

# IMMUNE SYSTEM

## ACTION CATEGORIES & HERBS

**ADAPTOGENS: Aids the body's own homeostatic mechanisms, influences Immune, Endocrine, Nervous systems**

Immune system is depressed by stress → measured in activity and numbers of WBCs  
 Adaptogens prolong the 'plateau' or help maintain various expressions of homeostasis  
 Abuse of adaptogens: whole body and specific organ system issues, you can 'burn yourself out'  
 Eg. all nighter + coffee, lots of sex and ginseng -- burning the cash flow so to speak  
 Daily Qi abuse = aging by borrowing from Ancestral Qi.  
 Energy drinks: xanthine alkaloids--stimulants, tend to drain rather than 'fill you up' with energy.  
 While they can be stimulating, Adaptogens tend to help 'fill you up'

***Aralia nudicaulis*** (Sarsaparilla, *Araliaceae*, Ginseng Family)  
 Ginsenosides- water soluble sugars gathered by roots and rhizomes and aid adrenal glands and pancreas, regulates blood sugar levels, keeping insulin from spiking, improves short term memory, good for digestion

***Aralia racemosa*** (Spikenard, *Araliaceae*, Ginseng Family)  
 Wet colds that people carry at the end of winter, used in partus prep therapies.

***Astragalus membranaceus*** (Milk Vetch, *Fabaceae*, Pea Family)  
 Bone marrow stem cell production increase.

***Centella asiatica*** (Gotu Kola, *Apiaceae*, Carrot or Parsley Family)  
 For stress in the NS and for wound repair, helps epithelium (derm or GI).

***Codonopsis pilosula*** (Poor man's Ginseng, *Campanulaceae*, Harebell Family)  
 Called "Poor man's ginseng" (now expensive root) , encourages aggregation of growth hormones.  
 Arc of life: Anabolic state in youth ----> catabolic state as we age.  
**Anabolic** stimulant --for 'putting on' tissues -- catabolic is where tissues tend to break down.  
 helps with the 'building'(anabolism) of tissues.

***Eleutherococcus senticosus*** (Siberian Ginseng, *Araliaceae*, Ginseng Family)  
 King of Adaptogens, easy to produce, inexpensive and give most benefits of Panax g.  
 Herb of choice for patients recovering from radiation and chemotherapy (research does not show adverse interaction and will increase the patient's ability to undergo extreme stress e.g. reduction of N/V), antibacterial properties.

***Epimedium grandiflorum*** (Horny Goat weed, *Berberidaceae*, Barberry Family)  
 Works on testosterone levels and increase body's ability to do work (physical labour) can be used as anabolic for building muscle. First used by Chinese with goats to sire more kids, traditionally for increasing the potency of goats.

***Glycyrrhiza glabra*** (Licorice, *Fabaceae*, Pea Family)  
 Western licorice, more adreno-cortical activity--helps increase endogenous production of cortisol.  
 Strong anti-inflammatory after chemotherapy has spread the fire and want to renew them.  
 Effective in combination with Bupleurum and Dioscorea  
 Only way to reduce edema of prednisone is to stop cortisone (with MD's approval).

