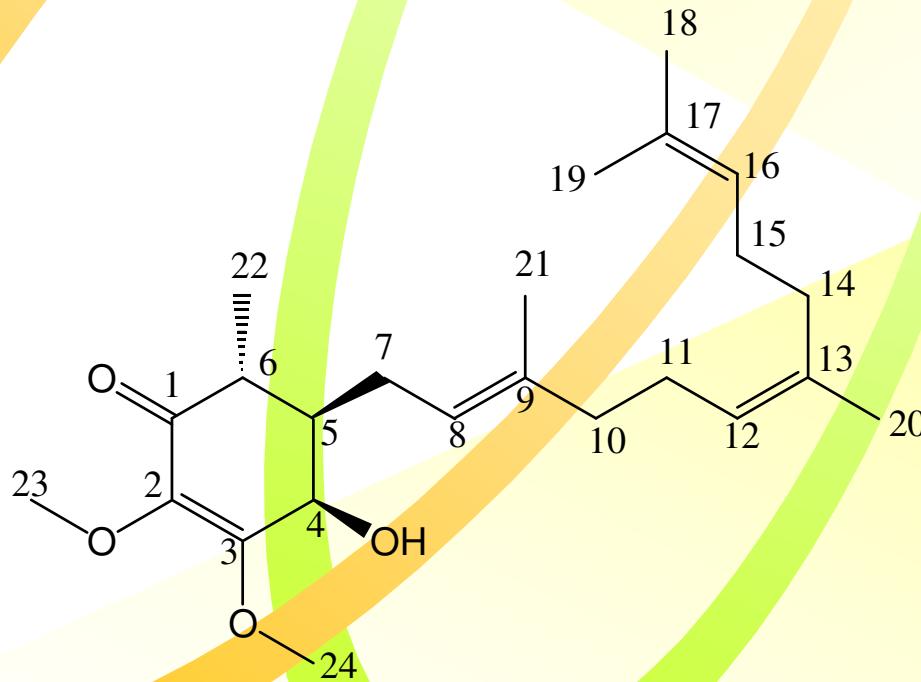


A new anticancer compound: **Antroquinonone™**



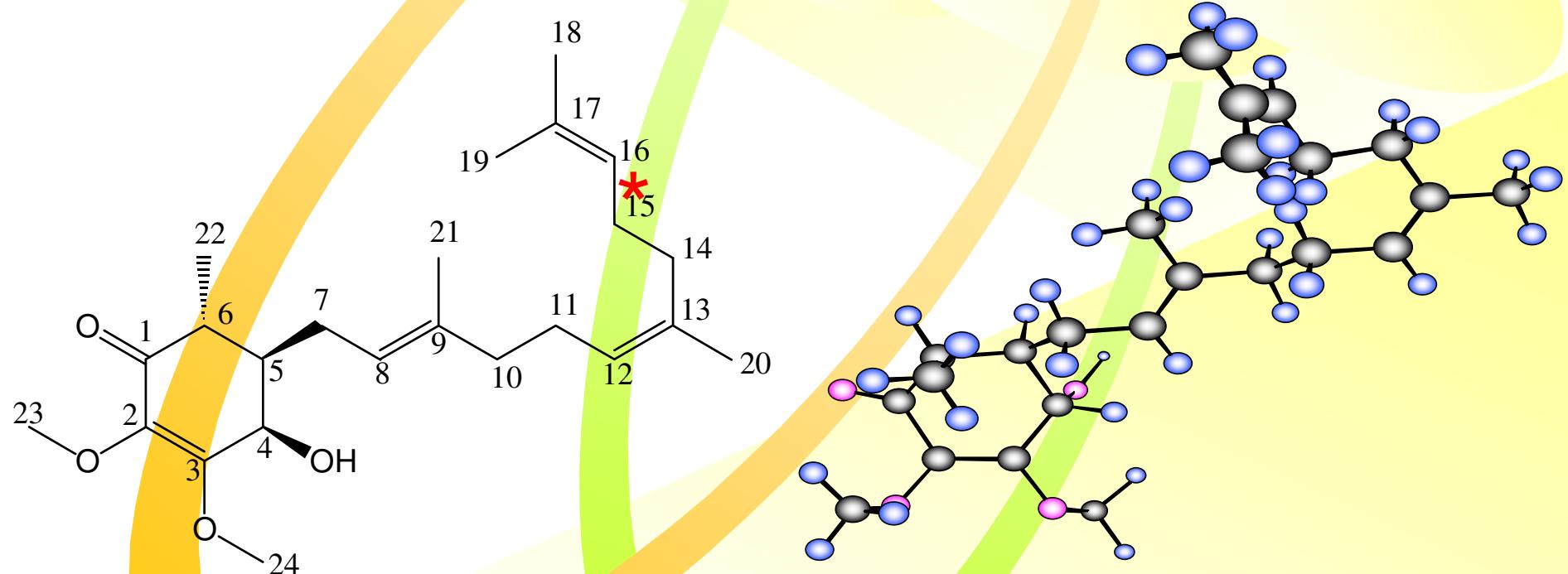
Antroquinonol™

Extract from *Antrodia camphorata*

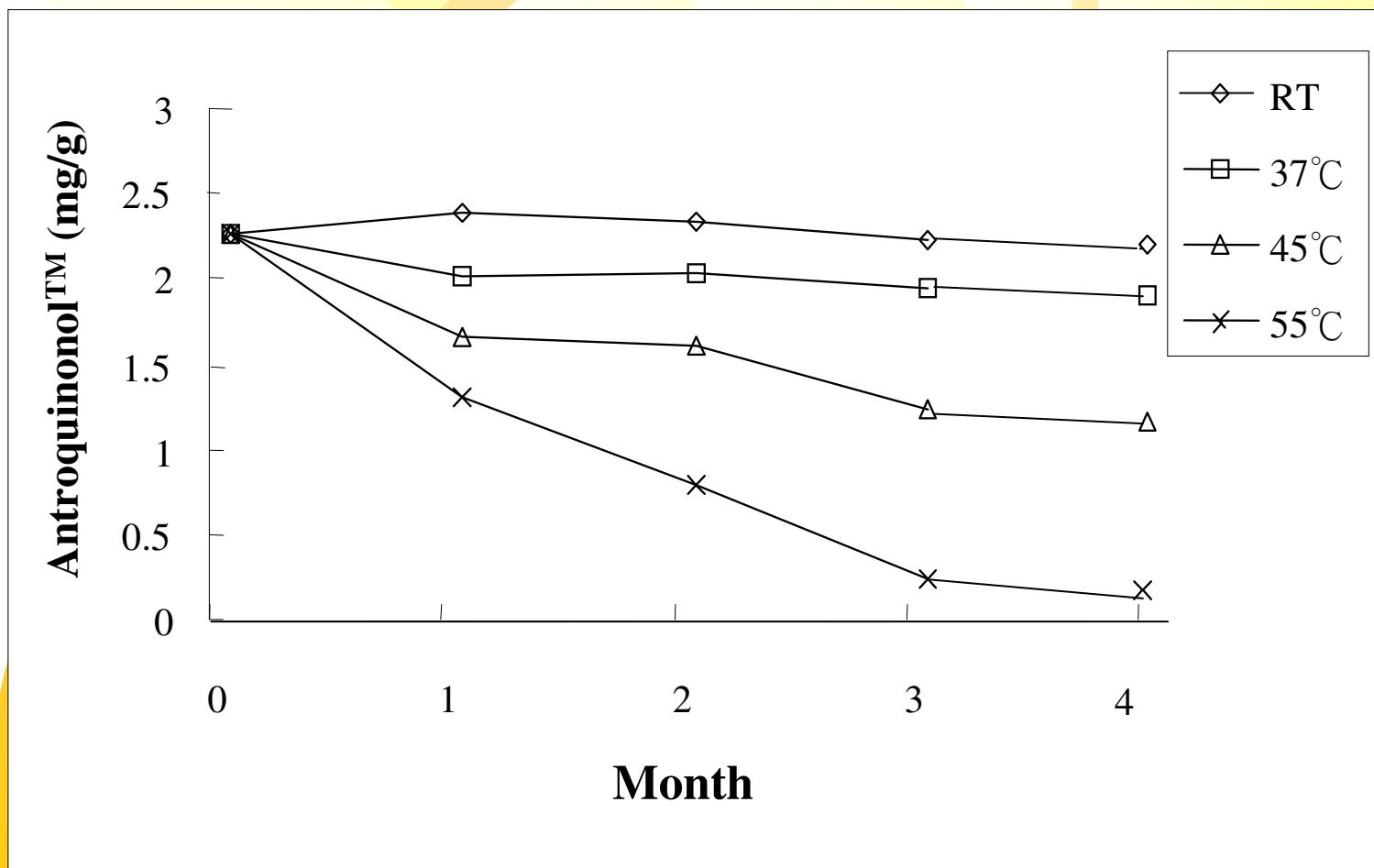
1. Purity technology, Chemical property and stability
2. In vitro data(IC_{50} , Fluorescence Microscopes and Flow Cytometry Analysis)
3. In vivo data (Breast cancer, liver recover)
4. Mechanism
5. Pharmacokinetic
6. Safety (90 days safety test and toxicity test)
(MDS, Aptuit)

