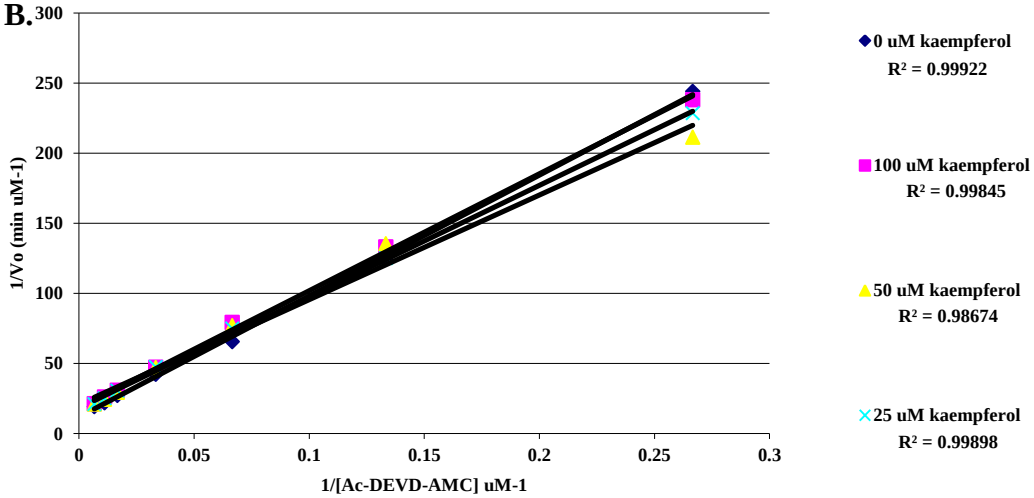


Figure S2. Flavonoids quench fluorescence of AMC product. Standard curve lines were generated in the absence or presence of various flavonoids as indicated (A, Luteolin, B, Kaempferol, C, Quercetin, and D, Myricetin). Equations of the line were generated for each [AMC] with flavonoid. Equations of the line are reported in supplementary table S1. Quenching increases as more flavonoid is used in the assay as indicated by the shift in the standard curves compared to the DMSO treatment.

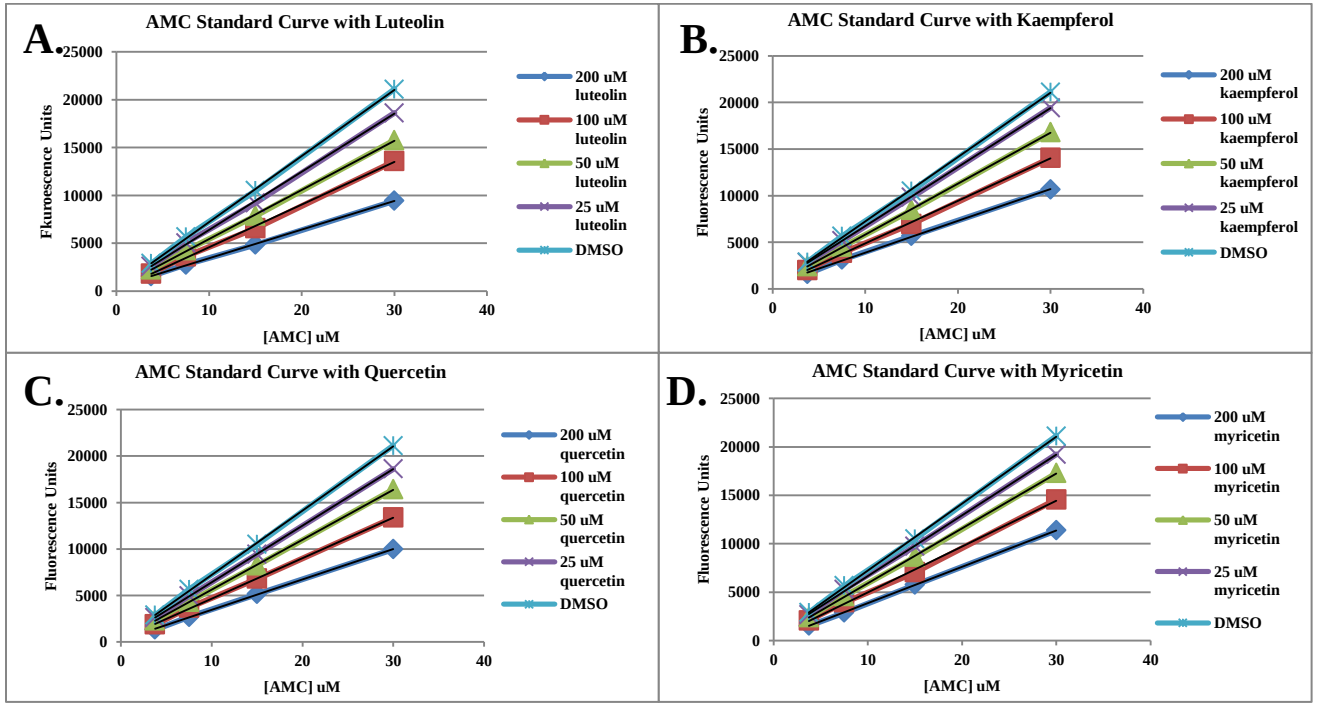


Figure S3 Dose-dependent flavonoid cytotoxicity on MDA-MB-231 cells. The cell number, as a percent of the DMSO-treated cell number, was calculated by counting cells using Trypan Blue Exclusion. Data points represent means of 4 to 6 independent experiments; Error bars represent standard deviation. Data for luteolin and catechin can be found in Figure 2.

