



Image 1: Reishi mushroom (ref)



Image 2: Turkey Tail (locally sourced by me 😊)



2 Medicinal Mushrooms:

Western Research and Traditional use with focus on immunity and anti-cancer properties

Reishi

Part: fruiting body, mycelium, spores

Taste: bitter, bland

Energy: warming

Latin name: *Ganoderma lucidum*

Western medicine/research: constituents (not an exhaustive list); terpenoids, glycoproteins, phenols, nucleotides, steroids, polysaccharides, all the essential amino acids, lysine and leucine, etc.

Actions: immune-boosting, anti-carcinogenic, anti-allergy, anti-microbial, hepatoprotective, anti-inflammatory, sedative, tonic

“G. lucidum could be administered as an alternative adjunct to conventional treatment in consideration of its potential of enhancing tumour response and stimulating host immunity.”
(Jin, Xingzhong, et al. 2012)

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“meta-analysis results showed that patients who had been given *G. lucidum* alongside with chemo/radiotherapy were more likely to respond positively compared to chemo/radiotherapy alone” (Jin, Xingzhong, et al. 2012)

“results for host immune function indicators suggested that *G. lucidum* simultaneously increases the percentage of CD3, CD4 and CD8... In addition, leukocyte, NK-cell activity and CD4/CD8 ratio were marginally elevated” (Jin, Xingzhong, et al. 2012)

“Based on the evidence to date, using *Ganoderma lucidum* for cancer treatment may increase the chance of better response to treatment, but this is uncertain. It may improve the body’s immune response, in particular, on T-cells, but the effect on natural killer cells (NK activity) is uncertain.” (Santesso, Nancy, and L. Susan Wieland, 2016)

“effectiveness of Reishi has been attributed to either the polysaccharide fraction, which is responsible for the stimulation of the immune system, or to the triterpenes, which demonstrate cytotoxic activity against a variety of cancer cells” (Suarez-Arroyo, Ivette J., et al. 2013)

Inflammatory Breast Cancer (IBC) study, in vivo: “tumor volume was significantly (>50%) reduced ($P < 0.02$) in the Reishi treated mice compared with mice gavaged daily with vehicle treatment” (Suarez-Arroyo, Ivette J., et al. 2013)

Traditional Chinese Medicine:

Chinese name: *Ling zhi*

Organs: Heart, Spleen, Liver, Lung, Kidney

Traditional use: said to be the mushroom of ‘longevity’ & ‘Immortality’, long used in China for insomnia/anxiety related to ‘Calming the Shen’ (Calming the Spirit of the Heart), tonifying properties (increasing functionality of organ/energy systems in order to boost immunity), reduce toxicity (anti-inflammatory, reduction of cancerous cells within the body), and protect the spirit/emotions/body of the user (relax cells and allow for healing, rest boosts immunity)

“Ben Cao Gang Mu by Li Shin-Zhen, which is considered to be the first pharmacopoeia in China (1590 AD; Ming dynasty), the mushroom was attributed with therapeutic properties, such as tonifying effects, enhancing vital energy, strengthening cardiac function, increasing memory, and antiaging effects” (Wachtel-Galor, Sissi, et al. 2011)

Cautions: No toxicity found, some studies outlined some nausea and sleep disturbances

Preparation/dosage: there was a lot of conflicting evidence to say what works and what did not. No one study/site/book referenced a primary preparation or dosage for cancer support or immunity. Due to the variety of medicinal constituents within the Reishi mushroom, it is recommended by most platforms to do a dual-extraction method (decoct in water, then tincture in ethanol), this allows the extraction of the highest amounts of ‘medicinal constituents’ which are the polysaccharides (beta-glucans) and triterpenes. From my experience using Reishi 1:4 dual-extracted tincture, effects on insomnia and general well-being after use have been supported, but these effects have been observed when Reishi is combined in a synergistic formula with other herbs.



Picture: Local Sunshine Coast Turkey Tail mushrooms collected by me for dual-extracted tincture 😊

Turkey Tail

Part: fruiting body, mycelium, spores

Taste: bland, sweet

Energy: neutral

Latin name: *Trametes versicolor* or *Coriolus versicolor*

Western medicine/research: constituents (not an exhaustive list); polysaccharides; “beta-glucans, arabinoxylane, glucose, xylose, galactose, mannose, glycoproteins, ergosterols, triterpenoids” (Stamets, Paul, 2012), phenolic & protein components, sterols, triterpene derivatives, hydroquinone-derived aromatic compounds, cerebroside, triglyceride derivative, etc. (Habibi, Emran, et al. 2015)

Actions: anti-tumor, antioxidant, immune modulating, anti-microbial, hepatoprotective

“results thus indicate that CVPs (water-soluble *Coriolus versicolor* polysaccharide) can be a potential candidate to ameliorate toxic effects when used in cancer therapy.” (Cai, Xinzhong, et al. 2010)

“*T. versicolor* preparation is safe and tolerable in women with breast cancer who had undergone chemotherapy. Perhaps the most intriguing part of this study was the finding that 6 g of *T. versicolor* appeared to lead to faster immune recovery after radiotherapy” (Stamets, Paul, 2012)

“dietary supplement prepared from extracts of *T. versicolor* reduces the growth of hormone responsive prostate cancer” (Patel, Seema, and Arun Goyal. 2012)

“polysaccharide of this mushroom has been demonstrated to inhibit the proliferation of cancer cells in vitro and in vivo, examined on the human hepatoma cancer” (Patel, Seema, and Arun Goyal. 2012)

“The strain is excellent in platelet aggregation inhibitory effect, chemokine gene expression inhibitory effect, antimutagenic effect, antitumor effect, antihypertensive effect, and immunomodulatory effect” (Eguchi, Fumio, Ryo Sumi, and Nobuo Mori, 2010)

Traditional Chinese Medicine:

Chinese name: Yun Zhi or 'cloud mushroom'

Organs: Liver, Spleen, and Lung

Traditional use: used traditionally for tonification of the Spleen (digestion and production of nourishing Blood), increasing energy and vitality (circulation of Blood), also said to reduce 'Dampness' (tumors, lumps, cancer) whilst clearing Heat and toxicity (inflammation)

Cautions: studies did not indicate any toxicity, safe to use in conjunction with conventional cancer therapies

Preparation: wide variety of preparations, including; in food/drink, pharmaceutical formulations, dual-extracted tinctures, freeze-dried mycelium capsules, etc.

Dosage: (4-9g) "4 g twice daily... capsules consist of activated, freeze-dried, organic mushroom mycelium, containing polysaccharides"... "up to 9 g/day tolerable in women with breast cancer who had undergone chemotherapy." (Stamets, Paul, 2012)

Table 7

Summary of Potential Clinical Applications

Type of Cancer	Indicated Mushroom
Nonsmall-cell lung cancer	<i>Cordyceps</i>
Lung cancer	Reishi
Gastric cancer	PSK (turkey tail)
Hepatocellular carcinoma	<i>Agaricus</i> , reishi

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Type of Cancer	Indicated Mushroom
Leukemia	<i>Agaricus</i> , reishi
Lymphoma	<i>Cordyceps</i>
Breast cancer	Reishi, maitake, turkey tail
Colon cancer	Maitake, reishi, turkey tail
Prostate cancer	Reishi
Sarcoma	Reishi

(Guggenheim, Alena G., Kirsten M. Wright, and Heather L. Zwickey, 2014)

References:

Image: Reishi mushroom (© 1997-2020 Peaceful Valley Farm Supply, Inc.)

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