

List of All Chemicals

P Terminalia arjuna (Combretaceae)

Common name(s)

Arjuna; Arjun

How used

Medicinal

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

| Chemical | Part All ▾ | Low PPM | High PPM | StdDev | *Reference |
|-----------------------------------|--|------------|-------------|--------|--|
| (+)-CATECHOL | Bark | -- | -- | | Madhusudanamma, W., Sastry, K. N. S., Rao, V. S. S., Reddy, K. K. 1980. Isolation of Flavan-3-ols from Terminalia arjuna Bark. Leather Sci (Madras) 27: 199-200. |
| Activities (4) | | | | | |
| Antihepatic | | | | | Martindale's 29th |
| Antiseptic | | | | | |
| Fatal | | | | | Martindale's 29th |
| Pesticide | | | | | |
| (+)-GALLOCATECHOL | Bark | -- | -- | | Madhusudanamma, W., Sastry, K. N. S., Rao, V. S. S., Reddy, K. K. 1980. Isolation of Flavan-3-ols from Terminalia arjuna Bark. Leather Sci (Madras) 27: 199-200. |
| (+)-LEUCOCYANIDIN | Bark | -- | -- | | Row, L. R. 1970. Chemical Examination of Terminalia Species. XIII. Isolation and Structure Determination of Arjunetin from Terminalia arjuna. Indian J. Chem. 8: 772. |
| (+)-LEUCODELPHINIDIN | Wood | -- | -- | | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| (+)-LEUCODELPHINIDIN | Heart Wood | -- | 500.0 | | Row, L. R., Subba, Rao, G. S. R. 1962. Chemistry of Terminalia Species. Part IV. Chemical Examination of T. arjuna: Isolation of Arjunolic Acid Saponin and (+) Leucodelphinidin. J. Indian Chem. Soc. 39: 89. |
| 1,2,3,4,6-PENTAGALLOYLGLUCOSE | Leaf | -- | -- | | Kandil, F. E., Nassar, M. I. 1998. A Tannin Anti-Cancer Promotor from Terminalia arjuna. Phytochemistry 47 8: 1567-1568. |
| 2',4',5,7-TETRAHYDROXYFLAVONE | Fruit | -- | 4.0 | | Nagar, A., Gujral, V. K., Gupta, S. R. 1979. A New Flavone from Terminalia arjuna Fruits. Phytochemistry 18: 1245-. |
| 2,3(S)-HHDP-6-O-GALLOYL-D-GLUCOSE | Bark | -- | 27.6 | | Lin, T. C., Ma, Y. T., Hsu, F. L. 1996. Tannins from the Bark of Terminalia arjuna. Zhonghua Yaoxue Zashi 48 1: 25-35. |
| 2,3(S)-HHDP-D-GLUCOSIDE | Bark | -- | 190.3 | | Lin, T. C., Ma, Y. T., Hsu, F. L. 1996. Tannins from the Bark of Terminalia arjuna. Zhonghua Yaoxue Zashi 48 1: 25-35. |
| 2,3,4,6-TETRAGALLOYL-GLUCOSE | Leaf | -- | -- | | Kandil, F. E., Nassar, M. I. 1998. A Tannin Anti-Cancer Promotor from Terminalia arjuna. Phytochemistry 47 8: 1567-1568. |
| 8-HYDROXY-HEXADECANOIC-ACID | Root Bark | -- | 50.0 | | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of Roots of Terminalia arjuna (Roxb.) Wight & Arnot: Part I-Characterization of Two New Triterpenoid Glycosides. Indian J. Chem. 21B 6: 530-533. |
| AFRORMOSIN | Fruit | -- | -- | | Singh, B., Pandey, V. B. 1995. Constituents of Terminalia arjuna Fruits. Orient. J. Chem. 11 2: 185-186. |
| Activities (3) | | | | | |
| Fungicide ED50=>100 | | | | | |
| Pesticide | | | | | |
| Phytoalexin | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | | |
| ARACHIDIC-STEARATE | Fruit | -- | -- | | Ahmad, M. U., Mullah, K. B., Saha, K. C. 1982. Hentriacontane, Arachidic Stearate and Myristyl Oleate from the Fruits of Terminalia arjuna Bedd. J. Bangladesh Acad. Sci. 6 1/2: 61-65. |

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|--------------------|--------------|--------|---------|---|
| ARJUNAGENIN | Bark | -- | 12.0 | Honda, T., Murae, T., Tsuyuki, T., Takahashi, T., Sawai, M. 1976. Arjungenin, Arjunglucoside I, and Arjunglucoside II, a New Triterpene and New Triterpene Glucosides from Terminalia arjuna. Bull. Chem. Soc. Japan 49: 3213-. |
| ARJUNETIN | Leaf | -- | -- | Chauhan, S. M. S., Parkash, S., Kaushik, R. 1997. Isolation of 3-beta-hydroxyolean-12-ene and Related Triterpenoids from the Leaves of Terminalia arjuna. Indian J. Chem. 36B 3: 297-298. |
| ARJUNETIN | Root Bark | -- | 10.0 | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of the Roots of Terminalia arjuna-The Structures of Arjunoside 3 and Arjunoside 4, Two New Triterpenoid Glycosides. Phytochemistry 21: 2057-2060. |
| ARJUNETIN | Bark | 1100.0 | 1600.0 | * |
| ARJUNGENIN | Bark | -- | -- | * |
| ARJUNGLUCOSIDE I | Bark | -- | 280.0 | Honda, T., Murae, T., Tsuyuki, T., Takahashi, T., Sawai, M. 1976. Arjungenin, Arjunglucoside I, and Arjunglucoside II, a New Triterpene and New Triterpene Glucosides from Terminalia arjuna. Bull. Chem. Soc. Japan 49: 3213-. |
| ARJUNGLUCOSIDE I | Root Bark | -- | 3.0 | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of the Roots of Terminalia arjuna-The Structures of Arjunoside 3 and Arjunoside 4, Two New Triterpenoid Glycosides. Phytochemistry 21: 2057-2060. |
| ARJUNGLUCOSIDE-II | Leaf | -- | -- | Chauhan, S. M. S., Parkash, S., Kaushik, R. 1997. Isolation of 3-beta-hydroxyolean-12-ene and Related Triterpenoids from the Leaves of Terminalia arjuna. Indian J. Chem. 36B 3: 297-298. |
| ARJUNGLUCOSIDE-II | Bark | 630.0 | 933.3 | * |
| ARJUNGLUCOSIDE-III | Bark | -- | 42.6 | Tsuyuki, T., Hamada, Y., Honda, T., Takahashi, T., Matsushita, K. 1979. A New Triterpene Glucoside from Terminalia arjuna. Arjunglucoside III. Bull. Chem. Soc. Japan 52 10: 3127-3128. |
| ARJUNGLUCOSIDES | Plant | -- | -- | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991. |
| ARJUNIC-ACID | Bark | -- | 160.0 | * |
| ARJUNIC-ACID | Stem | -- | 10.0 | Tripathi, V. K., Pandey, V. B., Udupa, K. N., Rucker, G. 1992. Arjunolitin, a Triterpene Glycoside from Terminalia arjuna. Phytochemistry 31 1: 349-351. |
| ARJUNIC-ACID | Seed | -- | 10.0 | Tripathi, V. K., Pandey, V. B., Udupa, K. N., Rucker, G. 1992. Arjunolitin, a Triterpene Glycoside from Terminalia arjuna. Phytochemistry 31 1: 349-351. |
| ARJUNIC-ACID | Leaf | -- | 10.0 | Tripathi, V. K., Pandey, V. B., Udupa, K. N., Rucker, G. 1992. Arjunolitin, a Triterpene Glycoside from Terminalia arjuna. Phytochemistry 31 1: 349-351. |
| ARJUNIC-ACID | Flower | -- | 10.0 | Tripathi, V. K., Pandey, V. B., Udupa, K. N., Rucker, G. 1992. Arjunolitin, a Triterpene Glycoside from Terminalia arjuna. Phytochemistry 31 1: 349-351. |
| ARJUNIC-ACID | Root Bark | -- | 150.0 | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of Roots of Terminalia arjuna (Roxb.) Wight & Arnot: Part I-Characterization of Two New Triterpenoid Glycosides. Indian J. Chem. 21B 6: 530-533. |
| ARJUNIN | Leaf | -- | -- | Kandil, F. E., Nassar, M. I. 1998. A Tannin Anti-Cancer Promotor from Terminalia arjuna. Phytochemistry 47 8: 1567-1568. |
| ARJUNOLIATIN | Leaf | -- | 100.0 | Tripathi, V. K., Pandey, V. B., Udupa, K. N., Rucker, G. 1992. Arjunolitin, a Triterpene Glycoside from Terminalia arjuna. Phytochemistry 31 1: 349-351. |
| ARJUNOLIATIN | Flower | -- | 100.0 | Tripathi, V. K., Pandey, V. B., Udupa, K. N., Rucker, G. 1992. Arjunolitin, a Triterpene Glycoside from Terminalia arjuna. Phytochemistry 31 1: 349-351. |
| ARJUNOLIATIN | Stem | -- | 100.0 | Tripathi, V. K., Pandey, V. B., Udupa, K. N., Rucker, G. 1992. Arjunolitin, a Triterpene Glycoside from Terminalia arjuna. Phytochemistry 31 1: 349-351. |
| ARJUNOLIATIN | Seed | -- | 100.0 | Tripathi, V. K., Pandey, V. B., Udupa, K. N., Rucker, G. 1992. Arjunolitin, a Triterpene Glycoside from Terminalia arjuna. Phytochemistry 31 1: 349-351. |
| ARJUNOLIC-ACID | Wood | -- | 30000.0 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

Activities (5)

| | |
|------------------|---|
| AntiEBV | |
| Anticarcinogenic | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Antitumor | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Cardioprotective | |
| Chemopreventive | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |

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|----------------|------|----|------|--|
| ARJUNOLIC-ACID | Stem | -- | 15.5 | Tripathi, V. K., Pandey, V. B., Udupa, K. N., Rucker, G. 1992. Arjunolitin, a Triterpene Glycoside from Terminalia arjuna. Phytochemistry 31 1: 349-351. |
|----------------|------|----|------|--|

| Activities (5) | | | | |
|------------------|--|--|--|---|
| AntiEBV | | | | |
| Anticarcinogenic | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Antitumor | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Cardioprotective | | | | |
| Chemopreventive | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |

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|----------------|------|----|------|--|--|
| ARJUNOLIC-ACID | Seed | -- | 15.5 | | Tripathi, V. K., Pandey, V. B., Udupa, K. N., Rucker, G. 1992. Arjunolitin, a Triterpene Glycoside from Terminalia arjuna. Phytochemistry 31 1: 349-351. |
|----------------|------|----|------|--|--|

| Activities (5) | | | | |
|------------------|--|--|--|---|
| AntiEBV | | | | |
| Anticarcinogenic | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Antitumor | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Cardioprotective | | | | |
| Chemopreventive | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |

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|----------------|------|----|------|------|---|
| ARJUNOLIC-ACID | Leaf | -- | 15.5 | -1.0 | * |
|----------------|------|----|------|------|---|

| Activities (5) | | | | |
|------------------|--|--|--|---|
| AntiEBV | | | | |
| Anticarcinogenic | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Antitumor | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Cardioprotective | | | | |
| Chemopreventive | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |

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|----------------|--------|----|------|--|--|
| ARJUNOLIC-ACID | Flower | -- | 15.5 | | Tripathi, V. K., Pandey, V. B., Udupa, K. N., Rucker, G. 1992. Arjunolitin, a Triterpene Glycoside from Terminalia arjuna. Phytochemistry 31 1: 349-351. |
|----------------|--------|----|------|--|--|

| Activities (5) | | | | |
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| AntiEBV | | | | |
| Anticarcinogenic | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Antitumor | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Cardioprotective | | | | |
| Chemopreventive | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |

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|----------------|--------------|----|------|--|--|
| ARJUNOLIC-ACID | Root Bark | -- | 10.0 | | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of Roots of Terminalia arjuna (Roxb.) Wight & Arnot: Part I-Characterization of Two New Triterpenoid Glycosides. Indian J. Chem. 21B 6: 530-533. |
|----------------|--------------|----|------|--|--|

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| AntiEBV | | | | |
| Anticarcinogenic | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Antitumor | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Cardioprotective | | | | |
| Chemopreventive | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |

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|----------------|------|----|-------|--|---|
| ARJUNOLIC-ACID | Bark | -- | 150.0 | | * |
|----------------|------|----|-------|--|---|

| Activities (5) | | | | |
|------------------|--|--|--|---|
| AntiEBV | | | | |
| Anticarcinogenic | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Antitumor | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Cardioprotective | | | | |
| Chemopreventive | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |

