References on Cat's Claw (*Uncaria tomentosa*) from Part 3 of *Fighting Cancer with Plants from the Rainforest* By Leslie Taylor

The published research referenced in the book which is shown below will include the initials **HS**, **IVT**, **IVA**, **REV**, **INS**, **REV** and **NEW**. HS refers to research conducted in humans; IVT refers to *in vitro* research conducted inside of test tubes; IVA refers to *in vivo* research conducted in animals; REV refers to a review article that evaluated and summarizes multiple studies on the subject; INS refers to *in silico* research (newer computer modeling including molecular docking studies) and NEW refers new biological research methods which determine genes and signaling pathways, and molecular pathways of actions which were developed during and after the Human Genome Project discussed in chapter 4.

This research below was last updated in August 2025. To view research published after that time, follow these links to the National Institute of Health's National Library of Medicine on **Cat's Claw**.

Human Clinical Trials:

de Paula, L., et al. "Uncaria tomentosa (cat's claw) improves quality of life in patients with advanced solid tumors." *J. Altern. Complement. Med.* 2015 Jan; 21(1): 22-30. (**HS**)

Tay, L., et al. "Evaluation of different treatment methods against denture stomatitis: a randomized clinical study." *Oral Surg. Oral Med. Oral Pathol. Oral Radiol.* 2014 Jul; 118(1): 72-7. (**HS**)

Santos Araujo Mdo, C., et al. "*Uncaria tomentosa* - Adjuvant treatment for breast cancer: Clinical trial." *Evid. Based Complement. Alternat. Med.* 2012; 2012: 676984. (**HS**)

Farias, I., et al. "*Uncaria tomentosa* for reducing side effects caused by chemotherapy in CRC patients: Clinical Trial." *Evid. Based Complement. Alternat. Med.* 2012; 2012: 892182. (**HS**)

Mur, E., et al. "Randomized double-blind trial of an extract from the pentacyclic alkaloid-chemotype of *Uncaria tomentosa* for the treatment of rheumatoid arthritis." *J. Rheumatol.* 2002 Apr; 29(4): 678-81. (**HS**)

Sheng, Y., et al. "DNA repair enhancement of aqueous extracts of *Uncaria tomentosa* in a human volunteer study." *Phytomedicine*. 2001 Jul; 8(4): 275-82. (**HS**)

Reviews:

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Cadena-Iñiguez, J., et al. "The cancer-protective potential of protocatechuic acid: A narrative review." *Molecules*. 2024 Mar; 29(7): 1439. [**Free Article**] (**REV**)

Khetmalis Y., et al. "Oxindole and its derivatives: A review on recent progress in biological activities." *Biomed. Pharmacother.* 2021 Sep; 141: 111842. (**REV**)

Kaur, M., et al. "Oxindole: A chemical prism carrying plethora of therapeutic benefits." *Eur. J. Med. Chem.* 2016 Nov; 123: 858-894. (**REV**)

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Gonzales, G., et al. "Medicinal plants from Peru: a review of plants as potential agents against cancer." *Anticancer Agents Med. Chem.* 2006 Sep; 6(5): 429-44. (**REV**)

Cancer Research

Test Tube Studies on Anticancerous Actions in Multiple Cancer Cell Types:

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Navarro, M., et al. "Fractioning of proanthocyanidins of *Uncaria tomentosa*: Composition and structure-bioactivity relationship." *Antioxidants* (Basel). 2017 Jul; 6(3): E60. (**IVT**)
Santos, K., et al. "*Uncaria tomentosa* extract alters the catabolism of adenine nucleotides and expression of ecto-5'-nucleotidase/CD73 and P2X7 and A1 receptors in the MDA-MB-231 cell line." *J. Ethnopharmacol.* 2016 Dec 24; 194: 108-116. (**IVT, NEW**)
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Gurrola-Diaz, C., et al. "Inhibitory mechanisms of two *Uncaria tomentosa* extracts affecting the Wnt-signaling pathway." *Phytomedicine*. 2011 Jun; 18(8-9): 683-90. (**IVT**)
Pilarski, R., et al. "Anticancer activity of the *Uncaria tomentosa* (Willd.) DC. preparations with different oxindole alkaloid composition." *Phytomedicine.* 2010 Dec; 17(14): 1133-9. (**IVT**)
De Martino, L., et al. "Proapoptotic effect of *Uncaria tomentosa* extracts." *J. Ethnopharmacol*. 2006 Aug; 107(1): 91-4. (**IVT**)
Muhammad, I., et al. "Investigation of Una de Gato I. 7-Deoxyloganic acid and 15N NMR spectroscopic studies on pentacyclic oxindole alkaloids from *Uncaria tomentosa*." *Phytochemistry*. 2001; 57(5): 781-5. (**IVT**)
Sheng, Y., et al. "Induction of apoptosis and inhibition of proliferation in human tumor cells treated with extracts of *Uncaria tomentosa*." *Anticancer Res.* 1998; 18(5A): 3363-68. (**IVT**)

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Rizzi, R., et al. "Mutagenic and antimutagenic activities of *Uncaria tomentosa* and its extracts." *J. Ethnopharmacol*. 1993; 38: 63-77. (**IVT**)

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Salazar, E., et al. "Depletion of specific binding sites for estrogen receptor by *Uncaria tomentosa*." *Proc. West. Pharmacol. Soc*. 1998; 41(1): 123-124. (**IVT**)

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Pilarski, R., et al. "Antiproliferative activity of various *Uncaria tomentosa* preparations on HL-60 promyelocytic leukemia cells." *Pharmacol. Rep.* 2007 Sep-Oct; 59(5): 565-72. (**IVT**)

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Komider, A., et al. "*Uncaria tomentosa* leaves decoction modulates differently ROS production in cancer and normal cells, and effects cisplatin cytotoxicity." *Molecules*. 2017 Apr 12; 22(4). (**IVT**)
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Tsouh Fokou, P., et al. “An update on antitumor efficacy of catechins: from molecular mechanisms to clinical applications.” *Food Sci. Nutr.* 2025 Apr; 13(4): e70169.
Tian, R., et al. “Chlorogenic acid alleviates the intestinal barrier dysfunction and intestinal microbiota disorder induced by cisplatin.“ *Front. Microbiol*. 2025 Mar; 16: 1508891.
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Jiang, Y., et al. “Gallic acid: A potential anti-cancer agent.” *Chin. J. Integr. Med.* 2022 Jul; 28(7): 661-671. (**REV**)
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Possible Drug Interactions:

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Return to the Rain-Tree Tropical Plant Database File on Chanca Piedra