



# N-TENSE

120 capsules (700 mg) per bottle.

Retail Price: \$25.00

A combination of 8 plants which have been independently documented around the world with active pharmacological actions.<sup>†</sup> For more complete information on these unique rainforest plant ingredients, please see the Raintree Nutrition internet website and the online [Tropical Plant Database](#).

**Ingredients:** Graviola leaf and stem, mullaca whole herb, guacatonga leaf and stem, espinheira santa leaf, bitter melon whole herb, vassourinha leaf, mutamba bark, cat's claw vine.

**Suggested Use:** Take 3-4 capsules three times daily on an empty stomach.

## Contraindications:

- Not to be used during pregnancy or while breast-feeding.
- Several ingredients in this formula have demonstrated hypotensive, vasodilator, and cardiodepressant activities in animal studies. People with low blood pressure or those taking antihypertensive drugs should check with their physician before taking N-Tense and monitor their blood pressure accordingly.
- Do not take in conjunction with CoQ10. CoQ10 and other supplements which increase cellular ATP may reduce the benefits of N-Tense.

**Drug Interactions:** This product may potentiate antihypertensive and cardiac depressant drugs.

## Other Practitioner Observations:

- Several ingredients in this formula have demonstrated significant *in vitro* antimicrobial properties. Chronic or long-term use of this plant may lead to die-off of friendly bacteria in the digestive tract due to its antimicrobial properties. Supplementing the diet with probiotics and digestive enzymes is advisable if this product is used for longer than 30 days.
- Drinking plenty of water (at least 8 glasses a day) is helpful to reduce Herxheimer reactions.

## Clinical Documentation and Research:

This formulated product has not been the subject of any clinical research. Available third-party documentation and clinical research on each ingredient in this formula can be found at the Raintree website. A partial listing of published research on these ingredients is shown below:

### Graviola (*Annona muricata*)

Liaw, C. C., et al. "New cytotoxic monotetrahydrofuran Annonaceous acetogenins from *Annona muricata*." *J. Nat. Prod.* 2002; 65(4): 470–75.

Chang, F. R., et al. "Novel cytotoxic Annonaceous acetogenins from *Annona muricata*." *J. Nat. Prod.* 2001; 64(7): 925–31.

Zeng, B. B., et al. "Studies on mimicry of naturally occurring Annonaceous acetogenins: Non-THF analogues leading to remarkable selective cytotoxicity against human tumor cells." *Chemistry.* 2003 Jan 3; 9(1): 282-90.

Nicolas, H., et al. "Structure-activity relationships of diverse Annonaceous acetogenins against multidrug resistant human mammary adenocarcinoma (MCF-7/Adr) cells." *J. Med. Chem.* 1997; 40(13): 2102–6.

Gonzalez-Coloma, A., et al. "Selective action of acetogenin mitochondrial complex I inhibitors." *Z. Naturforsch [C].* 2002; 57(11-12): 1028-34.

Tormo, J. R., et al. "Specific interactions of monotetrahydrofuranic annonaceous acetogenins as inhibitors of mitochondrial complex I." *Chem. Biol. Interact.* 1999 Nov 1; 122(3): 171-83.

### Mullaca (*Physalis angulata*)

Chiang, H., et al. "Antitumor agent, physalin F from *Physalis angulata* L." *Anticancer Res.* 1992; 12(3): 837–43.

Ismail, N., et al. "A novel cytotoxic flavonoid glycoside from *Physalis angulata*." *Fitoterapia* 2001 Aug. 72(6): 676–79.

Hayashi T, A cytotoxic flavone from *Scoparia dulcis* L. *Chem Pharm Bull* (Tokyo). 1988 Dec; 36(12): 4849-51.

Chiang, H. et al. "Inhibitory effects of physalin B and physalin F on various human leukemia cells *in vitro*." *Anticancer Res.* 1992; 12(4): 1155–62.

Kawai, M., et al. "Cytotoxic activity of physalins and related compounds against HeLa cells." *Pharmazie.* 2002; 57(5): 348–50.

### Guacatonga (*Casearia sylvestris*)

Oberlies, N. H., et al. "Novel bioactive clerodane diterpenoids from the leaves and twigs of *Casearia sylvestris*." *J. Nat. Prod.* 2002; 65(2): 95-99.

Itokawa, H., et al. "New antitumor principles, casearins A-F, for *Casearia sylvestris* Sw. (*Flacourtiaceae*)" *Chem. Pharm. Bull.* (Tokyo) 1990; 38(12): 3384-88.