***Glycyrrhiza uralensis*** (Chinese Licorice, *Fabaceae*, Pea Family)  
 Detoxifying, cooling.

<p><b><i>Gynostemma pentaphyllum</i></b> (Gynostemma, <i>Cucurbitaceae</i>, Gourd Family) Similar sugars to ginsengs, reduces blood sugar and cravings for sugary foods.</p>
<p><b><i>Ocimum sanctum</i></b> (Holy Basil, <i>Lamiaceae</i>, Mint Family) Energy drink as a tea, not stimulating.</p>
<p><b><i>Oplopanax horridum</i></b> (Devil's Club, <i>Araliaceae</i>, Ginseng Family) Formerly known as <i>Echinopanax</i>(spikey ginseng), improves or helps establish boundaries in any context (physical/spiritual). Can be harsh to harvest due to spikes, grows W. of Lake Superior--sacred to Natives wherever grows in abundance. Not discovered until Europeans asking about Native tradition -- ceremonial and as a food. Regulates blood sugar, profound effects in children with : hyperactivity, ADHD and autism symptoms, helps them to find a calmness (Clinical findings of John).</p>
<p><b><i>Panax notoginseng</i></b> (Notoginseng, <i>Araliaceae</i>, Ginseng Family) Grows in a certain mountain range in China, Cooked --goes from white to black-- ideal quality is darker, harder and shiny and size of thumb. Specifically anti-viral to Hepatitis.</p>
<p><b><i>Panax ginseng</i></b> (Korean Ginseng, <i>Araliaceae</i>, Ginseng Family) King of all the Ginsengs and energetically the warmest or hottest---can overdose as it can be over stimulating. DO NOT give to women with heat picture (menopause/ hot flashes etc). Method of Chinese for those on their deathbed--buy best Ginseng and give the person and family the "last hurrah!" (historically)</p>
<p><b><i>Pfaffia paniculata</i></b> (Suma, <i>Amaranthaceae</i>, Amaranth Family) For sterility (male and female), an Amazonian nutritive, used for those who want the anabolic effect.</p>
<p><b><i>Panax quinquefolius</i></b> (North American, <i>Araliaceae</i>, Ginseng Family) *Recommended by John* energetically cool, mucilaginous, yin tonic Loss of heat (old and cold), warming/yang agents might not work if a person doesn't have the ability to 'hold' the yang and can't 'anchor' it. We live in a yang focused world, we don't encourage the gentle/yin virtues (i.e. listening/sensitivity) not being valued. Great for fibromyalgia, a "hot" picture. Other yin tonics: <i>Rehmania</i>, <i>Schisandra</i>, <i>Polygonum m.</i>, <i>Asparagus</i> (put qi in all 12 meridians).</p>
<p><b><i>Rehmannia glutinosa</i></b> (Rehmannia, <i>Orobanchaceae</i>, Broomrape Family) Anabolic, youth-making Can overdose on this, affecting the Liver. He Shou Wu (<i>Polygonum multiflora</i>) from the legends of Li Chi Chen-- was incorporated in a formula for longevity (Book on dover and Chinese list of great authors) Viriditas uses similar formula --Three Ginseng Tonic.</p>
<p><b><i>Rhodiola rosea</i></b> (Goldenroot/Stonecrop, <i>Crassulaceae</i>, Stonecrop Family) Root smells of roses W. Canada--most in world supply is wild harvested (BAD--tundra plants are amongst the most delicate). Astringent--can lead to constipation. Stimulating to certain personality types, they get shaky and agitated. OK if you are Kaffa, not for vata and pita.</p>
<p><b><i>Schisandra chinensis</i></b> (Five Flavour Berry, <i>Schisandraceae</i>) Yin tonic, Liver tonic protective and tonifying, detoxifying and used for serious Liver diseases. Chicken soup with schisandra or with astragalus.</p>
<p><b><i>Verbena officinalis</i></b> (Verbena/Vervain, <i>Verbenaceae</i>) Sedating, relaxing. <b>Many properties (RESP and NS) and adaptogenic.</b></p>
<p><b><i>Withania somnifera</i></b> (Ashwagandha, <i>Solanaceae</i>, Nightshade Family) Common in India, drink as a tea to help sleep at night, relaxing, parasympathetic, increases sperm counts.</p>

<i>Lycium barbarum</i> (Goji Berry, <i>Solanaceae</i> , Nightshade Family)
<b>DEEP IMMUNE ACTIVATION</b> Multi mushroom and roots
<b>THREE GINSENGS TONIC</b> Energy
<b>ANTI-INFLAMMATORY: generally speaking inflammation is an immune mechanism that acts to isolate a given antigen or environmental stress to allow for repair and healing</b> Evolved trait to protect body from invasion Macrophages and CK(cytokine) are self propelled to support the immune response If inflammation becomes more chronic--need to use cooling herbs to shut down the CK activity
<i>Boswellia thurifera</i> (Frankincense, <i>Burseraceae</i> , Torchwood Family) Penetrates the blood brain barrier, therefore is anti inflammatory to cerebrovascular tissues, can literally paint over lesion on the head and penetrate into the brain and reduce the inflammation (shown on brain scans). Rheumatology-Boswellia for Rheumatoid Arthritis--response to topically and internally.
<i>Bupleurum falcatum</i> (Bupleurum, <i>Apiaceae</i> , Carrot or Parsley Family) Too much causes diarrhea (think: cold glass in summer). Saikosaponins--when combined with those from licorice ( <i>Glycyrrhiza</i> and <i>Dioscorea</i> ) strong mix for systemic inflammation.
<i>Curcuma longa</i> (Turmeric, <i>Zingiberaceae</i> , Ginger Family) Systemic anti-inflammatory, usually applied in combination with irritative black pepper to improve absorption through membranous structures. Cooked in fat (milk, butter, creams, oil). As powder or tea, often mixed with pepper (opening the vascular permeability to allow more curcuma through). In balls, can be anti-inflammatory to digestive tract, needs fat for systemic.
<i>Dioscorea villosa</i> (Wild Yam, <i>Dioscoreaceae</i> , family) Antispasmodic with saponins.
<i>Glycyrrhiza glabra</i> (Licorice, <i>Fabaceae</i> , Pea Family) Corticosteroid stimulation.
<i>Panax quinquefolius</i> (North American Ginseng, <i>Araliaceae</i> , Ginseng Family) