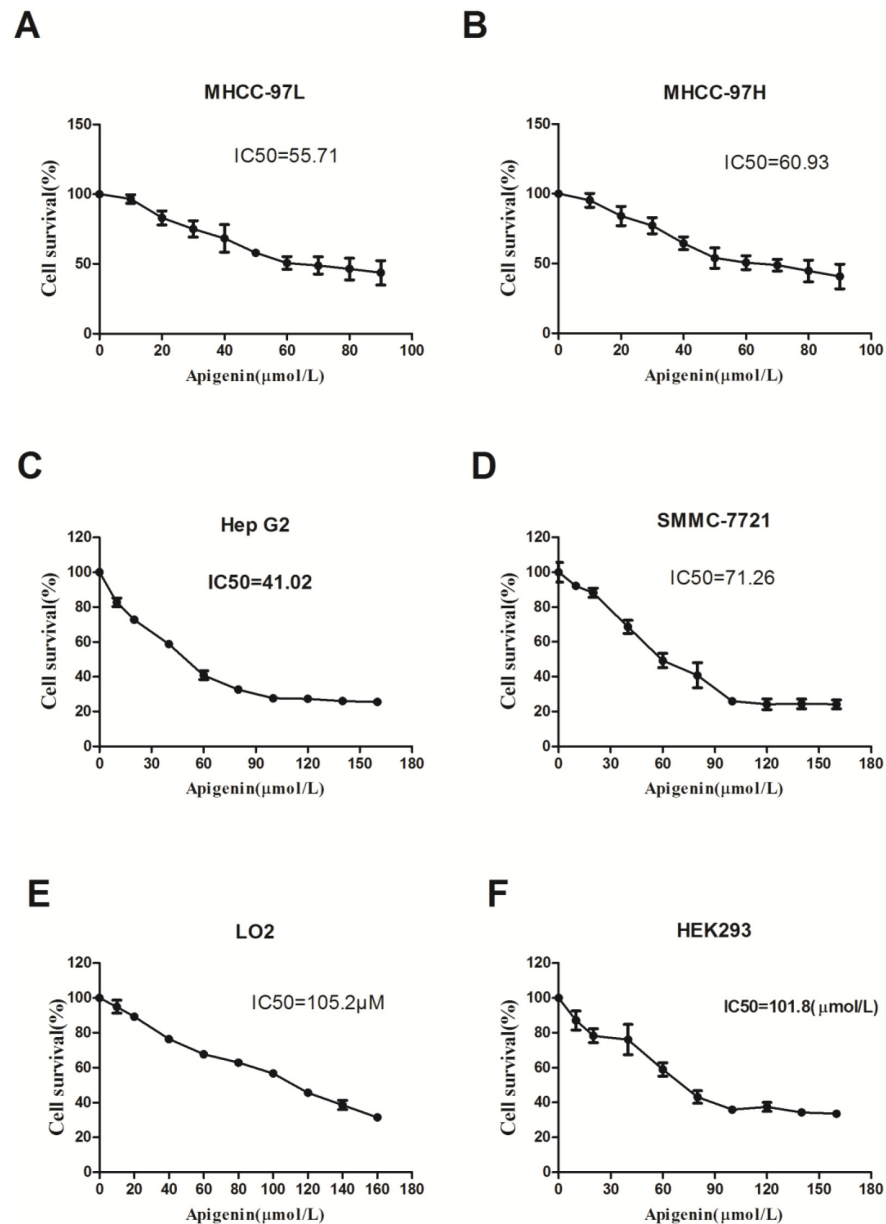