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|----------------|---------------|----|--------|--|--|
| ARJUNOLIC-ACID | Heart Wood | -- | 8000.0 | | Row, L. R., Subba, Rao, G. S. R. 1962. Chemistry of Terminalia Species. Part IV. Chemical Examination of T. arjuna: Isolation of Arjunolic Acid Saponin and (+) Leucodelphinidin. J. Indian Chem. Soc. 39: 89. |
|----------------|---------------|----|--------|--|--|

| Activities (5) | | | | |
|------------------|--|--|--|---|
| AntiEBV | | | | |
| Anticarcinogenic | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Antitumor | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Cardioprotective | | | | |
| Chemopreventive | | | | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |

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|------------------------|------------|----|---------|-------|---|
| ARJUNOLIC-ACID-SAPONIN | Root Bark | -- | 7.0 | | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of Roots of Terminalia arjuna (Roxb.) Wight & Arnot: Part I-Characterization of Two New Triterpenoid Glycosides. Indian J. Chem. 21B 6: 530-533. |
| ARJUNOLIC-ACID-SAPONIN | Heart Wood | -- | 1300.0 | | Row, L. R., Subba, Rao, G. S. R. 1962. Chemistry of Terminalia Species. Part IV. Chemical Examination of T. arjuna: Isolation of Arjunolic Acid Saponin and (+) Leucodelphinidin. J. Indian Chem. Soc. 39: 89. |
| ARJUNOLONE | Stem Bark | -- | 16.7 | | Sharma, P. N., Shoeb, A., Kapil, R. S., Popli, S. P. 1982. Arjunolone-A New Flavone from Stem Bark of Terminalia arjuna. Indian J. Chem. 21B: 263-264. |
| ARJUNOSIDE-I | Root Bark | -- | 20.0 | | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of Roots of Terminalia arjuna (Roxb.) Wight & Arnot: Part I-Characterization of Two New Triterpenoid Glycosides. Indian J. Chem. 21B 6: 530-533. |
| ARJUNOSIDE-II | Root Bark | -- | 10.0 | | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of Roots of Terminalia arjuna (Roxb.) Wight & Arnot: Part I-Characterization of Two New Triterpenoid Glycosides. Indian J. Chem. 21B 6: 530-533. |
| ARJUNOSIDE-III | Root Bark | -- | 60.0 | | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of the Roots of Terminalia arjuna-The Structures of Arjunoside 3 and Arjunoside 4, Two New Triterpenoid Glycosides. Phytochemistry 21: 2057-2060. |
| ARJUNOSIDE-IV | Root Bark | -- | 2.0 | | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of the Roots of Terminalia arjuna-The Structures of Arjunoside 3 and Arjunoside 4, Two New Triterpenoid Glycosides. Phytochemistry 21: 2057-2060. |
| ASH | Leaf | -- | 70900.0 | -0.84 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| BAICALEIN | Stem Bark | -- | 8.3 | | Sharma, P. N., Shoeb, A., Kapil, R. S., Popli, S. P. 1982. Arjunolone-A New Flavone from Stem Bark of Terminalia arjuna. Indian J. Chem. 21B: 263-264. |

Activities (50)

12-Lipoxygenase-Inhibitor

17-beta-hydroxysteroid
dehydrogenase-Inhibitor 9.3
uM5-Lipoxygenase-Inhibitor
IC50=0.1-5 uMAldose-Reductase-Inhibitor
IC50=0.98 ppmKohda, H., Tanaka, S., Yamaoka, Y., Yahara, S., Nohara, T., Tanimoto, T., Tanaka, A. 1989. Studies on Lens-Aldose-Reductase Inhibitor in Medicinal Plants. II Active Constituents of *Monochasma savatieri* FRANCH, et MAXIM. Chem. Pharm. Bull. 37(11):3153-3154Aldose-Reductase-Inhibitor
IC62=10 uM

Shimizu, M., Ito, T., Terashima, S., Hayashi, T., Arisawa, M., Morita, N., Kurokawa, S., Ito, K., and Hashimoto, Y. 1984. Inhibition of Lens Aldose Reductase by Flavonoids. Phytochemistry, 23: 1885-1888.

Aldose-Reductase-Inhibitor
IC50=0.98 rbtKohda, H., Tanaka, S., Yamaoka, Y., Yahara, S., Nohara, T., Tanimoto, T., Tanaka, A. 1989. Studies on Lens-Aldose-Reductase Inhibitor in Medicinal Plants. II Active Constituents of *Monochasma savatieri* FRANCH, et MAXIM. Chem. Pharm. Bull. 37(11):3153-3154

AntiHIV

Antiacne

Antiaggregant ED50=120-
200 mg/kgButenko, I.G., Gladchenko, S.V., and Galushko, S.V. Anti-inflammatory properties and inhibition of leukotriene C4 biosynthesis in vitro by flavonoid baicalein from *Scutellaria baicalensis* georgy roots. Agents Actions 39: C49, 1993.

Antiallergic

Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.

Antiarthritic IC28=20 mg/kg
scu rat

Antiasthmatic

Antiatherosclerotic
IC50=3.5-8.6 uM

Foster, S. and Yue, C-G. 1992. Herbal Emissaries-Bringing Chinese Herbs to the West. Healing Arts Press, Rochester VT. 356 pp.

Antibacterial

Anticolitic 20 mg/kg

Antidermatitic

Antidote (Strychnine) 10 mg
mus

Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.

Antiedemic IC28=20 mg/kg
scu rat

Antiflu

Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Antigenotoxic IC50=22-34
uM

Antihepatomic

Antihistaminic

Antiinflammatory IC28=20
mg/kg scu ratAntiinflammatory IC50=0.1-
5 uMAntileukemic IC50=0.26
ug/ml

Life Sciences 55: 1061.

Antileukemic 2 ug/ml

Economic & Medicinal Plant Research, 5: 225.

Antimutagenic

Antiproliferative

Huang, H-C., Wang, H-R., and Hsieh, L-M. 1993. Antiproliferative effect of baicalein, a flavonoid from a Chinese herb, on vascular smooth muscle cell. European J. of Pharmacology 251: 91-93, 1994.

Antipyretic

Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.

Antiretroviral

Antithrombotic IC50=3.5-8.6
uM

Antithrombotic IC50=3.7 uM

Antitoxin (Strychnine) 10 mg
mus

Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.

Antiviral

Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Apoptotic

Astringent

Merck 11th Edition

COX-1-Inhibitor 100 ug/ml

Fukutake, M., Yokota, S., Kawamura, H., Iizuka, A., Amagaya, S., Fukuda, K., Komatsu, Y. 1998. Inhibitory effect of *Coptidis rhizoma* and *Scutellariae radix* on azoxymethane-induced aberrant crypt foci formation in rat colon. Biol Pharm Bull, 21(8): 814-817

COX-2-Inhibitor 100 ug/ml

Choleretic

Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.

Cyclooxygenase-Inhibitor

Diuretic

Fungicide

HIV-RT-Inhibitor 2 ug/ml

Economic & Medicinal Plant Research, 5: 225.

HIV-RT-Inhibitor IC50=<1
ug/ml

Nakane, H., Fukushima, M., and Ono*, K. Differential Inhibition Of Reverse Transcriptase And Various DNA Polymerases By Digallic Acid And Its Derivatives. Journal of Natural Products, 53(5): 1234-1240, 1990.

Hypocholesterolemic

Neuroprotective 10 uM

Pesticide

Topoisomerase-II-Inhibitor
200 ug/ml

Matsuzaki, Y., Kurokawa, N., Terai, S., Matsumura, Y., Kobayashi, N., Okita, K. 1996. Cell Death Induced by Baicalein in Human Hepatocellular Carcinoma Cell Lines. Jap J Cancer Res, 87: 170-177.

Triglycerolytic

Xanthine-Oxidase-Inhibitor
IC50=3 uM

BETA-AMYRIN

Leaf

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Chauhan, S. M. S., Parkash, S., Kaushik, R. 1997. Isolation of 3-beta-hydroxyolean-12-ene and Related Triterpenoids from the Leaves of Terminalia arjuna. Indian J. Chem. 36B 3: 297-298.

Activities (9)

Analgesic
Antiedemic IC27=40 mg/kg ipr rat
Antiinflammatory
Antinociceptive
Antiulcer
Gastroprotective
Hepatoprotective
Larvicide
Mosquitocide

BETA-SITOSTEROL

Root
Bark

--

50.0

Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of Roots of Terminalia arjuna (Roxb.) Wight & Arnot: Part I-Characterization of Two New Triterpenoid Glycosides. Indian J. Chem. 21B 6: 530-533.

Activities (47)

| | |
|--|--|
| Androgenic | |
| Angiogenic | |
| Anorexic | Martindale's 28th |
| Antiadenomic | Merck 11th Edition |
| Antiandrogenic | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. <i>Journal of Ethnopharmacology</i> , 28: 221-234, 1990. |
| Antibacterial | Recently became Internat. J. Crude Drug Res. 28(1,2,3,4):1990, page 155. |
| Anticancer (Breast) | Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from <i>Vaccinium myrtillus</i> (Bilberry) Fruits and Cell Cultures. <i>Plant Sci.</i> , 131(1): 95-103. |
| Anticancer (Cervix) | |
| Anticancer (Lung) | |
| Antiedemic IC54=320 mg/kg orl | |
| Antiestrogenic | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. <i>Journal of Ethnopharmacology</i> , 28: 221-234, 1990. |
| Antifeedant | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
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| Antigonadotrophic | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. <i>Journal of Ethnopharmacology</i> , 28: 221-234, 1990. |
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| Antiinflammatory | |
| Antileukemic | |
| Antilymphomic | |
| Antimutagenic 250 ug/ml | |
| Antiophidic 2.3 mg mus | Economic & Medicinal Plant Research, 5: 363. |
| Antioxidant IC44=10 uM | |
| Antiprogestational | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. <i>Journal of Ethnopharmacology</i> , 28: 221-234, 1990. |
| Antiprostaglandin 30 mg/day/12 wks | |
| Antiprostataadenomic | Merck 11th Edition |
| Antiprostatic 10-20 mg 3 x/day/orl man | |
| Antipyretic | Neuwinger, H. D. 1996. <i>African Ethnobotany - Poisons and Drugs.</i> Chapman & Hall, New York. 941 pp. |
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| Antitumor (Cervix) | |
| Antitumor (Lung) | |
| Antiviral | Abid Ali Khan, M.M., Jain, D.C., Bhakuni, R.S., Zaim, M., and Thakur, R.S. 1991. Occurrence of some antiviral sterols in <i>Artemisia annua</i> . <i>Plant Science</i> , 75: 161-165, 1991. |
| Apoptotic | |
| Artemicide LC50=110 ppm | Jung, J.H., Pummangura, S., Chaichantipyuth, c., Patarapanich, C., and McLaughlin, J.L. 1989. Bioactive Constituents of <i>Melodorum fruticosum</i> . <i>Phytochemistry</i> . 29(5): 1667-1670. 1990. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | Recently became Internat. J. Crude Drug Res. 28(1,2,3,4):1990, page 155. |
| Caspase-8-Inducer | |
| Estrogenic | |
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| Ubiquiot | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp. |
| Ulcerogenic 500 mg/kg ipr rat | |

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|-----------------|------|----|------|-------|---|
| BETA-SITOSTEROL | Root | -- | 20.0 | -0.28 | Anjaneyulu, A. S. R., Prasad, A. V. R. 1983. Chemical Examination of the Roots of <i>Terminalia arjuna</i> . Part 3. Structure of Terminic Acid, a Dihydroxytriterpene Carboxylic Acid from <i>Terminalia arjuna</i> . <i>Phytochemistry</i> 22 4: 993-998. |
|-----------------|------|----|------|-------|---|

Activities (47)

| | |
|--|--|
| Androgenic | |
| Angiogenic | |
| Anorexic | Martindale's 28th |
| Antiadenomic | Merck 11th Edition |
| Antiandrogenic | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. <i>Journal of Ethnopharmacology</i> , 28: 221-234, 1990. |
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| Anticancer (Cervix) | |
| Anticancer (Lung) | |
| Antiedemic IC54=320 mg/kg orl | |
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| Ulcerogenic 500 mg/kg ipr rat | |

BETA-SITOSTEROL Bark -- 300.0 1.26 *

Activities (47)

| | |
|--|--|
| Androgenic | |
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| Antiadenomic | Merck 11th Edition |
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| Anticancer (Lung) | |
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|-----------------|------|----|----|--|
| BETA-SITOSTEROL | Leaf | -- | -- | Chauhan, S. M. S., Parkash, S., Kaushik, R. 1997. Isolation of 3-beta-hydroxyolean-12-ene and Related Triterpenoids from the Leaves of <i>Terminalia arjuna</i> . <i>Indian J. Chem.</i> 36B 3: 297-298. |
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Activities (47)

| | |
|--|---|
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| Antiadenomic | Merck 11th Edition |
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| Caspase-8-Inducer | |
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| Hypoglycemic | Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. Journal of Ethnopharmacology, 27: 243-275, 1989. |
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| Ulcerogenic 500 mg/kg ipr rat | |

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|-----------------|------------|----|--------|--|
| BETA-SITOSTEROL | Heart Wood | -- | 1000.0 | Row, L. R., Subba, Rao, G. S. R. 1962. Chemistry of Terminalia Species. Part IV. Chemical Examination of T. arjuna: Isolation of Arjunolic Acid Saponin and (+) Leucodelphinidin. J. Indian Chem. Soc. 39: 89. |
|-----------------|------------|----|--------|--|

Activities (47)

| | |
|--|--|
| Androgenic | |
| Angiogenic | |
| Anorexic | Martindale's 28th |
| Antiadenomic | Merck 11th Edition |
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| Ulcerogenic 500 mg/kg ipr rat | |

| | | | | |
|-----------------|-------|----|----|--|
| BETA-SITOSTEROL | Fruit | -- | -- | Singh, B., Pandey, V. B. 1995. Constituents of <i>Terminalia arjuna</i> Fruits. <i>Orient. J. Chem.</i> 11 2: 185-186. |
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Activities (47)

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| Antiadenomic | Merck 11th Edition |
| Antiandrogenic | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. |
| Antibacterial | Recently became Internat. J. Crude Drug Res. 28(1,2,3,4):1990, page 155. |
| Anticancer (Breast) | Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from Vaccinium myrtillus (Bilberry) Fruits and Cell Cultures. Plant Sci., 131(1): 95-103. |
| Anticancer (Cervix) | |
| Anticancer (Lung) | |
| Antiedemic IC54=320 mg/kg orl | |
| Antiestrogenic | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. |
| Antifeedant | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Antifertility | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. |
| Antigonadotrophic | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. |
| Antihyperlipoproteinaemic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antiinflammatory | |
| Antileukemic | |
| Antilymphomic | |
| Antimutagenic 250 ug/ml | |
| Antiophidic 2.3 mg mus | Economic & Medicinal Plant Research, 5: 363. |
| Antioxidant IC44=10 uM | |
| Antiprogestational | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. |
| Antiprostaglandin 30 mg/day/12 wks | |
| Antiprostataadenomic | Merck 11th Edition |
| Antiprostatic 10-20 mg 3 x/day/orl man | |
| Antipyretic | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Antitumor (Breast) | Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from Vaccinium myrtillus (Bilberry) Fruits and Cell Cultures. Plant Sci., 131(1): 95-103. |
| Antitumor (Cervix) | |
| Antitumor (Lung) | |
| Antiviral | Abid Ali Khan, M.M., Jain, D.C., Bhakuni, R.S., Zaim, M., and Thakur, R.S. 1991. Occurrence of some antiviral sterols in Artemisia annua. Plant Science, 75: 161-165, 1991. |
| Apoptotic | |
| Artemicide LC50=110 ppm | Jung, J.H., Pummangura, S., Chaichantipyuth, c., Patarapanich, C., and McLaughlin, J.L. 1989. Bioactive Constituents of Melodorum fruticosum. Phytochemistry. 29(5): 1667-1670. 1990. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | Recently became Internat. J. Crude Drug Res. 28(1,2,3,4):1990, page 155. |
| Caspase-8-Inducer | |
| Estrogenic | |
| Febrifuge | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Gonadotrophic | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. |
| Hepatoprotective | |
| Hypocholesterolemic 2-6 g/man/day/orl | Martindale's 30th |
| Hypocholesterolemic 9-3,330 mg/man/day/orl | Martindale's 28th |
| Hypoglycemic | Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. Journal of Ethnopharmacology, 27: 243-275, 1989. |
| Hypolipidemic 2-6 g/day | |
| Pesticide | |
| Spermicide | Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990. |
| Ubiquiot | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Ulcerogenic 500 mg/kg ipr rat | |

| | | | | |
|------------|------|----|-------|--|
| CASTALAGIN | Bark | -- | 692.3 | Lin, T. C., Ma, Y. T., Hsu, F. L. 1996. Tannins from the Bark of Terminalia arjuna. Zhonghua Yaoxue Zashi 48 1: 25-35. |
|------------|------|----|-------|--|

Activities (1)

| | |
|---|---|
| Topoisomerase-II-Inhibitor IC100=0.2 uM | Kashiwada, Y., Nonaka, G. I., Nishioka, I., Lee, J. H., Bori, I., Fukushima, Y., Bastow, K. F., Lee, K. H. 1993. Tannins as Potent Inhibitors of DNA Topoisomerase II in vitro. J Pharm Sci, 82: 487-492. |
|---|---|

| | | | | |
|-----------|------|----|------|--|
| CASUARIIN | Bark | -- | 96.1 | Lin, T. C., Ma, Y. T., Hsu, F. L. 1996. Tannins from the Bark of Terminalia arjuna. Zhonghua Yaoxue Zashi 48 1: 25-35. |
|-----------|------|----|------|--|

| | | | | |
|------------|------|----|------|--|
| CASUARININ | Bark | -- | 98.0 | Lin, T. C., Ma, Y. T., Hsu, F. L. 1996. Tannins from the Bark of Terminalia arjuna. Zhonghua Yaoxue Zashi 48 1: 25-35. |
|------------|------|----|------|--|

Activities (4)

| | |
|---|---|
| Antiperoxidant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Lipoxygenase-Inhibitor | |
| Topoisomerase-II-Inhibitor IC100=0.2 uM | Kashiwada, Y., Nonaka, G. I., Nishioka, I., Lee, J. H., Bori, I., Fukushima, Y., Bastow, K. F., Lee, K. H. 1993. Tannins as Potent Inhibitors of DNA Topoisomerase II in vitro. J Pharm Sci, 82: 487-492. |
| Xanthine-Oxidase-Inhibitor IC50=36 uM | Hatano, T., Yasuhara, T., Yoshihara, R., Agata, I., Noro, T., and Okuda, T. 1989. Effects of Interaction of Tannins with Co-existing Substances.VII. Inhibitory Effects of Tannins Related Polyphenols on Xanthine Oxidase. Chem. Pharm. Bull. 38(5): 1224-1229 |

DAUCOSTEROL Fruit -- -- Singh, B., Pandey, V. B. 1995. Constituents of Terminalia arjuna Fruits. Orient. J. Chem. 11 2: 185-186.

Activities (5)

| | |
|---|---|
| Aldose-Reductase-Inhibitor 0.1 mM/l rat (weak activity, 31.9% inhibition) | Fujita, T., Ohira, K., Miyatake, K., Nakano, Y., Nakayama, M. 1995. Inhibitory Effect of Perillosides A and C, Related Monoterpene Glucosides on Aldose Reductase and Their Structure-Activity Relationships. Chem Pharm Bull, 43(6): 920-926. |
| Antileukemic | |
| Antispasmodic 20 mg/kg | =ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp |
| Antitumor | |
| Hypoglycemic | Economic & Medicinal Plant Research, 6: 158. |

ELLAGIC-ACID Leaf -- -- Kandil, F. E., Nassar, M. I. 1998. A Tannin Anti-Cancer Promotor from Terminalia arjuna. Phytochemistry 47 8: 1567-1568.

Activities (51)

| | |
|---|--|
| ACE-Inhibitor IC50=5 mM/l | |
| Abortifacient 1.2 mg/kg ivn mus | |
| Aldose-Reductase-Inhibitor IC50=0.2 uM | |
| Aldose-Reductase-Inhibitor IC50=0.2 ug/ml (strong activity) | |
| AntiGTF ID50=20 ug/ml | |
| AntiHIV IC90=200 ug/ml | Tan, G.T., Pezzuto, J.M., Kinghorn,* A.D., Hughes, S.H. Evaluation Of Natural Products As Inhibitors Of Human Immunodeficiency Virus Type 1 (HIV-1) Reverse Transcriptase. <i>Journal of Natural Products</i> , 54(1): 143-154, 1991. |
| Antiaflatoxin | |
| Antianaphylactic | |
| Antibacterial 1,250 ug/ml | |
| Antibacterial ID50=20 ug/ml | |
| Anticancer (Cervix) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticancer (Colon) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticancer (Esophagus) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticancer (Mouth) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticariogenic ID50=20 ug/ml | |
| Anticataract | Shimizu, M., Horie, S., Terashima, S., Ueno, H., et al. 1989. Studies on Aldose Reductase Inhibitors from Natural Products.II. Active Components of a Paraguayan Crude Drug 'Para-parai mi,' <i>Phyllanthus niruri</i> . <i>Chem. Pharm. Bull.</i> 37(9): 2531-2532, 1989. |
| Antigingivitic 1,250 ug/ml | |
| Antihyperthyroid | |
| Antiinflammatory | |
| Antimalarial IC50=0.5 uM | Rukunga, G. and Simons, A. J. 2006. The Potential of Plants as a Source of Antimalarial Agents - A Review. <i>Africa Herbal Antimalaria Meeting</i> . PlantaPhile Publications, Berlin. 72 pp. |
| Antimutagenic | |
| Antioxidant >50 x tocopherol | Osawa, T. Phenolic Antioxidants in Dietary Plants as Antimutagens. <i>Phenolic Compounds in Food and Their Effects on Health</i> , Ch.11 p.142. |
| Antioxidant IC98=30 ppm | |
| Antioxidant 2/3 quercetin | |
| Antiperiodontic 1,250 ug/ml | |
| Antiperoxidant IC50=29 uM | <i>Planta Medica</i> , 57: A54, 1991. |
| Anti plaque 1,250 ug/ml | |
| Antiplasmodial IC50=0.5 uM | Rukunga, G. and Simons, A. J. 2006. The Potential of Plants as a Source of Antimalarial Agents - A Review. <i>Africa Herbal Antimalaria Meeting</i> . PlantaPhile Publications, Berlin. 72 pp. |
| Antiseptic 1,250 ug/ml | |
| Antistreptococccic ID50=20 ug/ml | |
| Antithyroid | Jim Duke's personal files. |
| Antitumor | |
| Antiviral | <i>Economic & Medicinal Plant Research</i> , 5: 224. |
| Antiyeast IC50=10.5 uM | |
| Apoptotic | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Astringent | Martindale's 29th |
| Cancer-Preventive 3 ppm | |
| Candida-SAP-Inhibitor IC50=8.4 uM | |
| Cytotoxic 4.6 ug/ml | <i>Advance in Chinese Medicinal Materials Research</i> . 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 359. |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Detoxicant | |
| Glucosyl-Transferase-Inhibitor ID50=20 ug/ml | |
| HIV-RT-Inhibitor | <i>Economic & Medicinal Plant Research</i> , 5: 224. |
| Hemostatic | Merck 11th Edition |
| Hepatoprotective IC55=30 ug/ml | Mayumi Ito (nee Someya), et al. 1990. Hepatoprotective Compounds from <i>Canarium album</i> and <i>Euphorbia nematocypha</i> . <i>Chem. Pharm. Bull.</i> 38(8): 2201-2203, 1990. |
| Juvabional | Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Pesticide | |
| Quinone-Reductase-Inducer 0.4 g/kg rat | Ahn, D., Putt, D., Kresty, L., Stoner, G. D., Fromm, D., Hollenberg, P. F. 1996. The Effects of Dietary Ellagic Acid on Rat Hepatic and Esophageal Mucosal Cytochromes P450 and Phase II Enzymes. <i>Carcinogenesis</i> , 17(4): 821-828. |
| Sunscreen 0.50% | Jim Duke's personal files. |
| Topoisomerase-I-Antagonist | <i>Journal of Medicinal Food</i> 2: 167.1999. |
| Xanthine-Oxidase-Inhibitor IC50=3.1 uM | Hatano, T., Yasuhara, T., Yoshihara, R., Agata, I., Noro, T., and Okuda, T. 1989. Effects of Interaction of Tannins with Co-existing Substances.VII. Inhibitory Effects of Tannins Related Polyphenols on Xanthine Oxidase. <i>Chem. Pharm. Bull.</i> 38(5): 1224-1229 |

ELLAGIC-ACID

| | | | |
|------|----|-----|--|
| Root | -- | 3.0 | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of the Roots of <i>Terminalia arjuna</i> -The Structures of Arjunoside 3 and Arjunoside 4, Two New Triterpenoid Glycosides. <i>Phytochemistry</i> 21: 2057-2060. |
| Bark | | | |

Activities (51)

| | |
|---|--|
| ACE-Inhibitor IC50=5 mM/l | |
| Abortifacient 1.2 mg/kg ivn mus | |
| Aldose-Reductase-Inhibitor IC50=0.2 uM | |
| Aldose-Reductase-Inhibitor IC50=0.2 ug/ml (strong activity) | |
| AntiGTF ID50=20 ug/ml | |
| AntiHIV IC90=200 ug/ml | Tan, G.T., Pezzuto, J.M., Kinghorn,* A.D., Hughes, S.H. Evaluation Of Natural Products As Inhibitors Of Human Immunodeficiency Virus Type 1 (HIV-1) Reverse Transcriptase. <i>Journal of Natural Products</i> , 54(1): 143-154, 1991. |
| Antiaflatoxin | |
| Antianaphylactic | |
| Antibacterial 1,250 ug/ml | |
| Antibacterial ID50=20 ug/ml | |
| Anticancer (Cervix) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticancer (Colon) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticancer (Esophagus) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticancer (Mouth) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticariogenic ID50=20 ug/ml | |
| Anticataract | Shimizu, M., Horie, S., Terashima, S., Ueno, H., et al. 1989. Studies on Aldose Reductase Inhibitors from Natural Products.II. Active Components of a Paraguayan Crude Drug 'Para-parai mi,' <i>Phyllanthus niruri</i> . <i>Chem. Pharm. Bull.</i> 37(9): 2531-2532, 1989. |
| Antigingivitic 1,250 ug/ml | |
| Antihyperthyroid | |
| Antiinflammatory | |
| Antimalarial IC50=0.5 uM | Rukunga, G. and Simons, A. J. 2006. The Potential of Plants as a Source of Antimalarial Agents - A Review. <i>Africa Herbal Antimalaria Meeting</i> . PlantaPhile Publications, Berlin. 72 pp. |
| Antimutagenic | |
| Antioxidant >50 x tocopherol | Osawa, T. Phenolic Antioxidants in Dietary Plants as Antimutagens. <i>Phenolic Compounds in Food and Their Effects on Health</i> , Ch.11 p.142. |
| Antioxidant IC98=30 ppm | |
| Antioxidant 2/3 quercetin | |
| Antiperiodontic 1,250 ug/ml | |
| Antiperoxidant IC50=29 uM | <i>Planta Medica</i> , 57: A54, 1991. |
| Anti plaque 1,250 ug/ml | |
| Antiplasmodial IC50=0.5 uM | Rukunga, G. and Simons, A. J. 2006. The Potential of Plants as a Source of Antimalarial Agents - A Review. <i>Africa Herbal Antimalaria Meeting</i> . PlantaPhile Publications, Berlin. 72 pp. |
| Antiseptic 1,250 ug/ml | |
| Antistreptococccic ID50=20 ug/ml | |
| Antithyroid | Jim Duke's personal files. |
| Antitumor | |
| Antiviral | <i>Economic & Medicinal Plant Research</i> , 5: 224. |
| Antiyeast IC50=10.5 uM | |
| Apoptotic | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Astringent | Martindale's 29th |
| Cancer-Preventive 3 ppm | |
| Candida-SAP-Inhibitor IC50=8.4 uM | |
| Cytotoxic 4.6 ug/ml | <i>Advance in Chinese Medicinal Materials Research</i> . 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 359. |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Detoxicant | |
| Glucosyl-Transferase-Inhibitor ID50=20 ug/ml | |
| HIV-RT-Inhibitor | <i>Economic & Medicinal Plant Research</i> , 5: 224. |
| Hemostatic | Merck 11th Edition |
| Hepatoprotective IC55=30 ug/ml | Mayumi Ito (nee Someya), et al. 1990. Hepatoprotective Compounds from <i>Canarium album</i> and <i>Euphorbia nematocypa</i> . <i>Chem. Pharm. Bull.</i> 38(8): 2201-2203, 1990. |
| Juvabional | Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Pesticide | |
| Quinone-Reductase-Inducer 0.4 g/kg rat | Ahn, D., Putt, D., Kresty, L., Stoner, G. D., Fromm, D., Hollenberg, P. F. 1996. The Effects of Dietary Ellagic Acid on Rat Hepatic and Esophageal Mucosal Cytochromes P450 and Phase II Enzymes. <i>Carcinogenesis</i> , 17(4): 821-828. |
| Sunscreen 0.50% | Jim Duke's personal files. |
| Topoisomerase-I-Antagonist | <i>Journal of Medicinal Food</i> 2: 167.1999. |
| Xanthine-Oxidase-Inhibitor IC50=3.1 uM | Hatano, T., Yasuhara, T., Yoshihara, R., Agata, I., Noro, T., and Okuda, T. 1989. Effects of Interaction of Tannins with Co-existing Substances.VII. Inhibitory Effects of Tannins Related Polyphenols on Xanthine Oxidase. <i>Chem. Pharm. Bull.</i> 38(5): 1224-1229 |

ELLAGIC-ACID

| | | | |
|-------|----|-------|---|
| Heart | -- | 250.0 | Row, L. R., Subba, Rao, G. S. R. 1962. <i>Chemistry of Terminalia Species</i> . Part IV. Chemical Examination of <i>T. arjuna</i> : Isolation of Arjunolic Acid Saponin and (+) Leucodelphinidin. <i>J. Indian Chem. Soc.</i> 39: 89. |
| Wood | | | |

Activities (51)

| | |
|---|--|
| ACE-Inhibitor IC50=5 mM/l | |
| Abortifacient 1.2 mg/kg ivn mus | |
| Aldose-Reductase-Inhibitor IC50=0.2 uM | |
| Aldose-Reductase-Inhibitor IC50=0.2 ug/ml (strong activity) | |
| AntiGTF ID50=20 ug/ml | |
| AntiHIV IC90=200 ug/ml | Tan, G.T., Pezzuto, J.M., Kinghorn,* A.D., Hughes, S.H. Evaluation Of Natural Products As Inhibitors Of Human Immunodeficiency Virus Type 1 (HIV-1) Reverse Transcriptase. <i>Journal of Natural Products</i> , 54(1): 143-154, 1991. |
| Antiaflatoxin | |
| Antianaphylactic | |
| Antibacterial 1,250 ug/ml | |
| Antibacterial ID50=20 ug/ml | |
| Anticancer (Cervix) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticancer (Colon) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticancer (Esophagus) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticancer (Mouth) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticariogenic ID50=20 ug/ml | |
| Anticataract | Shimizu, M., Horie, S., Terashima, S., Ueno, H., et al. 1989. Studies on Aldose Reductase Inhibitors from Natural Products.II. Active Components of a Paraguayan Crude Drug 'Para-parai mi,' <i>Phyllanthus niruri</i> . <i>Chem. Pharm. Bull.</i> 37(9): 2531-2532, 1989. |
| Antigingivitic 1,250 ug/ml | |
| Antihyperthyroid | |
| Antiinflammatory | |
| Antimalarial IC50=0.5 uM | Rukunga, G. and Simons, A. J. 2006. The Potential of Plants as a Source of Antimalarial Agents - A Review. <i>Africa Herbal Antimalaria Meeting</i> . PlantaPhile Publications, Berlin. 72 pp. |
| Antimutagenic | |
| Antioxidant >50 x tocopherol | Osawa, T. Phenolic Antioxidants in Dietary Plants as Antimutagens.Phenolic Compounds in Food and Their Effects on Health, Ch.11 p.142. |
| Antioxidant IC98=30 ppm | |
| Antioxidant 2/3 quercetin | |
| Antiperiodontic 1,250 ug/ml | |
| Antiperoxidant IC50=29 uM | Planta Medica, 57: A54, 1991. |
| Antiplatelet 1,250 ug/ml | |
| Antiplasmodial IC50=0.5 uM | Rukunga, G. and Simons, A. J. 2006. The Potential of Plants as a Source of Antimalarial Agents - A Review. <i>Africa Herbal Antimalaria Meeting</i> . PlantaPhile Publications, Berlin. 72 pp. |
| Antiseptic 1,250 ug/ml | |
| Antistreptococcic ID50=20 ug/ml | |
| Antithyroid | Jim Duke's personal files. |
| Antitumor | |
| Antiviral | Economic & Medicinal Plant Research, 5: 224. |
| Antiyeast IC50=10.5 uM | |
| Apoptotic | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Astringent | Martindale's 29th |
| Cancer-Preventive 3 ppm | |
| Candida-SAP-Inhibitor IC50=8.4 uM | |
| Cytotoxic 4.6 ug/ml | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 359. |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Detoxicant | |
| Glucosyl-Transferase-Inhibitor ID50=20 ug/ml | |
| HIV-RT-Inhibitor | Economic & Medicinal Plant Research, 5: 224. |
| Hemostatic | Merck 11th Edition |
| Hepatoprotective IC55=30 ug/ml | Mayumi Ito (nee Someya), et al. 1990. Hepatoprotective Compounds from <i>Canarium album</i> and <i>Euphorbia nematocarpa</i> . <i>Chem. Pharm. Bull.</i> 38(8): 2201-2203, 1990. |
| Juvabional | Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Pesticide | |
| Quinone-Reductase-Inducer 0.4 g/kg rat | Ahn, D., Putt, D., Kresty, L., Stoner, G. D., Fromm, D., Hollenberg, P. F. 1996. The Effects of Dietary Ellagic Acid on Rat Hepatic and Esophageal Mucosal Cytochromes P450 and Phase II Enzymes. <i>Carcinogenesis</i> , 17(4): 821-828. |
| Sunscreen 0.50% | Jim Duke's personal files. |
| Topoisomerase-I-Antagonist | <i>Journal of Medicinal Food</i> 2: 167.1999. |
| Xanthine-Oxidase-Inhibitor IC50=3.1 uM | Hatano, T., Yasuhara, T., Yoshihara, R., Agata, I., Noro, T., and Okuda, T. 1989. Effects of Interaction of Tannins with Co-existing Substances.VII. Inhibitory Effects of Tannins Related Polyphenols on Xanthine Oxidase. <i>Chem. Pharm. Bull.</i> 38(5): 1224-1229 |

ELLAGIC-ACID Bark -- 250.0 -1.0 *

Activities (51)

| | |
|---|--|
| ACE-Inhibitor IC50=5 mM/l | |
| Abortifacient 1.2 mg/kg ivn mus | |
| Aldose-Reductase-Inhibitor IC50=0.2 uM | |
| Aldose-Reductase-Inhibitor IC50=0.2 ug/ml (strong activity) | |
| AntiGTF ID50=20 ug/ml | |
| AntiHIV IC90=200 ug/ml | Tan, G.T., Pezzuto, J.M., Kinghorn,* A.D., Hughes, S.H. Evaluation Of Natural Products As Inhibitors Of Human Immunodeficiency Virus Type 1 (HIV-1) Reverse Transcriptase. <i>Journal of Natural Products</i> , 54(1): 143-154, 1991. |
| Antiaflatoxin | |
| Antianaphylactic | |
| Antibacterial 1,250 ug/ml | |
| Antibacterial ID50=20 ug/ml | |
| Anticancer (Cervix) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticancer (Colon) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticancer (Esophagus) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticancer (Mouth) | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Anticariogenic ID50=20 ug/ml | |
| Anticataract | Shimizu, M., Horie, S., Terashima, S., Ueno, H., et al. 1989. Studies on Aldose Reductase Inhibitors from Natural Products.II. Active Components of a Paraguayan Crude Drug 'Para-parai mi,' <i>Phyllanthus niruri</i> . <i>Chem. Pharm. Bull.</i> 37(9): 2531-2532, 1989. |
| Antigingivitic 1,250 ug/ml | |
| Antihyperthyroid | |
| Antiinflammatory | |
| Antimalarial IC50=0.5 uM | Rukunga, G. and Simons, A. J. 2006. The Potential of Plants as a Source of Antimalarial Agents - A Review. <i>Africa Herbal Antimalaria Meeting</i> . PlantaPhile Publications, Berlin. 72 pp. |
| Antimutagenic | |
| Antioxidant >50 x tocopherol | Osawa, T. Phenolic Antioxidants in Dietary Plants as Antimutagens.Phenolic Compounds in Food and Their Effects on Health, Ch.11 p.142. |
| Antioxidant IC98=30 ppm | |
| Antioxidant 2/3 quercetin | |
| Antiperiodontic 1,250 ug/ml | |
| Antiperoxidant IC50=29 uM | <i>Planta Medica</i> , 57: A54, 1991. |
| Anti plaque 1,250 ug/ml | |
| Antiplasmodial IC50=0.5 uM | Rukunga, G. and Simons, A. J. 2006. The Potential of Plants as a Source of Antimalarial Agents - A Review. <i>Africa Herbal Antimalaria Meeting</i> . PlantaPhile Publications, Berlin. 72 pp. |
| Antiseptic 1,250 ug/ml | |
| Antistreptococcic ID50=20 ug/ml | |
| Antithyroid | Jim Duke's personal files. |
| Antitumor | |
| Antiviral | <i>Economic & Medicinal Plant Research</i> , 5: 224. |
| Antiyeast IC50=10.5 uM | |
| Apoptotic | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY. |
| Astringent | Martindale's 29th |
| Cancer-Preventive 3 ppm | |
| Candida-SAP-Inhibitor IC50=8.4 uM | |
| Cytotoxic 4.6 ug/ml | <i>Advance in Chinese Medicinal Materials Research</i> . 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 359. |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Detoxicant | |
| Glucosyl-Transferase-Inhibitor ID50=20 ug/ml | |
| HIV-RT-Inhibitor | <i>Economic & Medicinal Plant Research</i> , 5: 224. |
| Hemostatic | Merck 11th Edition |
| Hepatoprotective IC55=30 ug/ml | Mayumi Ito (nee Someya), et al. 1990. Hepatoprotective Compounds from <i>Canarium album</i> and <i>Euphorbia nematocypa</i> . <i>Chem. Pharm. Bull.</i> 38(8): 2201-2203; 1990. |
| Juvabional | Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Pesticide | |
| Quinone-Reductase-Inducer 0.4 g/kg rat | Ahn, D., Putt, D., Kresty, L., Stoner, G. D., Fromm, D., Hollenberg, P. F. 1996. The Effects of Dietary Ellagic Acid on Rat Hepatic and Esophageal Mucosal Cytochromes P450 and Phase II Enzymes. <i>Carcinogenesis</i> , 17(4): 821-828. |
| Sunscreen 0.50% | Jim Duke's personal files. |
| Topoisomerase-I-Antagonist | <i>Journal of Medicinal Food</i> 2: 167.1999. |
| Xanthine-Oxidase-Inhibitor IC50=3.1 uM | Hatano, T., Yasuhara, T., Yoshihara, R., Agata, I., Noro, T., and Okuda, T. 1989. Effects of Interaction of Tannins with Co-existing Substances.VII. Inhibitory Effects of Tannins Related Polyphenols on Xanthine Oxidase. <i>Chem. Pharm. Bull.</i> 38(5): 1224-1229 |

| | | | | |
|------------------|------|----|----|--|
| EPICATECHOL | Bark | -- | -- | Madhusudanamma, W., Sastry, K. N. S., Rao, V. S. S., Reddy, K. K. 1980. Isolation of Flavan-3-ols from <i>Terminalia arjuna</i> Bark. <i>Leather Sci (Madras)</i> 27: 199-200. |
| EPIGALLOCATECHOL | Bark | -- | -- | Madhusudanamma, W., Sastry, K. N. S., Rao, V. S. S., Reddy, K. K. 1980. Isolation of Flavan-3-ols from <i>Terminalia arjuna</i> Bark. <i>Leather Sci (Madras)</i> 27: 199-200. |

FIBER Leaf -- 77800.0 -1.04 ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Activities (15)

Angiotensin-Receptor-Blocker
 Antidiabetic
 Antihypertensive
 Antiobesity
 Antitumor Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
 Antiulcer Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
 Beta-Blocker
 Cancer-Preventive Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
 Cardioprotective
 Diuretic
 Hypocholesterolemic
 Hypotensive 10 g/man/day/orl Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
 Hypouricemic
 Laxative
 Vasodilator

FRIEDELIN Bark -- -- *

Activities (2)

Antiinflammatory 30 mg/kg
 Diuretic Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

GALLIC-ACID Root -- 3.0 Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of the Roots of Terminalia arjuna-The Structures of Arjunoside 3 and Arjunoside 4, Two New Triterpenoid Glycosides. Phytochemistry 21: 2057-2060.
 Bark

Activities (62)

ACE-Inhibitor IC50=7.7 mM/l
 Analgesic
 AntiHIV
 AntiMRSA
 Antiadenovirus Economic & Medicinal Plant Research, 5: 194.
 Antiallergenic Dorsch, W., Wagner, H. New Antiasthmatic Drugs from Traditional Medicine? Int Arch Allergy Appl Immunol 94: 262-265, 1991.
 Antianaphylactic Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
 Antiangiogenic
 Antiasthmatic Watt, J.M., and Breyer-Brandwijk, M.G. The Medicinal and Poisonous Plants of Southern and Eastern Africa. 1962.
 Antibacterial MIC=1,000 ug/ml
 Antibronchitic Dorsch, W., Wagner, H. New Antiasthmatic Drugs from Traditional Medicine? Int Arch Allergy Appl Immunol 94: 262-265, 1991.
 Anticancer
 Anticarcinomic ED50=3
 Antiescherichic
 Antifibrinolytic Economic & Medicinal Plant Research, 1: 53.
 Antiflu Economic & Medicinal Plant Research, 5: 194.
 Antihepatotoxic Okuda, T., Yoshida, T., and Hatano, T. Antioxidant Effects of Tannins and Related Polyphenols. Phenolic Compounds in Food and Their Effects on Health, Ch.7 p.93.
 Antiherpetic EC50=>10 ug/ml
 Antiinflammatory Kroes, B.H., et al. 1991. Anti-Inflammatory Activity of Gallic Acid. Planta Medica, 58(6): 499.
 Antileishmanic EC50=4.4 ug/ml
 Antimutagenic Economic & Medicinal Plant Research, 6: 235.
 Antinitrosaminic
 Antioxidant IC44=33 ppm
 Antioxidant 7 x quercetin
 Antioxidant 2/3 BHA
 Antiperiodontitic 10 ug/ml
 Antiperoxidant IC50=69 uM
 Antipolio Economic & Medicinal Plant Research, 5: 194.

| | |
|---------------------------------------|---|
| Antiproteolytic 10 ug/ml | |
| Antiradicular 7 x quercetin | |
| Antiradicular IC50=4.9 uM | |
| Antiseptic | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antistaphylococcic MIC=1,000 ug/ml | |
| Antitumor | |
| Antitumor-Promoter | |
| Antiviral | |
| Apoptotic | |
| Astringent | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Bacteristat | Lamikanra, A., Ogundaini, A.O., and Ogungbamila*, F.O. Antibacterial Constituents of Alchornea cordifolia Leaves. Phytotherapy Research 4(5): 198. |
| Bronchodilator | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | |
| Carcinogenic | |
| Choleretic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Cyclooxygenase-Inhibitor | |
| Cytotoxic 500 uM | |
| Floral-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Gram(+)-icide MIC=1,000 ug/ml | |
| Gram(-)-icide MIC=1,000 ug/ml | |
| Hemostat | |
| Hepatoprotective | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Immunomodulator | |
| Immunostimulant | McKenna, D. J., Hughes, K., and Jones, K. 2000. Green Tea Monograph. Alternative Therapies, 6(3): 61-82. |
| Immunosuppressant | |
| Insulin-Sparing | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Myorelaxant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| NO-Inhibitor IC-26=250 uM | |
| Nephrotoxic | Martindale's 29th |
| Pesticide | |
| Styptic | |
| Topoisomerase-I-Inhibitor | Hamada, S. I., Kataoka, T., Woo, J. T., Yamada, A., Yoshida, T., Nishimura, T., Otake, N., Nagai, K. 1997. Immunosuppressive Effects by Gallic Acid and Chebulagic Acid on CTL-Mediated Cytotoxicity. Biol Pharm Bull, 20: 1017-1019. |
| Xanthine-Oxidase-Inhibitor IC50=24 uM | Hatano, T., Yasuhara, T., Yoshihara, R., Agata, I., Noro, T., and Okuda, T. 1989. Effects of Interaction of Tannins with Co-existing Substances.VII. Inhibitory Effects of Tannins Related Polyphenols on Xanthine Oxidase. Chem. Pharm. Bull. 38(5): 1224-1229 |

| | | | | | |
|-------------|-------|----|-----|-------|--|
| GALLIC-ACID | Shoot | -- | 7.5 | -0.73 | Pettit, G. R., Hoard, M. S., Doubek, D. L., Schmidt, J. M., Pettit, R. K., Tackett, L. P., Chapuis, J. C. 1996. Antineoplastic Agents 338. The Cancer Cell Growth Inhibitory Constituents of Terminalia arjuna (Combretaceae). J. Ethnopharmacol. 53 1: 57-63. |
|-------------|-------|----|-----|-------|--|

Activities (62)

| | |
|-------------------------------|--|
| ACE-Inhibitor IC50=7.7 mM/l | |
| Analgesic | |
| AntiHIV | |
| AntiMRSA | |
| Antiadenovirus | Economic & Medicinal Plant Research, 5: 194. |
| Antiallergenic | Dorsch, W., Wagner, H. New Antiasthmatic Drugs from Traditional Medicine? Int Arch Allergy Appl Immunol 94: 262-265, 1991. |
| Antianaphylactic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antiangiogenic | |
| Antiasthmatic | Watt, J.M., and Breyer-Brandwijk, M.G. The Medicinal and Poisonous Plants of Southern and Eastern Africa. 1962. |
| Antibacterial MIC=1,000 ug/ml | |
| Antibronchitic | Dorsch, W., Wagner, H. New Antiasthmatic Drugs from Traditional Medicine? Int Arch Allergy Appl Immunol 94: 262-265, 1991. |
| Anticancer | |
| Anticarcinomic ED50=3 | |
| Antiescherichic | |
| Antifibrinolytic | Economic & Medicinal Plant Research, 1: 53. |
| Antiflu | Economic & Medicinal Plant Research, 5: 194. |

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|---------------------------------------|--|
| Antihepatotoxic | Okuda, T., Yoshida, T., and Hatano, T. Antioxidant Effects of Tannins and Related Polyphenols. Phenolic Compounds in Food and Their Effects on Health, Ch.7 p.93. |
| Antitherpetic EC50=>10 ug/ml | |
| Antiinflammatory | Kroes, B.H., et al. 1991. Anti-Inflammatory Activity of Gallic Acid. <i>Planta Medica</i> , 58(6): 499. |
| Antileishmanic EC50=4.4 ug/ml | |
| Antimutagenic | Economic & Medicinal Plant Research, 6: 235. |
| Antinitrosaminic | |
| Antioxidant IC44=33 ppm | |
| Antioxidant 7 x quercetin | |
| Antioxidant 2/3 BHA | |
| Antiperiodontitic 10 ug/ml | |
| Antiperoxidant IC50=69 uM | |
| Antipolio | Economic & Medicinal Plant Research, 5: 194. |
| Antiproteolytic 10 ug/ml | |
| Antiradicular 7 x quercetin | |
| Antiradicular IC50=4.9 uM | |
| Antiseptic | Williamson, E. M. and Evans, F. J., <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antistaphylococcic MIC=1,000 ug/ml | |
| Antitumor | |
| Antitumor-Promoter | |
| Antiviral | |
| Apoptotic | |
| Astringent | Williamson, E. M. and Evans, F. J., <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Bacteristat | Lamikanra, A., Ogundaini, A.O., and Ogungbamila*, F.O. Antibacterial Constituents of <i>Alchornea cordifolia</i> Leaves. <i>Phytotherapy Research</i> 4(5): 198. |
| Bronchodilator | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Cancer-Preventive | Stitt, P. A. <i>Why George Should Eat Broccoli</i> . Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | |
| Carcinogenic | |
| Choleretic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Cyclooxygenase-Inhibitor | |
| Cytotoxic 500 uM | |
| Floral-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Gram(+)-icide MIC=1,000 ug/ml | |
| Gram(-)-icide MIC=1,000 ug/ml | |
| Hemostat | |
| Hepatoprotective | Neuwinger, H. D. 1996. <i>African Ethnobotany - Poisons and Drugs</i> . Chapman & Hall, New York. 941 pp. |
| Immunomodulator | |
| Immunostimulant | McKenna, D. J., Hughes, K., and Jones, K. 2000. <i>Green Tea Monograph. Alternative Therapies</i> , 6(3): 61-82. |
| Immunosuppressant | |
| Insulin-Sparing | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Myorelaxant | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| NO-Inhibitor IC-26=250 uM | |
| Nephrotoxic | Martindale's 29th |
| Pesticide | |
| Styptic | |
| Topoisomerase-I-Inhibitor | Hamada, S. I., Kataoka, T., Woo, J. T., Yamada, A., Yoshida, T., Nishimura, T., Otake, N., Nagai, K. 1997. Immunosuppressive Effects by Gallic Acid and Chebulagic Acid on CTL-Mediated Cytotoxicity. <i>Biol Pharm Bull</i> , 20: 1017-1019. |
| Xanthine-Oxidase-Inhibitor IC50=24 uM | Hatano, T., Yasuhara, T., Yoshihara, R., Agata, I., Noro, T., and Okuda, T. 1989. Effects of Interaction of Tannins with Co-existing Substances.VII. Inhibitory Effects of Tannins Related Polyphenols on Xanthine Oxidase. <i>Chem. Pharm. Bull.</i> 38(5): 1224-1229 |

GALLIC-ACID Leaf -- -- Kandil, F. E., Nassar, M. I. 1998. A Tannin Anti-Cancer Promotor from *Terminalia arjuna*. *Phytochemistry* 47 8: 1567-1568.