Antroquinonol™

Formula = C₂₄H₃₈O₄
MW = 390



Antroquinonol™ Stability

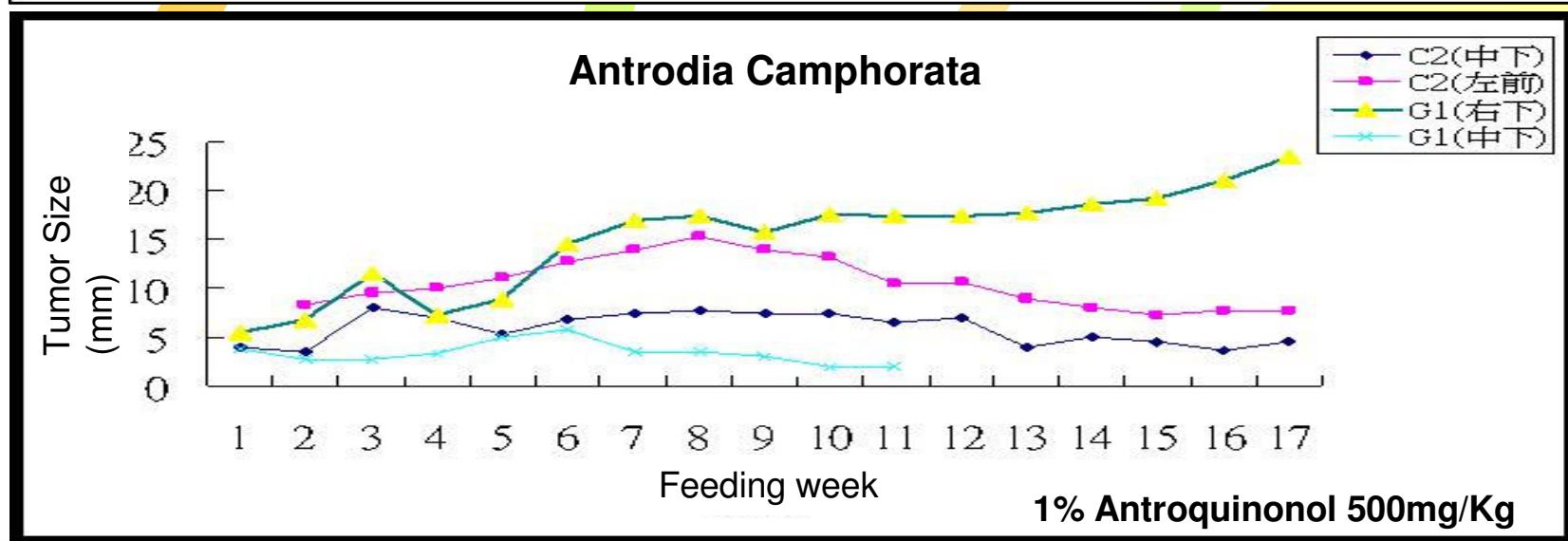
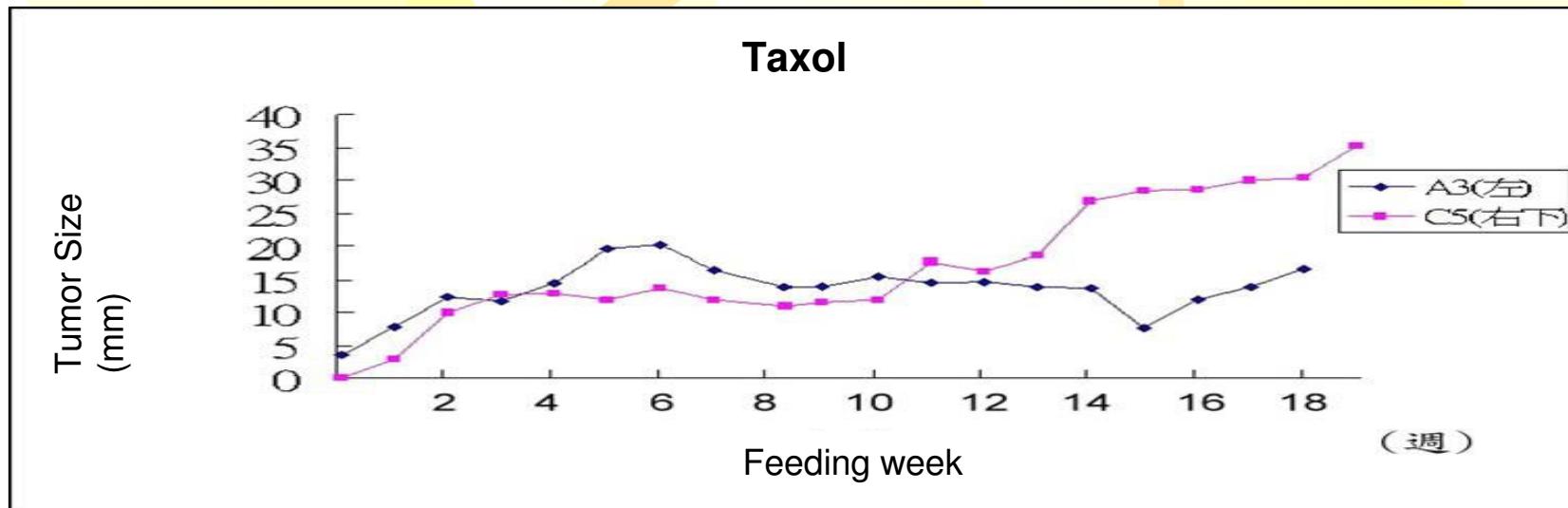


Bioassay of Antroquinonol™

Cancer cell lines	breast cancer		Lung cancer	Liver cancer		Prostate cancer	
	MCF-7	MDA-MB-231	A549	Hep3B	HepG2	DU145	LANcap
Antroquinonol™ IC_{50}	2.19 ±0.04	2.64 ±0.05	0.251	0.13 ±0.02	4.3 ±0.03	4.64 ±0.06	6.09 ±0.07