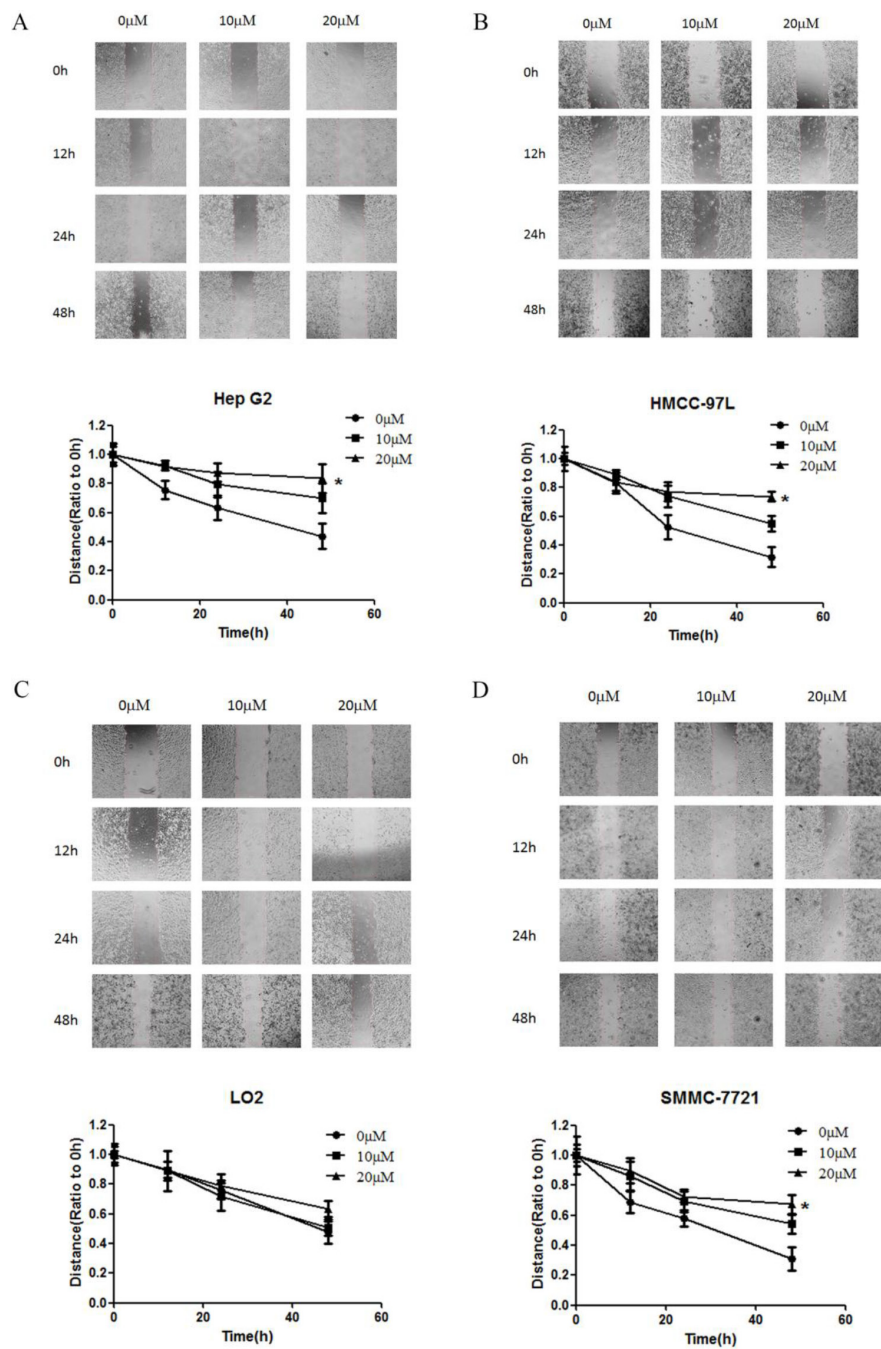


# Apigenin inhibits NF- $\kappa$ B and snail signaling, EMT and metastasis in human hepatocellular carcinoma

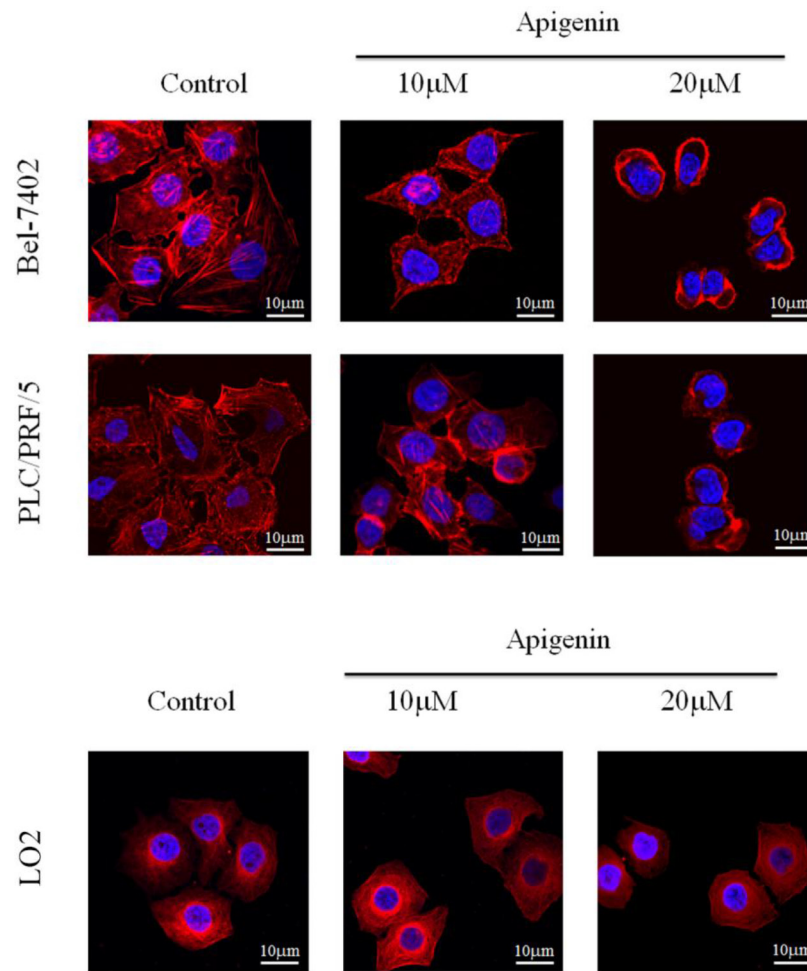
## Supplementary Materials



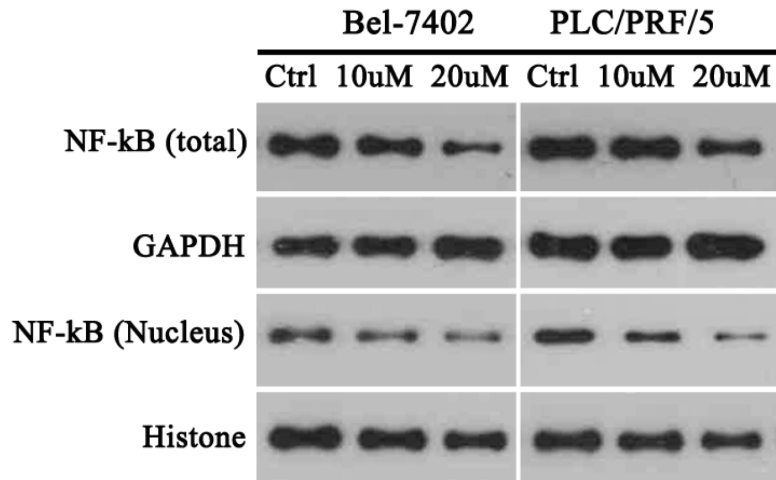
**Supplementary Figure S1: Effects of apigenin on cell viability in hepatocarcinoma cells, normal human liver cells, and normal human cells. (A–D)** Survival of different hepatocarcinoma cells treated with the indicated amounts of apigenin for 48 h. **(E)** Survival of LO2 normal human liver cells treated with the indicated amounts of apigenin for 48 h. **(F)** Survival of human embryonic kidney 293 cells treated with the indicated amounts of apigenin for 48 h.



