

## List of figures

Figure		Page
2-1	(a) Illustrates wound healing (b) Illustrates wound healing versus invasive tumor growth.....	7
2-2	The isoforms of nitric oxide synthases. Two cNOS enzymes (eNOS, nNOS) are contrasted by a third, inducible NOS (iNOS)....	16
2-3	Chronic inflammation alters the cellular levels of inflammatory mediators, including COX-2, RONS and inflammatory cytokines and activates protooncogenes. Depending on the collective functions and balance of inflammatory mediators, an inflammatory response may be either pro- or anti-tumorigenic.....	19
2-4	(a) <i>Anacyclus pyrethrum</i> (L.) DC.(Compositae) (b) Root of <i>A. pyrethrum</i> .....	22
2-5	(a) <i>Anethum graveolens</i> Linn.(Umbelliferae) (b) Fruit of <i>A.. graveolens</i> .....	22
2-6	(a) <i>Angelica sylvestris</i> Linn. (Umbelliferae) (b) Root of <i>A. sylvestris</i> .....	24
2-7	(a) <i>Artemisia vulgaris</i> Linn. (Compositae) (b) All part of <i>A. vulgaris</i> .....	25
2-8	(a) <i>Cinnamomum bejolghota</i> (Buch.-Ham.) Sweet (b) Bark of <i>C. bejolghota</i> .....	25
2-9	(a) <i>Cinnamomum zeylanicum</i> Linn. (b) Bark of <i>C. zeylanicum</i> ....	28
2-10	(a) <i>Commiphora abyssinica</i> (Berg.) Engel (b) Myrrh of <i>C. abyssinica</i> .....	28
2-11	(a) <i>Cuminium cyminum</i> Linn. (b) Fruit of <i>C. cyminum</i> .....	29
2-12	(a) <i>Foeniculum vulgare</i> Mill. (Umbelliferae) (b) Fruit of <i>F. vulgare</i> .....	29
2-13	(a) <i>Lepidium sativum</i> L. (Cruciferae) (b) Fruit of <i>L. sativum</i> .....	32
2-14	(a,b) <i>Myristica fragrans</i> Linn. (Myristiceae) (c) Nutmeg of <i>M. fragrans</i> are (d) Mace of <i>M. fragrans</i> .....	32

## List of figures (continued)

Figure		Page
2-15	(a) <i>Nigella sativa</i> L. (Ranunculaceae) (b) Seed of <i>N. sativa</i> .....	35
2-16	(a) <i>Picrorrhiza kurroa</i> Royle ex Benth (Scrophulariaceae) (b) Rhizome of <i>P. kurroa</i> .....	35
2-17	(a) <i>Piper chaba</i> Linn. or <i>Piper longum</i> Linn. (Piperaceae) (b) Flower of <i>P. chaba</i> .....	35
2-18	(a) <i>Piper nigrum</i> Linn. (Piperaceae) (b) Seed of <i>P. nigrum</i> .....	36
2-19	(a) <i>Piper ribesoides</i> Wall. (Piperaceae) (b) Stem of <i>P. ribesoides</i> ..	36
2-20	(a) <i>Platycladus orientalis</i> (L.) Franco or <i>Thuja orientalis</i> L. (Cupressaceae) (b) Stem of <i>P. orientalis</i> .....	39
2-21	(a,b) <i>Pouzolzia pentandra</i> J.J. Bennett (Urticaceae) (c) All part of <i>P. pentandra</i> .....	39
2-22	(a,b) <i>Terminalia chebula</i> Retz (Combretaceae) (c) Gall of <i>T. chebula</i> .....	40
2-23	(a) <i>Zingiber officinale</i> Roscoe (Zingiberaceae) (b) Rhizome of <i>Z. officinale</i> .....	40
3-1	Structure of Piperine .....	76
4-1	Percentage of yields of the ethanolic extracts of Ridsidaungmahakan preparation and its ingredient .....	81
4-2	IC <sub>50</sub> of ethanolic extracts of Ridsidaungmahakan preparation and its ingredient on NO inhibitory activity using Griess reagent, used Indomethacin as positive control (IC <sub>50</sub> of Indomethacin = 20.32 µg/ml), * Cytotoxic effect was observed with concentration 100 µg/ml .....	85
4-3	Chemical fingerprint using GC MS of Ridsidaungmahakan preparation .....	100

### **List of figures (continued)**

Figure		Page
4-4	The stability of biological activity test for inhibition of Nitric Oxide production and PGE <sub>2</sub> release (IC <sub>50</sub> ) of Ridsiduangmahakan preparation under accelerated condition (45 ± 2°C with 75 ± 5% RH). ....	103
4-5	The stability of piperine (%content) in the ehtanolic extract of Ridsiduangmahakan preparation under accelerated condition (45 ± 2°C with 75 ± 5% RH). ....	104
4-6	Stability of Chemical fingerprint using GC MS of Ridsiduangmahakan preparation on Day0, 15, 30, 60, 90 and 120 (from top to bottom panels) under accelerated condition (45 ± 2°C with 75 ± 5% RH). ....	105