Unit: μM

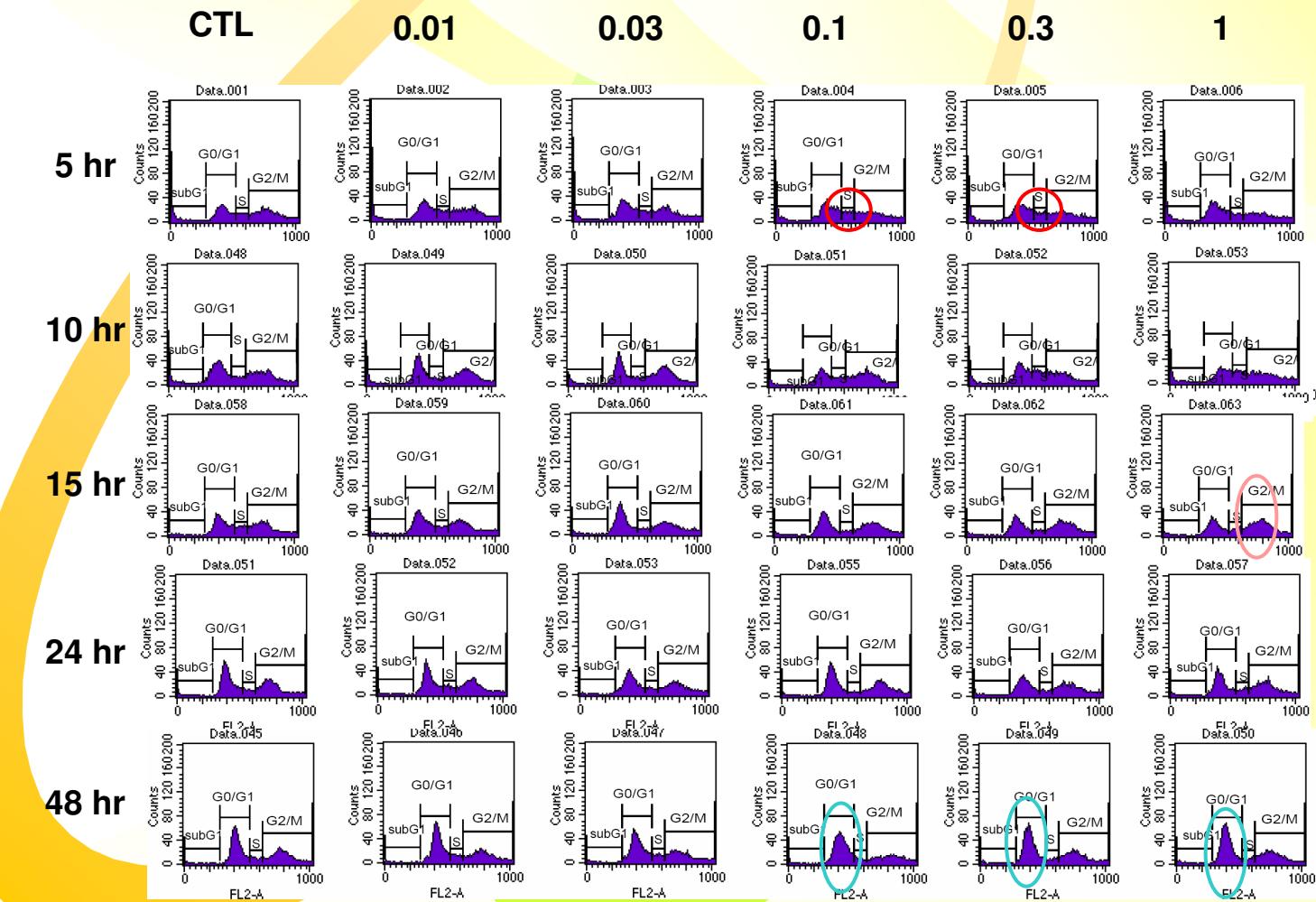
Effect on Rat's Breast Tumor



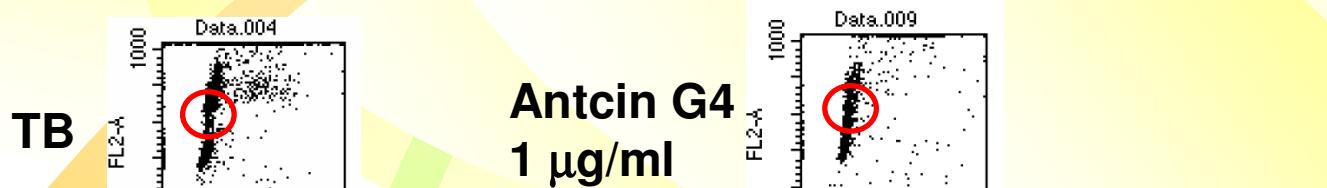
Effects of Antroquinonol™ on cell cycle progression

HepG2

Antroquinonol ($\mu\text{g/ml}$)