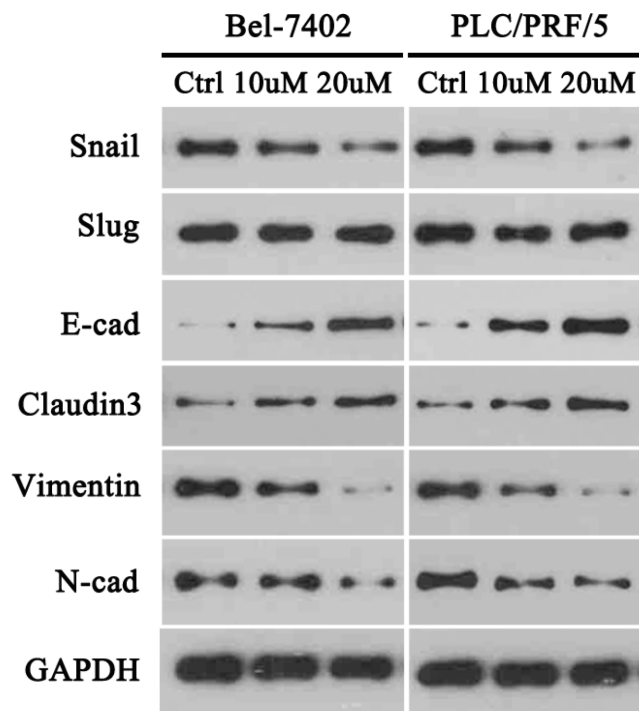
**Supplementary Figure S2: Effects of apigenin on cell migration.** (A–D) Cells were re-incubated in medium containing 0, 10, or 20  $\mu$ M apigenin for 48 h; apigenin inhibited migration.



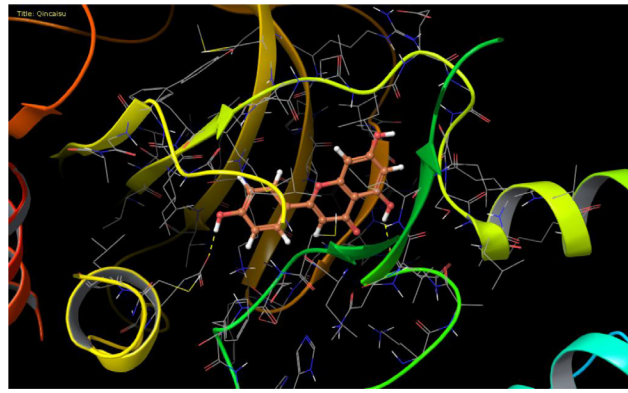
Supplementary Figure S3: Effect of apigenin on cellular microtubule morphology.



Supplementary Figure S4: Apigenin inhibits NF-κB in human liver cancer.



Supplementary Figure S5: Apigenin decreased Snail, Vimentin and N-cadherin levels and increased E-cadherin and Claudin3 levels; Slug levels did not change.



**Supplementary Figure S6: Molecular docking analysis showed that apigenin may target NF-κB-inducing kinase (NIK).**

**Supplementary Table S1: Snail and slug promoter reporter clones**

Promoter reporter clones	Promoter sequence	Vector information
Snail*	Promoter Length: 1255 bp Sequence length upstream of TSS: 1185 bp Sequence length downstream of TSS: 69 bp	pEZX-PG04
Slug*	Promoter Length: 1399 bp Sequence length upstream of TSS: 1235 bp Sequence length downstream of TSS: 163 bp	

\*The promoter reporter clones were purchased from GeneCopoeia (Guangzhou, China).

**Supplementary Table S2: AP-1, STAT3, NF-κB, cMyc luciferase reporter gene vector**

Reporter gene vector	Response element	Vector information
pAPI-TA-luc*	API response element 26–67 TGACTAATGACTAATGACTAAT GACTAATGACTAATGACTAA	pGL6-TA
pSTAT3-TA-luc*	STAT3 response element 32–86 TGCTTCCCG AACGTTGCTT CCCGAACGTT GCTTCCCGAA CGTTGCTTCC GAACG	pGL6-TA
pNFκB-TA-luc*	NFκB response element 26–65 GGGAATTTCCGGGAATTTCCGGGAATTT CCGGGAATTTCC	pGL6-TA
pcMyc-TA-luc*	cMyc response element 26–61 CACGT GCACGTGCAC GTGCACGTGC ACGTGCACGT	pGL6-TA
pRL-TK#	HSV-TK promoter 7–759	pRL

\*The reporter gene vector were purchased from Beyotime Biotechnology (Shanghai, China).

#The reporter gene vector was purchased from Promega.