

Module 9

HRB 620a Product Development Activity

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Purpose: This formula is an infusion designed to aid in my issues falling asleep and staying asleep.

Herbs: Ashwaganda, Chamomile, Hops, Passionflower, Skullcap, St. John's Wort

Special Note: Hawthorn leaf and flower were in my previous formulation. After reading further information in Hoffman, I decided that the Hawthorn would not help my recipe. In order to maximize the benefit of hawthorn I would need to use all parts of the plant. Very small quantities of each herb are being used so it would be quite difficult to achieve these numbers accurately. Additionally, I do not have issues with blood pressure or my heart so this herb is not necessary. Removing hawthorn from the blend allows me to increase the dosage of the herbs that I can get more benefit from.

#### *Withania somnifera*

Constituents: steroidal compounds, such as the lactones withaferin A, sitoindoside IX, X and acylsteryl glucosides and various types of alkaloids.

Therapeutic actions: tonic, adaptogenic, mild anxiolytic.

Ashwaganda was added to this recipe for its anxiolytic properties.

#### Chamomile, *Matricaria recutita*

Constituents: sesquiterpenes, such as chamazulene, a-bisabolol, and bisabolol oxide, sesquiterpene lactones, such as matricin and matricarin, flavanoid glycosides, apigenin, luteolin, quercetin, isorhamnetin.

Chamomile is one of the most widely studied herbs and has a long list of indications for use. The reason chamomile is effective for these uses is due to its therapeutic actions.

It is considered a nervine, antispasmodic, carminative, anti-inflammatory, antimicrobial, bitter, and vulnerary.

Chamomile was chosen for this formula due to its long history as a nervine and antispasmodic. The nervine properties help with sleep issues attributed to stress and anxiety. The antispasmodic qualities are useful for relaxing the muscles.

### Hops, *Humulus lupulus*

Constituents: Volatile oils such as humulene, b-caryophyllene, myrcene, and farnesene. Flavonoids, according to Hoffman these are mainly the glycosides of kaempferol and quercetin. Hops contain oleoresins, which are unlikely to be extracted in infusion form. Hops are intriguing because they also contain estrogenic substances that are not well understood, miscellaneous tannins, and xanthohumol, which is a chalcone.

Therapeutic actions: sedative, hypnotic, antimicrobial, antispasmodic, and astringent.

Everything I've read about hops show that it is generally administered with another herb for synergistic effects. It is considered to have a significant impact on the central nervous system. It is used for insomnia and eases tension and anxiety.

### Passionflower, *Passiflora incarnata*

Constituents: Alkaloids (harmine, harman, harmol, harmaline, harmalol, passiflorine); flavonoids (apigenin, homoorientin, isovitexin, kaemferl, luteolin, orientin, quercetin, rutin, saponaretin, saponarin, vitexin).

Therapeutic actions: nervine, hypnotic, antispasmodic, anodyne, hypotensive.

Passionflower is full of alkaloids and flavonoids, which have demonstrated sedative properties in animal testing. It is effective for treating insomnia due to its nervine and hypnotic properties. The antispasmodic properties would be beneficial, as they would help the muscles relax.

## Skullcap

Constituents: flavonoids, iridoids, volatile oils, and tannins. Flavonoids include baicalein, baicalin, scutellarein, and wogonin.

Therapeutic Actions: nervine tonic, antispasmodic, and hypotensive.

Skullcap is a powerful nervine that acts on the central nervous system. While not fully proven, it is proposed that the flavonoids interact with the GABA receptor.

## St. John's Wort, *Hypericum perforatum*

Constituents: volatile oil (caryophyllene, methyl-2-octane, n-nonane, n-octanal, n-decanal, a and b pinene); naphodianthones (hypericin and pseudohypericin); phloroglucinols (hyperforin), catechins, proanthocyanidine; flavonoids (hyperoside, rutin)

Actions: anti-inflammatory, astringent, vulnerary, nervine, antimicrobial.

Much of the available data on St. John's Wort revolves around the testing of the constituents in relation to their antidepressant activity claims and their activity as MAO inhibitors. St. John's Wort was added to this formula due to its properties as a nervine sedative.

## References:

Bone, K., & Mills, S. (2013). *Principles and practice of phytotherapy modern herbal medicine*. Edinburgh: Churchill Livingstone, Elsevier.

Hoffmann, D. (2003). *Medical herbalism: the science and practice of herbal medicine*. Rochester, VT: Healing Arts Press.

Herbal Medicine: Expanded Commission E. (n.d.). Retrieved February 10, 2018, from <http://cms.herbalgram.org/expandedE/Hops.html?ts=1518322781&signature=932bfbd8b71c49f7d6e128524b16084f#Uses>

Passionflower. (n.d.). Retrieved March 04, 2018, from <https://www.umm.edu/health/medical/altmed/herb/passionflower>  
Pengelly, A. (n.d.). *Module 3A Nerve Support*. Lecture