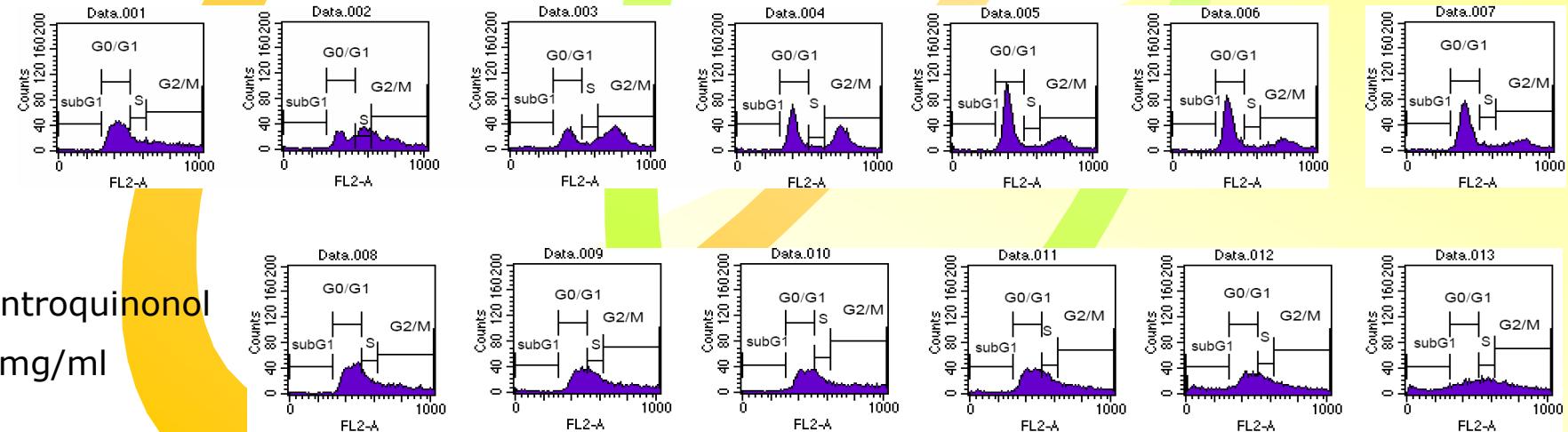


Thymidine block increase effect of Antroquinonol™ on S phase arrest

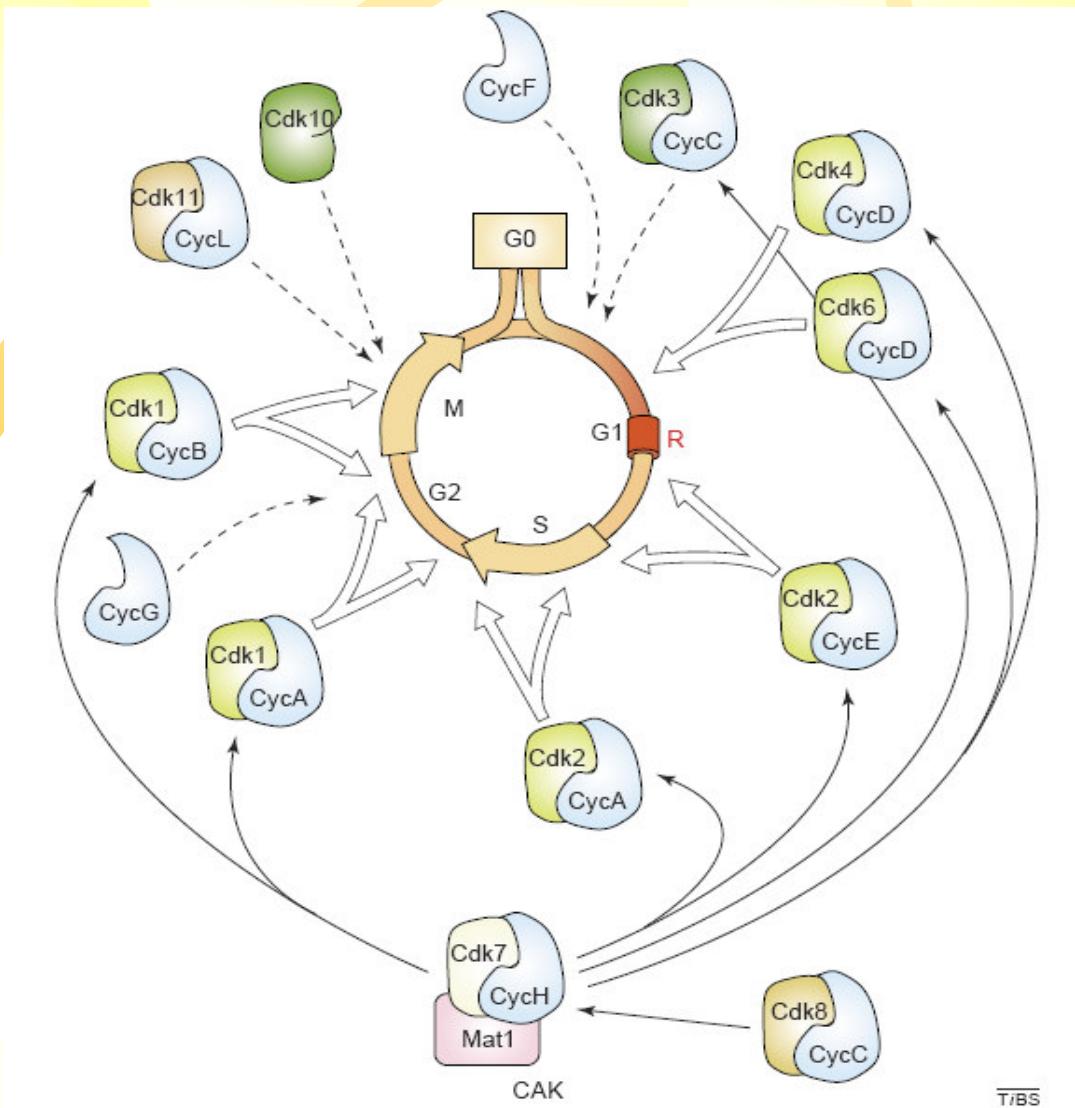


Release from thymidine block 24hr