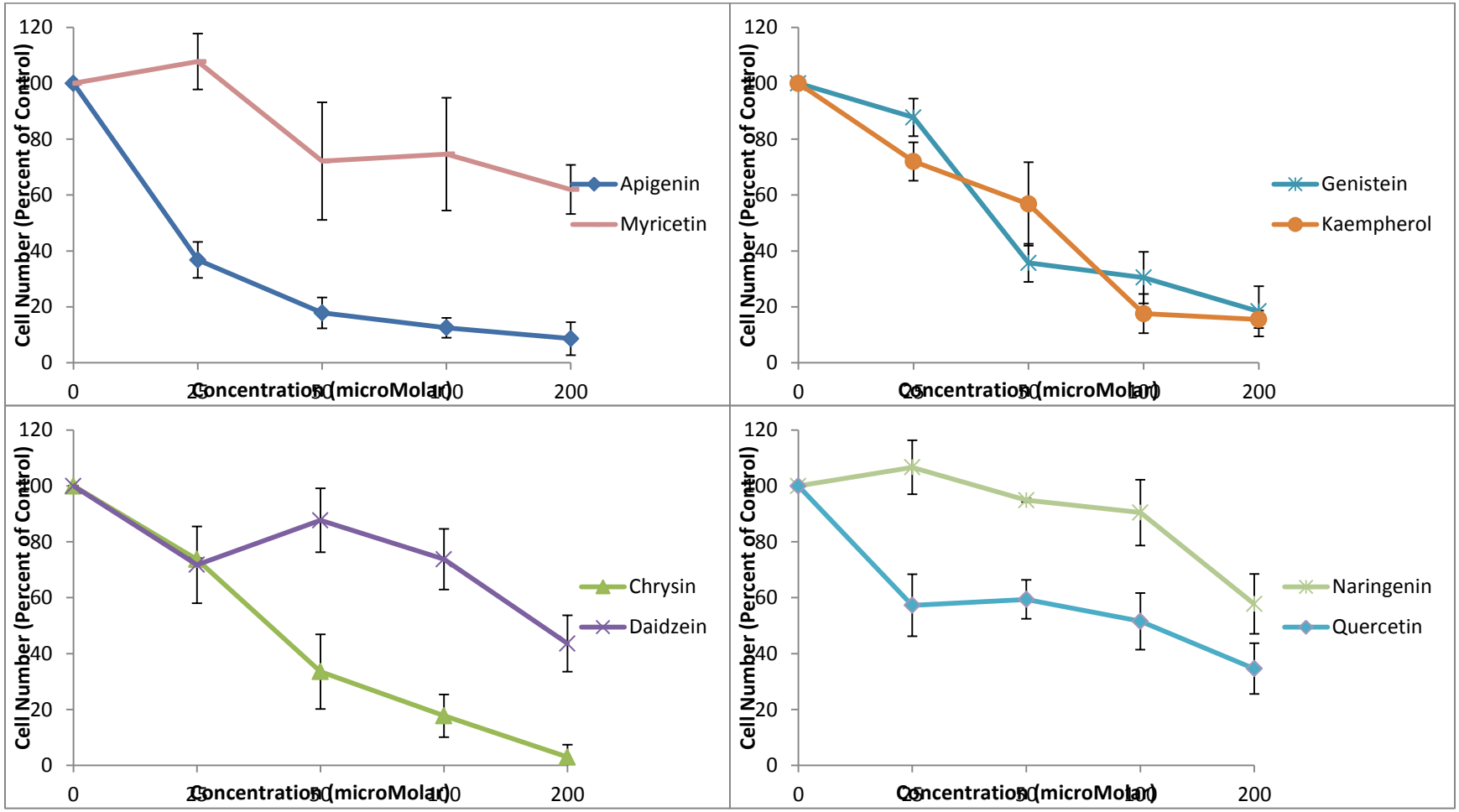


Table S1: Equations of the line for quenching used for background correction

Compound	Concentration (μM)	Equation of the Line
DMSO	-	Y=690.74X + 317.35
kaempferol	200	Y=341.72X + 462.67
	100	Y=455.53X + 320.55
	50	Y=546.60X + 352.55
	25	Y=632.42X + 406.01
luteolin	200	Y=298.66X + 452.02
	100	Y=445.37X + 135.66
	50	Y=513.25X + 317.59
	25	Y=607.53X + 325.81
myricetin	200	Y=376.07X + 93.084
	100	Y=472.99X + 255.01
	50	Y=565.58X + 273.70
	25	Y=626.82X + 402.31
quercetin	200	Y=376.26X + 183.06
	100	Y=435.07X + 314.11
	50	Y=537.16X + 255.47
	25	Y=608.46X + 342.05