Activities (62)

ACE-Inhibitor
IC50=7.7 mM/l
Analgesic
AntiHIV

| | |
|---------------------------------------|--|
| AntiMRSA | |
| Antiadenovirus | Economic & Medicinal Plant Research, 5: 194. |
| Antiallergenic | Dorsch, W., Wagner, H. New Antiasthmatic Drugs from Traditional Medicine? Int Arch Allergy Appl Immunol 94: 262-265, 1991. |
| Antianaphylactic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antiangiogenic | |
| Antiasthmatic | Watt, J.M., and Breyer-Brandwijk, M.G. The Medicinal and Poisonous Plants of Southern and Eastern Africa. 1962. |
| Antibacterial MIC=1,000 ug/ml | |
| Antibronchitic | Dorsch, W., Wagner, H. New Antiasthmatic Drugs from Traditional Medicine? Int Arch Allergy Appl Immunol 94: 262-265, 1991. |
| Anticancer | |
| Anticarcinomic ED50=3 | |
| Antiescherichic | |
| Antifibrinolytic | Economic & Medicinal Plant Research, 1: 53. |
| Antiflu | Economic & Medicinal Plant Research, 5: 194. |
| Antihepatotoxic | Okuda, T., Yoshida, T., and Hatano, T. Antioxidant Effects of Tannins and Related Polyphenols. Phenolic Compounds in Food and Their Effects on Health, Ch.7 p.93. |
| Antiherpetic EC50=>10 ug/ml | |
| Antiinflammatory | Kroes, B.H., et al. 1991. Anti-Inflammatory Activity of Gallic Acid. Planta Medica, 58(6): 499. |
| Antileishmanic EC50=4.4 ug/ml | |
| Antimutagenic | Economic & Medicinal Plant Research, 6: 235. |
| Antinitrosaminic | |
| Antioxidant IC44=33 ppm | |
| Antioxidant 7 x quercetin | |
| Antioxidant 2/3 BHA | |
| Antiperiodontitic 10 ug/ml | |
| Antiperoxidant IC50=69 uM | |
| Antipolio | Economic & Medicinal Plant Research, 5: 194. |
| Antiproteolytic 10 ug/ml | |
| Antiradicular 7 x quercetin | |
| Antiradicular IC50=4.9 uM | |
| Antiseptic | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antistaphylococcic MIC=1,000 ug/ml | |
| Antitumor | |
| Antitumor-Promoter | |
| Antiviral | |
| Apoptotic | |
| Astringent | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Bacteristat | Lamikanra, A., Ogundaini, A.O., and Ogungbamila*, F.O. Antibacterial Constituents of Alchornea cordifolia Leaves. Phytotherapy Research 4(5): 198. |
| Bronchodilator | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | |
| Carcinogenic | |
| Choleretic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Cyclooxygenase- Inhibitor | |
| Cytotoxic 500 uM | |
| Floral-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Gram(+)-icide MIC=1,000 ug/ml | |
| Gram(-)-icide MIC=1,000 ug/ml | |
| Hemostat | |
| Hepatoprotective | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Immunomodulator | |
| Immunostimulant | McKenna, D. J., Hughes, K., and Jones, K. 2000. Green Tea Monograph. Alternative Therapies, 6(3): 61-82. |
| Immunosuppressant | |
| Insulin-Sparing | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Myorelaxant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| NO-Inhibitor IC- 26=250 uM | |

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|---------------------------------------|--|--|--|--|--|
| Nephrotoxic | Martindale's 29th | | | | |
| Pesticide | | | | | |
| Styptic | | | | | |
| Topoisomerase-I-Inhibitor | Hamada, S. I., Kataoka, T., Woo, J. T., Yamada, A., Yoshida, T., Nishimura, T., Otake, N., Nagai, K. 1997. Immunosuppressive Effects by Gallic Acid and Chebulagic Acid on CTL-Mediated Cytotoxicity. <i>Biol Pharm Bull</i> , 20: 1017-1019. | | | | |
| Xanthine-Oxidase-Inhibitor IC50=24 uM | Hatano, T., Yasuhara, T., Yoshihara, R., Agata, I., Noro, T., and Okuda, T. 1989. Effects of Interaction of Tannins with Co-existing Substances.VII. Inhibitory Effects of Tannins Related Polyphenols on Xanthine Oxidase. <i>Chem. Pharm. Bull.</i> 38(5): 1224-1229 | | | | |

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|-------------------------|-------|----|-----|--|---|
| GALLIC-ACID-ETHYL-ESTER | Shoot | -- | 0.1 | | Pettit, G. R., Hoard, M. S., Doubek, D. L., Schmidt, J. M., Pettit, R. K., Tackett, L. P., Chapuis, J. C. 1996. Antineoplastic Agents 338. The Cancer Cell Growth Inhibitory Constituents of Terminalia arjuna (Combretaceae). <i>J. Ethnopharmacol.</i> 53 1: 57-63. |
|-------------------------|-------|----|-----|--|---|

Activities (1)

AntiMRSA

| | | | | | |
|---------------|--------------|----|-----|--|--|
| LEUCOCYANIDIN | Root Bark | -- | 6.0 | | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of the Roots of Terminalia arjuna-The Structures of Arjunoside 3 and Arjunoside 4, Two New Triterpenoid Glycosides. <i>Phytochemistry</i> 21: 2057-2060. |
|---------------|--------------|----|-----|--|--|

Activities (1)

Capillariprotective

Merck 11th Edition

| | | | | | |
|----------|-------|----|-----|-------|---|
| LUTEOLIN | Shoot | -- | 0.9 | -0.71 | Pettit, G. R., Hoard, M. S., Doubek, D. L., Schmidt, J. M., Pettit, R. K., Tackett, L. P., Chapuis, J. C. 1996. Antineoplastic Agents 338. The Cancer Cell Growth Inhibitory Constituents of Terminalia arjuna (Combretaceae). <i>J. Ethnopharmacol.</i> 53 1: 57-63. |
|----------|-------|----|-----|-------|---|

Activities (78)

| | |
|---|--|
| Aldose-Reductase-Inhibitor EC=3 ppm | Shin*, K.H., Chung, M.S., Chae, Y.J., Yoon, K.Y., Cho, T.S. 1992. A survey for aldose reductase inhibition of herbal medicines. <i>Fitoterapia</i> 64(2): 130, 1993. |
| Aldose-Reductase-Inhibitor IC50=0.45 uM rat | |
| AntiHIV | |
| Antiallergic | |
| Antiangiogenic IC60-75=10 uM | |
| Antiatherogenic | |
| Antibacterial MIC=500 ug/ml | Planta Medica, 57: A43, 1991. |
| Anticarcinogenic | |
| Anticarcinomic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Anticataract EC=3 ppm | Shin*, K.H., Chung, M.S., Chae, Y.J., Yoon, K.Y., Cho, T.S. 1992. A survey for aldose reductase inhibition of herbal medicines. <i>Fitoterapia</i> 64(2): 130, 1993. |
| Anticomplementary | |
| Antidermatic | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp. |
| Antiestrogenic | |
| Antifeedant IC52=<1,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Antiherpetic 11-23 ug/ml | |
| Antihistaminic <10-15 uM | |
| Antiinflammatory #NAME? | Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp. |
| Antileukemic 20-50 uM | |
| Antilymphomic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antimelanomic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antimutagenic ID50=2-5 nM | |
| Antimutagenic ID50=0.44 ug/ml | |
| Antinociceptive | |
| Antioxidant IC50=10 uM | |
| Antipolio | Economic & Medicinal Plant Research, 5: 197. |
| Antiproliferant | |
| Antispasmodic | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antitumor 1-50 uM | |
| Antitumor (Colon) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Kidney) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Lung) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Ovary) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |

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| Antitumor (Pancreas) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Skin) 20 uM | |
| Antitumor (Stomach) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Thyroid) 12-50 uM | |
| Antitumor (brain) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitussive | |
| Antiviral 11-23 ug/ml | |
| Aphidifuge | |
| Apoptotic 12-50 uM | |
| Aromatase-Inhibitor IC35=1 uM/l | Journal of Medicinal Food 2: 235.1999. |
| Beta-Glucuronidase-Inhibitor IC50=40 uM | |
| Calcium-Antagonist IC50=1.2 uM rbt | |
| Cancer-Preventive | |
| Chemopreventive | |
| Choleretic | |
| Cytotoxic 1-50 uM | |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Differentiator IC>40=40 uM | |
| Diuretic | Jim Duke's personal files. |
| Estrogenic 58% genistein | |
| Hepatoprotective | |
| Hyaluronidase-Inhibitor IC50+=100-250 uM | |
| Hypocholesterolemic | |
| ICAM-1-Inhibitor | |
| IKK-Inhibitor | |
| Iodothyronine-Deiodinase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp. |
| Lipoxygenase-Inhibitor | |
| MAPK-Inhibitor | |
| MMP-9-Inhibitor 20 uM | |
| Metalloproteinase-Inhibitor | |
| Myorelaxant | |
| NEP-Inhibitor IC50=>42 uM | |
| NF-kB-Inhibitor | |
| NO-Inhibitor | |
| PTK-Inhibitor 10-100 uM | |
| Pesticide | |
| Proliferant | |
| Prostaglandin-Synthetase-Inhibitor | |
| Protein-Kinase-C-Inhibitor IC70=50 uM | |
| Succinoxidase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp. |
| TNF-alpha-Inhibitor IC50=14.44 uM | |
| Topoisomerase-I-Inhibitor | Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. <i>Toxicol Ind Health</i> , 14: 223-237. |
| VEGF-Inhibitor IC50=2-7 uM | |
| Vasodilator | |
| Xanthine-Oxidase-Inhibitor IC50=0.11 ug/ml | Chem. & Pharm. Bull. 38: 1772. |
| iNOS-Inhibitor | |

MANNITOL Fruit -- -- ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Activities (18)

| | |
|------------------|--|
| Allergenic | Martindale's 29th |
| Analgesic | |
| Anthelmintic | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| AntiReye's | Martindale's 29th |
| Antiglaucomic | Martindale's 28th |
| Antiinflammatory | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| Antimutagenic | |
| Antinephritic | Martindale's 29th |
| Antioxidant | Jim Duke's personal files. |
| Antiradicular | |
| Antispasmodic | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| Diuretic | Merck 11th Edition |
| Emetic | Martindale's 28th |
| Flatugenic | Martindale's 29th |
| Laxative | |
| Nephrotoxic | Martindale's 29th |
| Pesticide | |
| Sweetener | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |

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|---------------|------|----|----|--|---|
| MASLINIC-ACID | Leaf | -- | -- | | Chauhan, S. M. S., Parkash, S., Kaushik, R. 1997. Isolation of 3-beta-hydroxyolean-12-ene and Related Triterpenoids from the Leaves of Terminalia arjuna. Indian J. Chem. 36B 3: 297-298. |
|---------------|------|----|----|--|---|

Activities (6)

| | |
|-----------------------------------|--------------------------------------|
| AntiHIV IC100=18 ug/ml | |
| Antiedemic | |
| Antihistaminic | |
| Antiinflammatory | Chem & Pharm. Bull., 34: 2164, 1986. |
| Antiviral IC100=18 ug/ml | |
| Protease-Inhibitor IC100=18 ug/ml | |

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|-----------------|-------|----|----|--|---|
| MYRISTYL-OLEATE | Fruit | -- | -- | | Ahmad, M. U., Mullah, K. B., Saha, K. C. 1982. Hentriacontane, Arachidic Stearate and Myristyl Oleate from the Fruits of Terminalia arjuna Bedd. J. Bangladesh Acad. Sci. 6 1/2: 61-65. |
|-----------------|-------|----|----|--|---|

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|------------------|-------|----|----|--|---|
| N-HENTRIACONTANE | Fruit | -- | -- | | Ahmad, M. U., Mullah, K. B., Saha, K. C. 1982. Hentriacontane, Arachidic Stearate and Myristyl Oleate from the Fruits of Terminalia arjuna Bedd. J. Bangladesh Acad. Sci. 6 1/2: 61-65. |
|------------------|-------|----|----|--|---|

Activities (3)

| | |
|------------------|--|
| Antiinflammatory | |
| Cosmetic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Diuretic | |

| | | | | | |
|----------------|--------------|----|------|------|--|
| OLEANOLIC-ACID | Root Bark | -- | 10.0 | -1.0 | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of Roots of Terminalia arjuna (Roxb.) Wight & Arnot: Part I-Characterization of Two New Triterpenoid Glycosides. Indian J. Chem. 21B 6: 530-533. |
|----------------|--------------|----|------|------|--|

Activities (64)

| | |
|--------------------------------------|--|
| Abortifacient | |
| AntiHIV IC50=21.8 ug/ml | |
| AntiHIV EC50=1.7 ug/ml | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. J. Nat. Prod., 61 (9): 1090-1095. |
| AntiPGE2 IC50=24 uM | |
| AntiTGF-beta IC50=19-24 uM | |
| Antiallergic | |
| Antiarrhythmic 40 mg/kg | |
| Antiatherosclerotic | |
| Antibacterial MIC=625-1,250 ug/ml | |
| Anticarcinomic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46. |
| Anticariogenic | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Anticomplement IC40-50 0.01 mM/l gpg | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Anticomplement IC80-90 0.05 mM/l gpg | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |

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|---|---|
| Antiedemic IC36=40 mg/kg ipr rat | |
| Antifertility | |
| Antingivitic MIC=625-1,250 ug/ml | |
| Antihepatotoxic | |
| Antihyperlipidemic | |
| Antiinflammatory 40 mg/kg ipr | Aquino, R., De Feo, V., De Simone, F., Pizza, C.*, and Cirino, G. Plant Metabolites. New Compounds And Anti-Inflammatory Activity Of <i>Uncaria tomentosa</i> . <i>Journal of Natural Products</i> , 54(2): 453-459, 1991. |
| Antiischemic 40 mg/kg | |
| Antileukemic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antileukotriene IC50=17 uM | |
| Antimalarial IC50=70-89 ug/ml | |
| Antinephritic IC50=19-24 uM | |
| Antioxidant | Balanehru, S. and Nagarajan, B. 1992. Intervention of Adriamycin Induced Free Radical Damage. <i>Biochemistry International</i> 28(4): 735-744, 1992. |
| Antioxidant IC46=10 uM | |
| Antiperiodontic MIC=625-1,250 ug/ml | |
| Antiperoxidant IC30=200 ug/ml | |
| Antiplatelet MIC=625-1,250 ug/ml | |
| Antiplasmodial IC50=70-89 ug/ml | |
| Antisarcotic | |
| Antiseptic MIC=625-1,250 ug/ml | |
| Antitumor | |
| Antitumor (Breast) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Colon) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Kidney) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Lung) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Pancreas) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antiulcer >carbenoxolone | |
| Antiviral EC50=1.7 ug/ml | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61(9): 1090-1095. |
| Antiviral IC50=21.8 ug/ml | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61(9): 1090-1095. |
| Aromatase-Inhibitor | |
| Beta-Blocker | |
| Beta-Glucuronidase-Inhibitor ~100 mg/kg | |
| COX-2-Inhibitor IC50=295 uM/ | |
| COX-2-Inhibitor | Ringbom, T., Seguar, L., Noreen, Y., Perera, P., Bohlin, L. 1998. Ursolic Acid from <i>Plantago major</i> , a Selective Inhibitor of Cyclooxygenase-2 Catalyzed Prostaglandin Biosynthesis. <i>J. Nat. Prod.</i> , 61(10): 1212-1215. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Cardioprotective 40 mg/kg | |
| Cardiotonic | |
| Cyclooxygenase-Inhibitor | |
| Diuretic | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Elastase-Inhibitor IC50=~15 uM | |
| Hepatoprotective | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 211. |
| Hypolipemic | |
| Hypotensive | |
| Immunomodulator | |
| Leucocytogenic | |
| NF-kB-Inhibitor | |
| Phagocytotic | |
| Piscicide | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| Prostaglandin-Synthesis-Inhibitor igs mus | |
| Sedative | |
| Uterotonic | |
| Vasopressor | |

Activities (64)

Abortifacient

AntiHIV IC50=21.8 ug/ml

AntiHIV EC50=1.7 ug/ml

Kashiwada, Y., et. al. 1998. *Anti-AIDS Agents*. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. *J. Nat. Prod.*, 61 (9): 1090-1095.

AntiPGE2 IC50=24 uM

AntiTGF-beta IC50=19-24 uM

Antiallergic

Antiarrhythmic 40 mg/kg

Antiatherosclerotic

Antibacterial MIC=625-1,250 ug/ml

Anticarcinomic

Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. *Am J Chin Med*, 31(1):37-46.

Anticariogenic

Leung, A. Y. and Foster, S. 1995. *Encyclopedia of Common Natural Ingredients* 2nd Ed. John Wiley & Sons, New York. 649 pp.

Anticomplement IC40-50 0.01 mM/l gpg

Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. *Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D)*, 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.

Anticomplement IC80-90 0.05 mM/l gpg

Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. *Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D)*, 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.

Antiedemic IC36=40 mg/kg ipr rat

Antifertility

Antigingivitic MIC=625-1,250 ug/ml

Antihepatotoxic

Antihyperlipidemic

Antiinflammatory 40 mg/kg ipr

Aquino, R., De Feo, V., De Simone, F., Pizza, C.*, and Cirino, G. *Plant Metabolites. New Compounds And Anti-Inflammatory Activity Of Uncaria tomentosa*. *Journal of Natural Products*, 54(2): 453-459, 1991.

Antischismic 40 mg/kg

Antileukemic

Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. *Am J Chin Med*, 31(1):37-46.

Antileukotriene IC50=17 uM

Antimalarial IC50=70-89 ug/ml

Antinephritic IC50=19-24 uM

Antioxidant

Balanehru, S. and Nagarajan, B. 1992. Intervention of Adriamycin Induced Free Radical Damage. *Biochemistry International* 28(4): 735-744, 1992.

Antioxidant IC46=10 uM

Antiperiodontic MIC=625-1,250 ug/ml

Antiperoxidant IC30=200 ug/ml

Antiplateau MIC=625-1,250 ug/ml

Antiplasmodial IC50=70-89 ug/ml

Antisarcomic

Antiseptic MIC=625-1,250 ug/ml

Antitumor

Antitumor (Breast)

Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. *Am J Chin Med*, 31(1):37-46.

Antitumor (Colon)

Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. *Am J Chin Med*, 31(1):37-46.

Antitumor (Kidney)

Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. *Am J Chin Med*, 31(1):37-46.

Antitumor (Lung)

Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. *Am J Chin Med*, 31(1):37-46.

Antitumor (Pancreas)

Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. *Am J Chin Med*, 31(1):37-46.

Antiulcer >carbenoxolone

Antiviral EC50=1.7 ug/ml

Kashiwada, Y., et. al. 1998. *Anti-AIDS Agents*. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. *J. Nat. Prod.*, 61 (9): 1090-1095.

Antiviral IC50=21.8 ug/ml

Kashiwada, Y., et. al. 1998. *Anti-AIDS Agents*. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. *J. Nat. Prod.*, 61 (9): 1090-1095.

Aromatase-Inhibitor

Beta-Blocker

Beta-Glucuronidase-Inhibitor ~100 mg/kg

COX-2-Inhibitor IC50=295 uM/

COX-2-Inhibitor

Ringbom, T., Seguar, L., Noreen, Y., Perera, P., Bohlin, L. 1998. Ursolic Acid from *Plantago major*, a Selective Inhibitor of Cyclooxygenase-2 Catalyzed Prostaglandin Biosynthesis. *J. Nat. Prod.*, 61(10): 1212-1215.

Cancer-Preventive

Stitt, P. A. *Why George Should Eat Broccoli*. Dougherty Co, Milwaukee, WI, 1990, 399 pp.

Cardioprotective 40 mg/kg

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| Cardiotonic | |
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| Diuretic | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Elastase-Inhibitor IC50= ~15 uM | |
| Hepatoprotective | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 211. |
| Hypolipemic | |
| Hypotensive | |
| Immunomodulator | |
| Leucocytogenic | |
| NF-kB-Inhibitor | |
| Phagocytotic | |
| Piscicide | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| Prostaglandin-Synthesis-Inhibitor igs mus | |
| Sedative | |
| Uterotonic | |
| Vasopressor | |

OLEANOLIC-ACID Seed -- 17.5 1.0 Tripathi, V. K., Pandey, V. B., Udupa, K. N., Rucker, G. 1992. Arjunolitin, a Triterpene Glycoside from Terminalia arjuna. Phytochemistry 31 1: 349-351.

Activities (64)

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|--------------------------------------|--|
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| AntiPGE2 IC50=24 uM | |
| AntiTGF-beta IC50=19-24 uM | |
| Antiallergic | |
| Antiarrhythmic 40 mg/kg | |
| Antiatherosclerotic | |
| Antibacterial MIC=625-1,250 ug/ml | |
| Anticarcinomic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46. |
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| Anticomplement IC80-90 0.05 mM/l gpg | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Antiedemic IC36=40 mg/kg ipr rat | |
| Antifertility | |
| Antigingivitic MIC=625-1,250 ug/ml | |
| Antihepatotoxic | |
| Antihyperlipidemic | |
| Antiinflammatory 40 mg/kg ipr | Aquino, R., De Feo, V., De Simone, F., Pizza, C.*, and Cirino, G. Plant Metabolites. New Compounds And Anti-Inflammatory Activity Of Uncaria tomentosa. Journal of Natural Products, 54(2): 453-459, 1991. |
| Antischemic 40 mg/kg | |
| Antileukemic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46. |
| Antileukotriene IC50=17 uM | |
| Antimalarial IC50=70-89 ug/ml | |
| Antinephritic IC50=19-24 uM | |
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| Antioxidant IC46=10 uM | |
| Antiperiodontic MIC=625-1,250 ug/ml | |
| Antiperoxidant IC30=200 ug/ml | |
| Antiplaque MIC=625-1,250 ug/ml | |
| Antiplasmodial IC50=70-89 ug/ml | |
| Antisarcomic | |
| Antiseptic MIC=625-1,250 ug/ml | |
| Antitumor | |
| Antitumor (Breast) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46. |

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|---|---|
| Antitumor (Colon) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Kidney) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Lung) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Pancreas) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antiulcer >carbenoxolone | |
| Antiviral EC50=1.7 ug/ml | Kashiwada, Y., et. al. 1998. <i>Anti-AIDS Agents</i> . 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61 (9): 1090-1095. |
| Antiviral IC50=21.8 ug/ml | Kashiwada, Y., et. al. 1998. <i>Anti-AIDS Agents</i> . 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61 (9): 1090-1095. |
| Aromatase-Inhibitor | |
| Beta-Blocker | |
| Beta-Glucuronidase-Inhibitor ~100 mg/kg | |
| COX-2-Inhibitor IC50=295 uM/ | |
| COX-2-Inhibitor | Ringbom, T., Seguar, L., Noreen, Y., Perera, P., Bohlin, L. 1998. Ursolic Acid from <i>Plantago major</i> , a Selective Inhibitor of Cyclooxygenase-2 Catalyzed Prostaglandin Biosynthesis. <i>J. Nat. Prod.</i> , 61(10): 1212-1215. |
| Cancer-Preventive | Stitt, P. A. <i>Why George Should Eat Broccoli</i> . Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Cardioprotective 40 mg/kg | |
| Cardiotonic | |
| Cyclooxygenase-Inhibitor | |
| Diuretic | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Elastase-Inhibitor IC50=~15 uM | |
| Hepatoprotective | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 211. |
| Hypolipemic | |
| Hypotensive | |
| Immunomodulator | |
| Leucocytogenic | |
| NF-kB-Inhibitor | |
| Phagocytotic | |
| Piscicide | ANON. 1948-1976. <i>The Wealth of India raw materials</i> . Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| Prostaglandin-Synthesis-Inhibitor igs mus | |
| Sedative | |
| Uterotonic | |
| Vasopressor | |

OLEANOLIC-ACID Leaf -- 17.5 -0.83 *

Activities (64)

| | |
|--------------------------------------|---|
| Abortifacient | |
| AntiHIV IC50=21.8 ug/ml | |
| AntiHIV EC50=1.7 ug/ml | Kashiwada, Y., et. al. 1998. <i>Anti-AIDS Agents</i> . 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61 (9): 1090-1095. |
| AntiPGE2 IC50=24 uM | |
| AntiTGF-beta IC50=19-24 uM | |
| Antiallergic | |
| Antiarrhythmic 40 mg/kg | |
| Antiatherosclerotic | |
| Antibacterial MIC=625-1,250 ug/ml | |
| Anticarcinomic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Anticariogenic | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Anticomplement IC40-50 0.01 mM/l gpg | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. <i>Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D)</i> , 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Anticomplement IC80-90 0.05 mM/l gpg | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. <i>Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D)</i> , 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Antiedemic IC36=40 mg/kg ipr rat | |
| Antifertility | |
| Antigingivitic MIC=625-1,250 ug/ml | |
| Antihepatotoxic | |
| Antihyperlipidemic | |
| Antiinflammatory 40 mg/kg ipr | Aquino, R., De Feo, V., De Simone, F., Pizza, C*, and Cirino, G. <i>Plant Metabolites. New Compounds And Anti-Inflammatory Activity Of Uncaria tomentosa</i> . <i>Journal of Natural Products</i> , 54(2): 453-459, 1991. |
| Antischemic 40 mg/kg | |

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|---|---|
| Antileukemic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antileukotriene IC50=17 uM | |
| Antimalarial IC50=70-89 ug/ml | |
| Antinephritic IC50=19-24 uM | |
| Antioxidant | Balanehru, S. and Nagarajan, B. 1992. Intervention of Adriamycin Induced Free Radical Damage. <i>Biochemistry International</i> 28(4): 735-744, 1992. |
| Antioxidant IC46=10 uM | |
| Antiperiodontic MIC=625-1,250 ug/ml | |
| Antiperoxidant IC30=200 ug/ml | |
| Antiplatelet MIC=625-1,250 ug/ml | |
| Antiplasmodial IC50=70-89 ug/ml | |
| Antisarcotic | |
| Antiseptic MIC=625-1,250 ug/ml | |
| Antitumor | |
| Antitumor (Breast) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Colon) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Kidney) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Lung) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Pancreas) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antiulcer >carbenoxolone | |
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| Aromatase-Inhibitor | |
| Beta-Blocker | |
| Beta-Glucuronidase-Inhibitor ~100 mg/kg | |
| COX-2-Inhibitor IC50=295 uM | |
| COX-2-Inhibitor | Ringbom, T., Seguar, L., Noreen, Y., Perera, P., Bohlin, L. 1998. Ursolic Acid from <i>Plantago major</i> , a Selective Inhibitor of Cyclooxygenase-2 Catalyzed Prostaglandin Biosynthesis. <i>J. Nat. Prod.</i> , 61(10): 1212-1215. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
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| Diuretic | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Elastase-Inhibitor IC50=~15 uM | |
| Hepatoprotective | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 211. |
| Hypolipemic | |
| Hypotensive | |
| Immunomodulator | |
| Leucocytogenic | |
| NF-kB-Inhibitor | |
| Phagocytotic | |
| Piscicide | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| Prostaglandin-Synthesis-Inhibitor igs mus | |
| Sedative | |
| Uterotonic | |
| Vasopressor | |

OLEANOLIC-ACID Flower -- 17.5 -0.78 Tripathi, V. K., Pandey, V. B., Udupa, K. N., Rucker, G. 1992. Arjunolitin, a Triterpene Glycoside from *Terminalia arjuna*. *Phytochemistry* 31 1: 349-351.