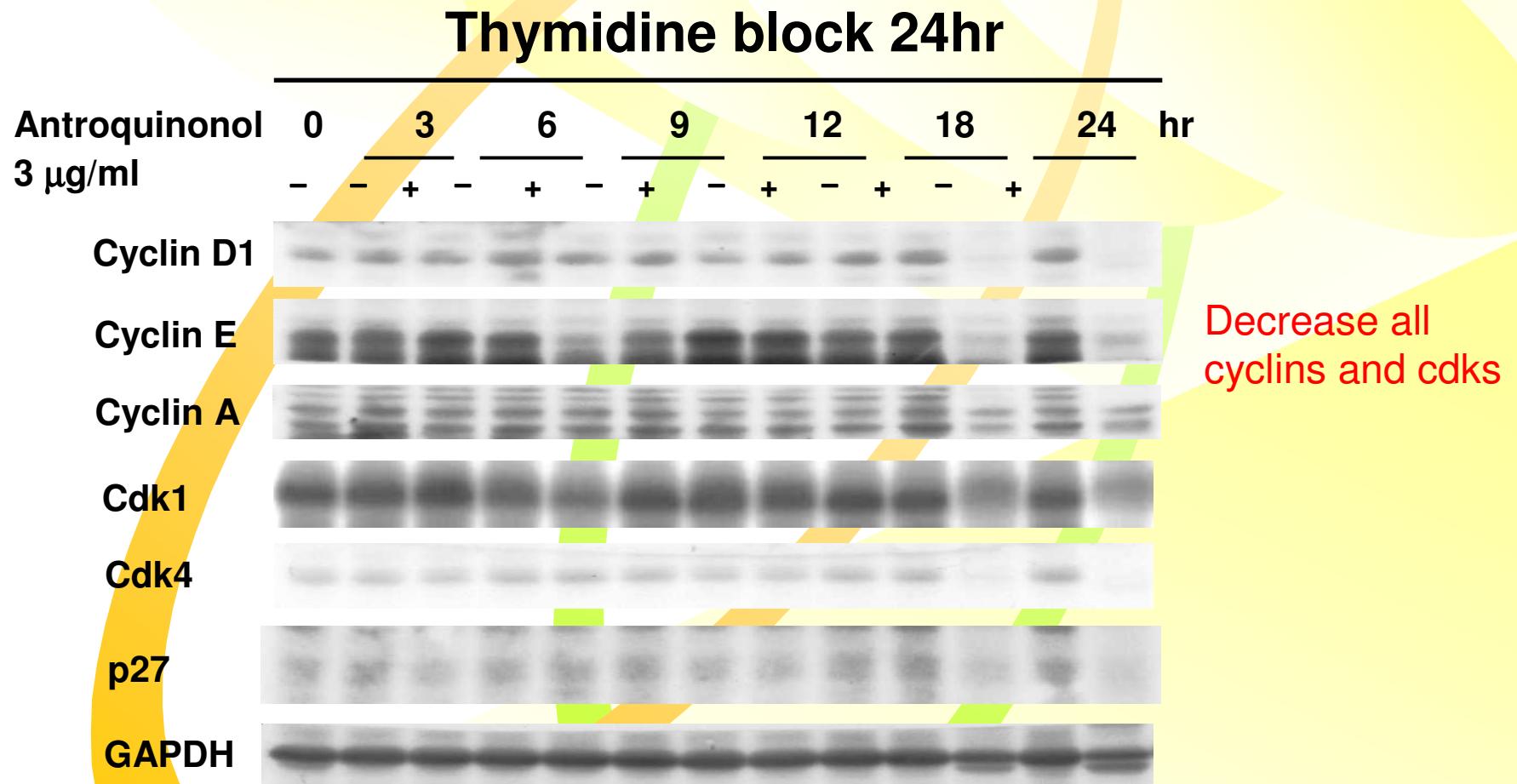
0 3 6 9 12 18 24 hr



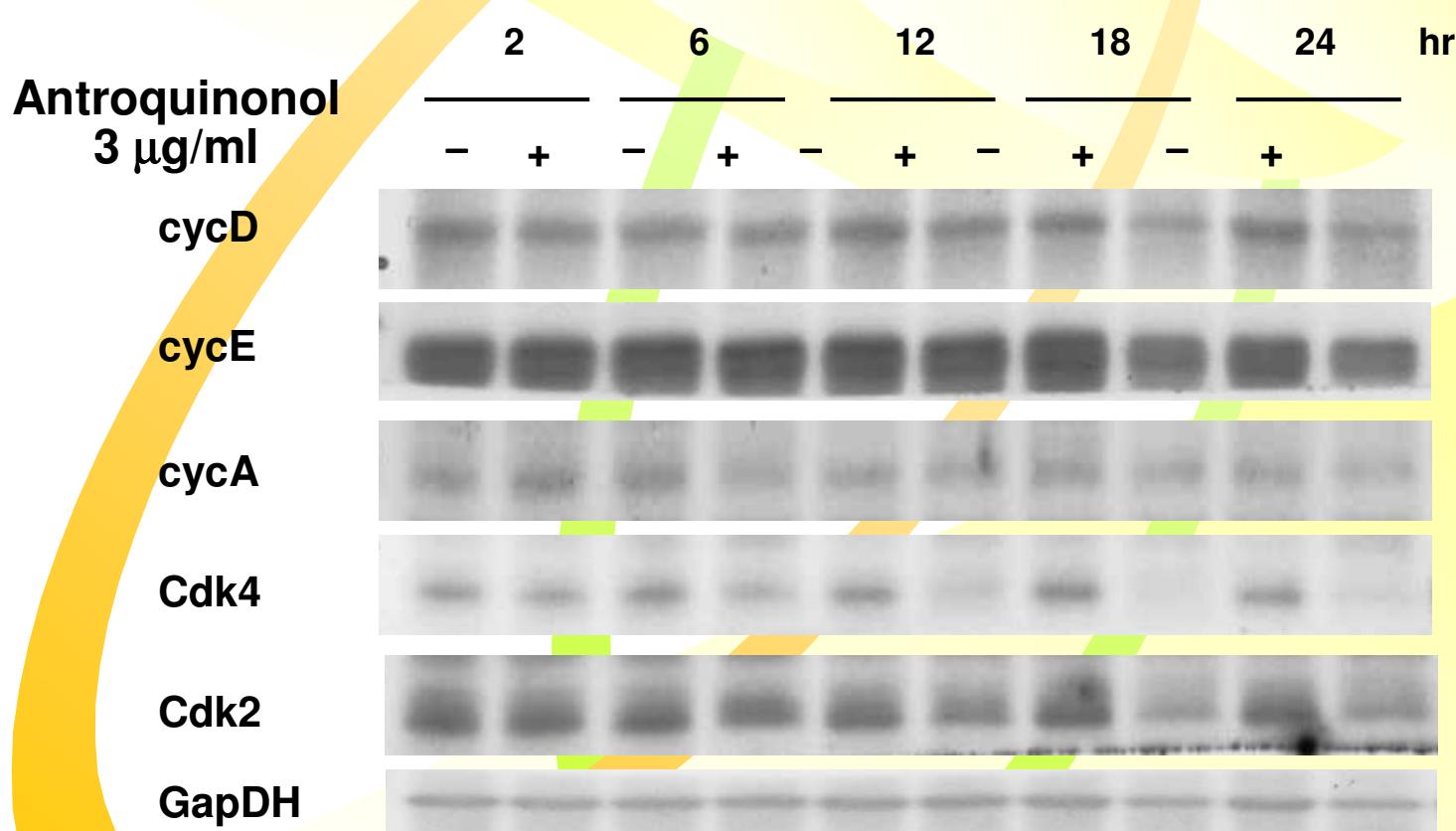
Cell cycle regulators



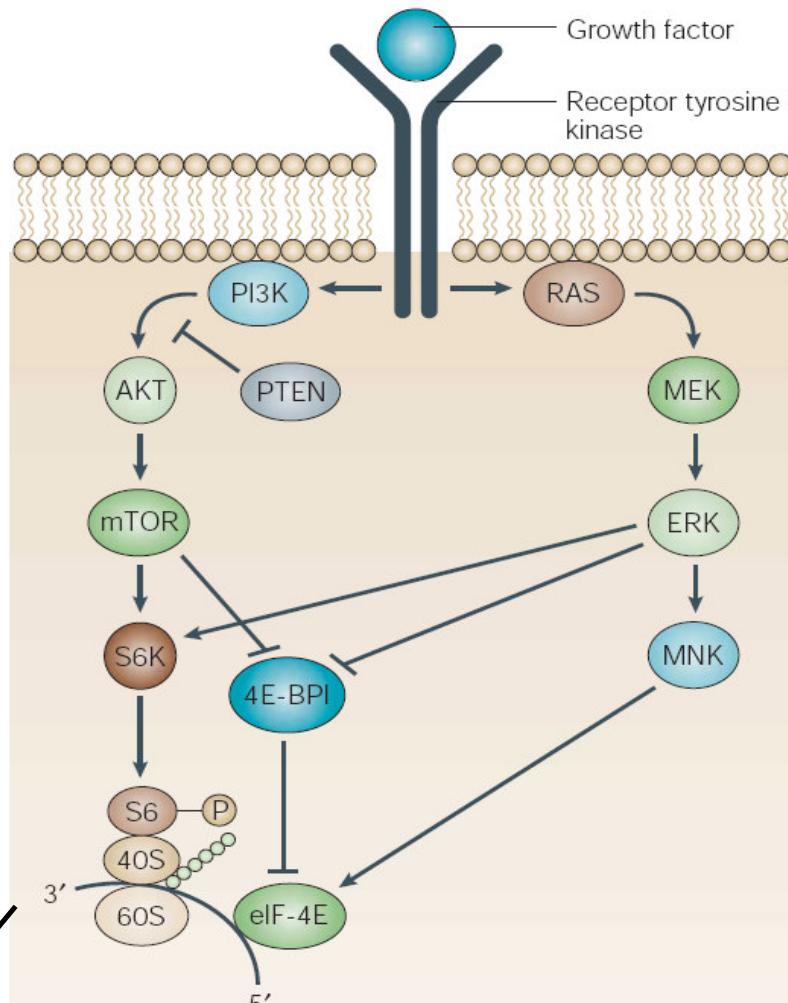