Itokawa, H., et al. "Antitumor principles from *Casearia sylvestris* Sw. (*Flacourtiaceae*), structure elucidation of new clerodane diterpenes by 2-D NMR spectroscopy." *Chem. Pharm. Bull.* (Tokyo) 1988 March; 36(4): 1585-88.

Morita, H., et al. "Structures and cytotoxic activity relationship of casearins, new clerodane diterpenes from *Casearia sylvestris* Sw." *Chem. Pharm. Bull.* (Tokyo) 1991 Dec; 39(3): 693-97.

Bolzani Vda S., et al. "Search for antifungal and anticancer compounds from native plant species of Cerrado and Atlantic Forest." *An. Acad. Bras. Cienc.* 1999; 71(2): 181-7.

#### **Espinheira Santa (*Maytenus ilicifolia*)**

Itokawa, H., et al. "Antitumor substances from South American plants." *Pharmacobio. Dyn.* 1992; 15(1): S-2.

Arisawa, M., et al. "Cell growth inhibition of KB cells by plant extracts." *Natural Med.* 1994; 48(4): 338-347.

Shirota, O., et al. "Cytotoxic aromatic triterpenes from *Maytenus ilicifolia* and *Maytenus chuchuhuasca*." *J. Nat. Prod.* 1994; 57(12): 1675-81.

Ladino, C.A., et al. "Folate-maytansinoids: target-selective drugs of low molecular weight." *Int. J. Cancer.* 1997 Dec 10; 73(6): 859-64.

#### **Bitter Melon (*Momordica charantia*)**

Clafin, A. J., et al. "Inhibition of growth and guanylate cyclase activity of an undifferentiated prostate adenocarcinoma by an extract of the balsam pear (*Momordica charantia* abbreviata)." *Proc. Natl. Acad. Sci.* 1978; 75(2): 989-93.

Terenzi, A., et al. "Anti-CD30 (BER=H2) immunotoxins containing the type-1 ribosome-inactivating proteins momordin and PAP-S (pokeweed antiviral protein from seeds) display powerful antitumor activity against CD30+ tumor cells *in vitro* and in SCID mice." *Br. J. Haematol.* 1996; 92(4): 872-79.

Nagasawa, H., et al. "Effects of bitter melon (*Momordica charantia*) or ginger rhizome (*Zingiber officinale* Rosc.) on spontaneous mammary tumorigenesis in SHN mice." *Am. J. Clin. Med.* 2002; 30(2-3): 195-205.

Pongnikorn, S., et al. "Effect of bitter melon (*Momordica charantia* Linn) on level and function of natural killer cells in cervical cancer patients with radiotherapy." *J. Med. Assoc. Thai.* 2003; 86(1): 61-8.

#### **Vassourinha (*Scoparia dulcis*)**

Nishino, H. "Antitumor-promoting activity of scopadulcic acid B, isolated from the medicinal plant *Scoparia dulcis* L." *Oncology* 1993; 50(2): 100-3.

Noda, Y., et al. "Enhanced cytotoxicity of some triterpenes toward leukemia L1210 cells cultured in low pH media; possibility of a new mode of cell killing." *Chem. Pharm. Bull.* 1997; 45(10): 1665-70.

Zuco, V., et al. "Selective cytotoxicity of betulinic acid on tumor cell lines, but not on normal cells." *Cancer Lett.* 2002; 175(1): 17-25.

Ahsan, M., et al. "Cytotoxic diterpenes from *Scoparia dulcis*." *J. Nat. Prod.* 2003; 66(7): 958-61.

#### **Mutamba (*Guazuma ulmifolia*)**

Kashiwada, Y., et al. "Antitumor agents, 129. Tannins and related compounds as selective cytotoxic agents." *J. Nat. Prod.* 1992; 55(8): 1033-43.

Ito, H., et al. "Antitumor activity of compounds isolated from leaves of *Eriobotrya japonica*." *J. Agric. Food Chem.* 2002; 50(8): 2400-3.

#### **Cat's Claw (*Uncaria tomentosa*)**

Sheng, Y. "Induction of apoptosis and inhibition of proliferation in human tumor cells treated with extracts of *Uncaria tomentosa*." *Anticancer Res.* 1998 Sep-Oct;18(5A): 3363-8.

Lemaire, I., et al. "Stimulation of interleukin-1 and -6 production in alveolar macrophages by the neotropical liana, *Uncaria tomentosa*." *J. Ethnopharmacol.* 1999 Feb;64(2):109-15.

This product is sold through health practitioners and retail stores. Please contact a health professional concerning other observations and/or effects of this product and/or if you have any disease, condition, or illness for which you are seeking treatment or products for.

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† The statements contained herein have not been evaluated by the Food and Drug Administration.  
This product is not intended to treat, cure, or prevent any disease.