Activities (64)

| | |
|----------------------------|--|
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| AntiHIV IC50=21.8 ug/ml | |
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| AntiPGE2 IC50=24 uM | |
| AntiTGF-beta IC50=19-24 uM | |

| | |
|---|---|
| Antiallergic | |
| Antiarrhythmic 40 mg/kg | |
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| Antibacterial MIC=625-1,250 ug/ml | |
| Anticarcinomic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Anticariogenic | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
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| Anticomplement IC80-90 0.05 mM/l gpg | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. <i>Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D)</i> , 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Antiedemic IC36=40 mg/kg ipr rat | |
| Antifertility | |
| Antigingivitic MIC=625-1,250 ug/ml | |
| Antihepatotoxic | |
| Antihyperlipidemic | |
| Antiinflammatory 40 mg/kg ipr | Aquino, R., De Feo, V., De Simone, F., Pizza, C.*, and Cirino, G. Plant Metabolites. New Compounds And Anti-Inflammatory Activity Of <i>Uncaria tomentosa</i> . <i>Journal of Natural Products</i> , 54(2): 453-459, 1991. |
| Antiischemic 40 mg/kg | |
| Antileukemic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
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| Antimalarial IC50=70-89 ug/ml | |
| Antinephritic IC50=19-24 uM | |
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| Antioxidant IC46=10 uM | |
| Antiperiodontic MIC=625-1,250 ug/ml | |
| Antiperoxidant IC30=200 ug/ml | |
| Antiplatelet MIC=625-1,250 ug/ml | |
| Antiplasmodial IC50=70-89 ug/ml | |
| Antisarcinomic | |
| Antiseptic MIC=625-1,250 ug/ml | |
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| Antitumor (Kidney) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
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| Antiviral IC50=21.8 ug/ml | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61 (9): 1090-1095. |
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| Beta-Blocker | |
| Beta-Glucuronidase-Inhibitor ~100 mg/kg | |
| COX-2-Inhibitor IC50=295 uM/ | |
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| Cardioprotective 40 mg/kg | |
| Cardiotonic | |
| Cyclooxygenase-Inhibitor | |
| Diuretic | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Elastase-Inhibitor IC50=~15 uM | |
| Hepatoprotective | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 211. |
| Hypolipemic | |
| Hypotensive | |
| Immunomodulator | |
| Leucocytogenic | |

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|--|--|--|--|--|--|
| NF-kB-Inhibitor | | | | | |
| Phagocytotic | | | | | |
| Piscicide | | | | | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| Prostaglandin-Synthesis-Inhibitor Inhibitor igs mus | | | | | |
| Sedative | | | | | |
| Uterotonic | | | | | |
| Vasopressor | | | | | |

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|-------------|------|----|----|--|--|
| OXALIC-ACID | Bark | -- | -- | | Bharadwaj, K., Chandra, V. 1983. Comparative Incidence of Calcium Oxalate as a Source of Oxalic Acid in Barks of Seven Species of Terminalia. Biol. Mem. 8 1/2: 54-62. |
|-------------|------|----|----|--|--|

| Activities (9) | | | | | |
|----------------|--|--|--|--|--|
| Acaricide | | | | | |
| Antiseptic | | | | | |
| CNS-Paralytic | | | | | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Fatal | | | | | Martindale's 29th |
| Hemostatic | | | | | Merck 11th Edition |
| Irritant | | | | | |
| Pesticide | | | | | |
| Renotoxic | | | | | Merck 11th Edition |
| Varroacide | | | | | |

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|--------------------|-------|----|----|--|--|
| POTASSIUM-CHLORIDE | Fruit | -- | -- | | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
|--------------------|-------|----|----|--|--|

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|---------|------|----|----------|-------|--|
| PROTEIN | Leaf | -- | 101000.0 | -1.11 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
|---------|------|----|----------|-------|--|

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|------------|------|----|----|--|--|
| PSIDININ-C | Bark | -- | -- | | Lin, T. C., Ma, Y. T., Hsu, F. L. 1996. Tannins from the Bark of Terminalia arjuna. Zhonghua Yaoxue Zashi 48 1: 25-35. |
|------------|------|----|----|--|--|

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|-------------|------|----|------|--|--|
| PUNICALAGIN | Bark | -- | 97.6 | | Lin, T. C., Ma, Y. T., Hsu, F. L. 1996. Tannins from the Bark of Terminalia arjuna. Zhonghua Yaoxue Zashi 48 1: 25-35. |
|-------------|------|----|------|--|--|

| Activities (12) | | | | | |
|---|--|--|--|--|---|
| AntiHIV | | | | | |
| AntiMRSA | | | | | |
| Antimalarial 2-8 ug/ml | | | | | |
| Antioxidant IC50=2.3 uM | | | | | |
| Antiplasmodial 1.5-8 ug/ml | | | | | |
| Antiplasmodial IC50=7.5-8.8 uM | | | | | |
| Hepatoprotective | | | | | |
| Hepatotoxic | | | | | |
| Pesticide | | | | | |
| Topoisomerase-II-Inhibitor IC100=0.2 uM | | | | | Kashiwada, Y., Nonaka, G. I., Nishioka, I., Lee, J. H., Bori, I., Fukushima, Y., Bastow, K. F., Lee, K. H. 1993. Tannins as Potent Inhibitors of DNA Topoisomerase II in vitro. J Pharm Sci, 82: 487-492. |
| Toxic | | | | | |
| Trypanocide 1.5-1.75 uM | | | | | |

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|-----------|------|----|----|--|--|
| PUNICALIN | Leaf | -- | -- | | Kandil, F. E., Nassar, M. I. 1998. A Tannin Anti-Cancer Promotor from Terminalia arjuna. Phytochemistry 47 8: 1567-1568. |
|-----------|------|----|----|--|--|

| Activities (7) | | | | | |
|---|--|--|--|--|---|
| AntiAIDS | | | | | |
| HIV-RT-Inhibitor ID50=8uM | | | | | |
| Hepatoprotective | | | | | |
| Hepatotoxic | | | | | |
| Pesticide | | | | | |
| Topoisomerase-II-Inhibitor IC100=0.5 uM | | | | | Kashiwada, Y., Nonaka, G. I., Nishioka, I., Lee, J. H., Bori, I., Fukushima, Y., Bastow, K. F., Lee, K. H. 1993. Tannins as Potent Inhibitors of DNA Topoisomerase II in vitro. J Pharm Sci, 82: 487-492. |
| Toxic | | | | | |

| | | | | | |
|-----------|------|----|------|--|--|
| PUNICALIN | Bark | -- | 66.5 | | Lin, T. C., Ma, Y. T., Hsu, F. L. 1996. Tannins from the Bark of Terminalia arjuna. Zhonghua Yaoxue Zashi 48 1: 25-35. |
|-----------|------|----|------|--|--|

Activities (7)

| | | | | | |
|---|--|--|--|--|---|
| AntiAIDS | | | | | |
| HIV-RT-Inhibitor ID50=8uM | | | | | |
| Hepatoprotective | | | | | |
| Hepatotoxic | | | | | |
| Pesticide | | | | | |
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| Toxic | | | | | |

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|--------------------------|-------|----|----------|-------|--|
| QUERCETIN-7-O-RHAMNOSIDE | Fruit | -- | -- | | Singh, B., Pandey, V. B. 1995. Constituents of Terminalia arjuna Fruits. <i>Orient. J. Chem.</i> 11 2: 185-186. |
| SUGARS | Fruit | -- | 57500.0 | -0.65 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| TANNIN | Bark | -- | 158000.0 | 0.15 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

Activities (35)

| | | | | | |
|-------------------------------------|--|--|--|--|--|
| Anthelmintic | | | | | |
| AntiHIV | | | | | |
| Antibacterial | | | | | |
| Anticancer | | | | | |
| Anticariogenic | | | | | |
| Antidiarrheic | | | | | |
| Antidysenteric | | | | | |
| Antihepatotoxic | | | | | |
| Antihypertensive | | | | | |
| Antilipolytic | | | | | |
| Antimutagenic | | | | | |
| Antinephritic | | | | | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990. |
| Antiphidic | | | | | Economic & Medicinal Plant Research, 5: 363. |
| Antioxidant IC50=1.44 ug/ml | | | | | |
| Antioxidant 1/3 quercetin | | | | | |
| Antiradicular 500 mg/kg/day orl mus | | | | | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990. |
| Antiradicular 1/3 quercetin | | | | | |
| Antirenitic | | | | | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990. |
| Antitumor | | | | | |
| Antitumor-Promoter | | | | | |
| Antiulcer | | | | | |
| Antiviral | | | | | |
| Cancer-Preventive | | | | | HerbalGram No. 22 - Spring 1990, page 14. |
| Carcinogenic | | | | | |
| Chelator | | | | | |
| Cyclooxygenase-Inhibitor | | | | | |
| Glucosyl-Transferase-Inhibitor | | | | | |
| Hepatoprotective | | | | | |
| Immunosuppressant | | | | | |
| Lipoxygenase-Inhibitor | | | | | |
| MAO-Inhibitor | | | | | |
| Ornithine-Decarboxylase-Inhibitor | | | | | |
| Pesticide | | | | | |
| Psychotropic | | | | | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990. |
| Xanthine-Oxidase-Inhibitor | | | | | |

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|--------|-------|---------|----------|------|--|
| TANNIN | Fruit | 70000.0 | 120000.0 | 0.25 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
|--------|-------|---------|----------|------|--|

Activities (35)

| | |
|---|---|
| Anthelmintic | |
| AntiHIV | |
| Antibacterial | |
| Anticancer | |
| Anticariogenic | |
| Antidiarrheic | |
| Antidysenteric | |
| Antihepatotoxic | |
| Antihypertensive | |
| Antilipolytic | |
| Antimutagenic | |
| Antinephritic | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990. |
| Antiphidic | Economic & Medicinal Plant Research, 5: 363. |
| Antioxidant IC50=1.44 ug/ml | |
| Antioxidant 1/3 quercetin | |
| Antiradicular 500 mg/kg/day orl mus | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990. |
| Antiradicular 1/3 quercetin | |
| Antirenitic | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990. |
| Antitumor | |
| Antitumor-Promoter | |
| Antiulcer | |
| Antiviral | |
| Cancer-Preventive | HerbalGram No. 22 - Spring 1990, page 14. |
| Carcinogenic | |
| Chelator | |
| Cyclooxygenase- Inhibitor | |
| Glucosyl- Transferase-Inhibitor | |
| Hepatoprotective | |
| Immunosuppressant | |
| Lipoxygenase- Inhibitor | |
| MAO-Inhibitor | |
| Ornithine- Decarboxylase- Inhibitor | |
| Pesticide | |
| Psychotropic | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990. |
| Xanthine-Oxidase- Inhibitor | |

| | | | | |
|----------------|--------------|----|-------|--|
| TERCHEBULIN | Bark | -- | 174.6 | Lin, T. C., Ma, Y. T., Hsu, F. L. 1996. Tannins from the Bark of Terminalia arjuna. Zhonghua Yaoxue Zashi 48 1: 25-35. |
| TERFLAVIN-C | Bark | -- | 36.1 | Lin, T. C., Ma, Y. T., Hsu, F. L. 1996. Tannins from the Bark of Terminalia arjuna. Zhonghua Yaoxue Zashi 48 1: 25-35. |
| TERMINIC-ACID | Root Bark | -- | 2.0 | Anjaneyulu, A. S. R., Rama Prasad, A. V. 1982. Chemical Examination of Roots of Terminalia arjuna (Roxb.) Wight & Arnot: Part I-Characterization of Two New Triterpenoid Glycosides. Indian J. Chem. 21B 6: 530-533. |
| TERMINIC-ACID | Root | -- | 100.0 | Anjaneyulu, A. S. R., Prasad, A. V. R. 1983. Chemical Examination of the Roots of Terminalia arjuna. Part 3. Structure of Terminic Acid, a Dihydroxytriterpene Carboxylic Acid from Terminalia arjuna. Phytochemistry 22 4: 993-998. |
| TERMINOIC-ACID | Bark | -- | 40.0 | Ahmad, M. U., Mullah, K. B., Norin, T., Ulla, J. K. 1983. Terminoic Acid, a New Trihydroxytriterpene Carboxylic Acid from Bark of Terminalia arjuna. Indian J. Chem. 22B 8: 738-740. |
| TERMINOIC-ACID | Plant | -- | -- | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991. |
| TERMINOLITIN | Fruit | -- | 19.3 | Singh, B., Singh, V. P., Pandey, V. B., Rucker, G. 1995. A New Triterpene Glycoside from Terminalia arjuna. Planta Med. 61 6: 576-577. |