Cell cycle regulatory proteins



Effect on cell cycle regulatory protein



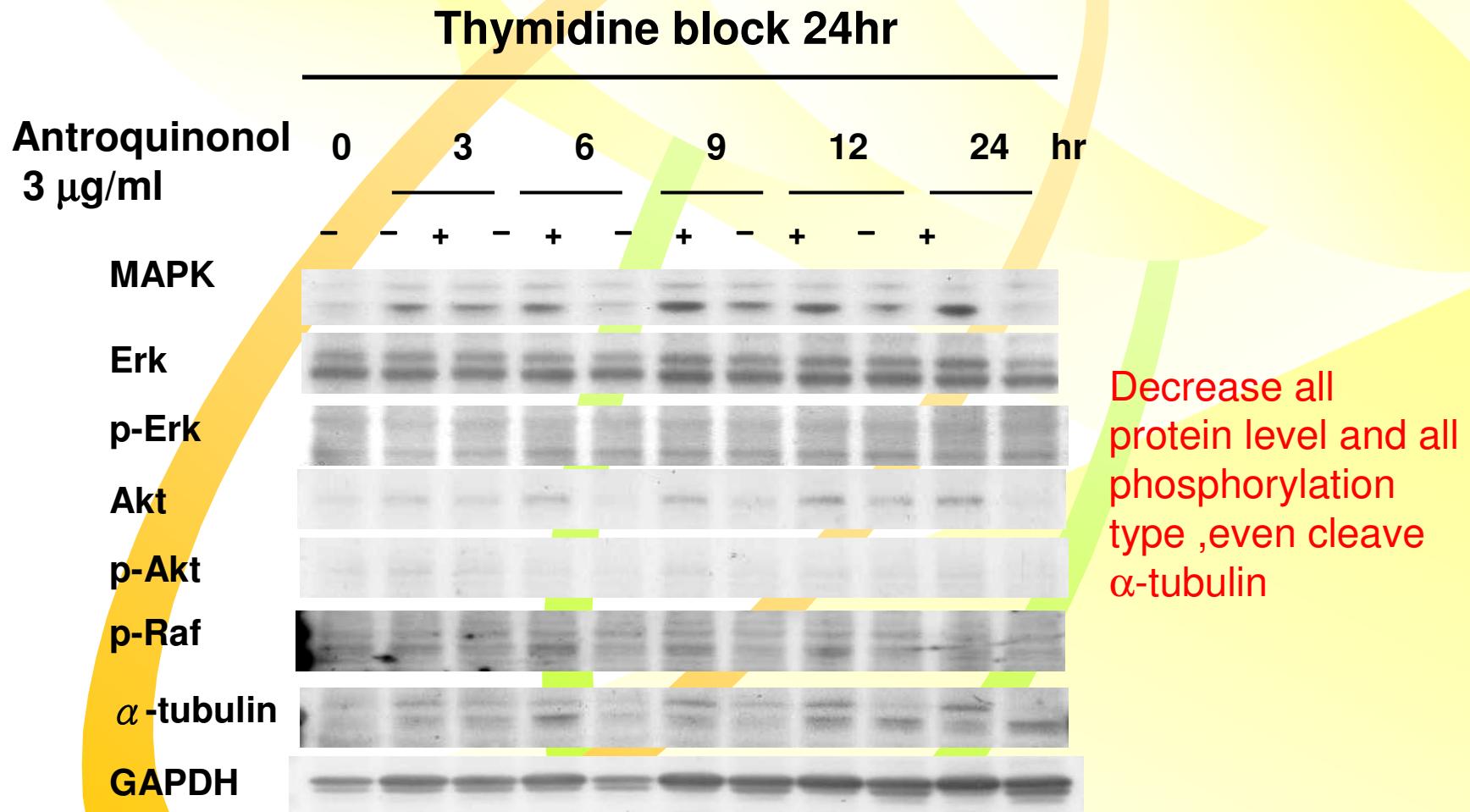
Growth receptor and protein synthesis signaling



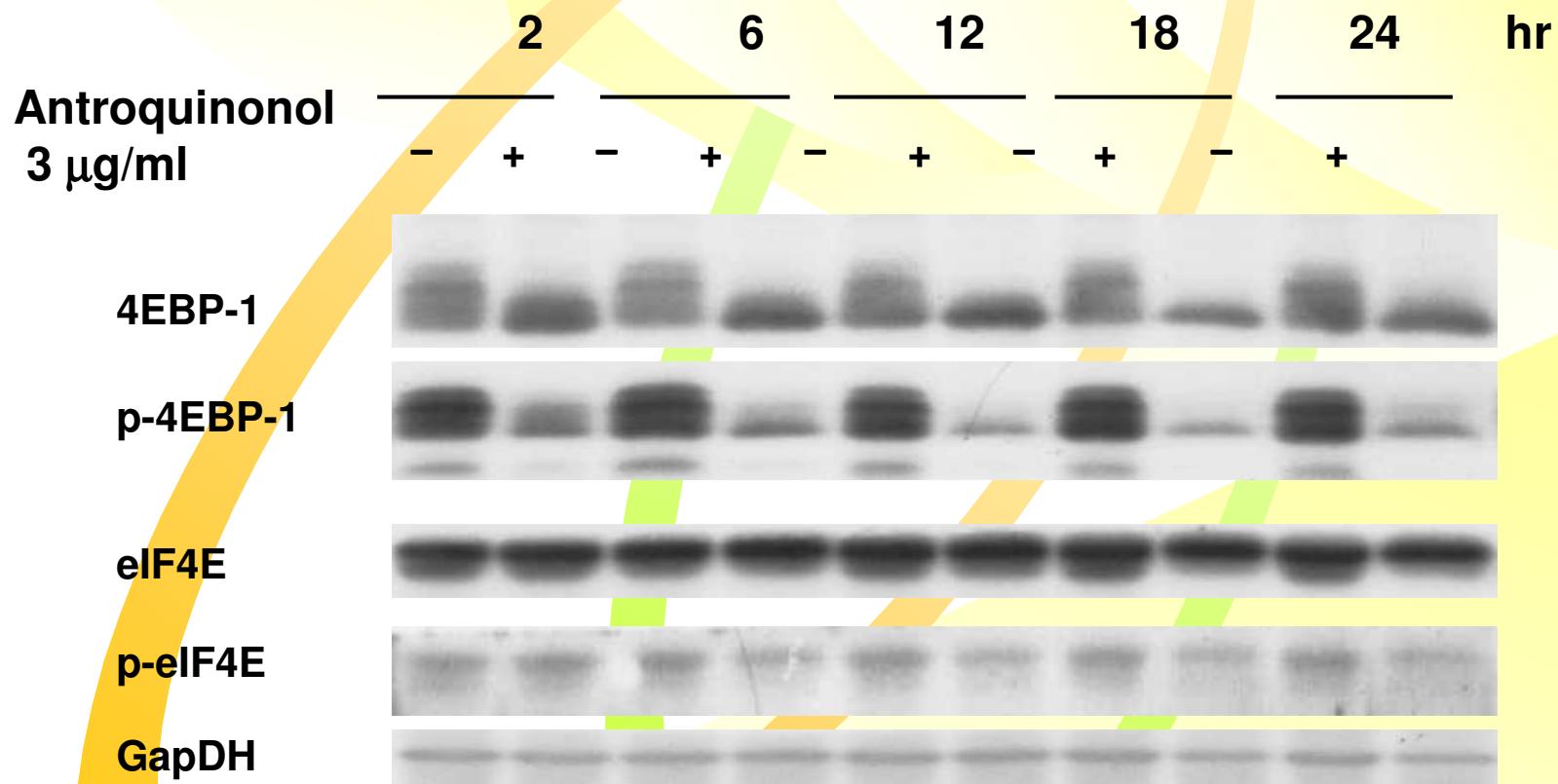
cell growth and proliferation

Modified from *NATURE REVIEWS CANCER VOLUME 3 -721*

Growth and survival related proteins



Effect on translation related protein



Pharmacokinetic of **Antroquinonol™**

Antroquinonol	AUC _{0-t} (ng/mL*h)	AUC _{0-∞} (ng/mL*h)	AUC _{0-t} / AUC _{0-∞}	C _{max} (ng/mL)	T _{max} (h)	MRT (h)	T _{1/2} (h)	RSQ
	137.2	153.1	89.6	187.94	0.25	2.21	2.52	0.9751

Conclusion

- High safety, High performance anti-cancer compound.
- Antroquinonol could inhibit proliferation of liver, lung, breast and prostate cancer cells.
- Antroquinonol induced S phase arrest of HepG2 cells when they are pretreated with synchronization.
- After synchronized with Antroquinonol decrease all cell cycle regulatory protein and cell growth related protein (including cyclin A, cyclin D, cyclin E, cdk2, cdk4, Rb, p53, Akt and MAPK)
- Antroquinonol inhibit protein synthesis through translation related protein 4E-BP1 and eIF4E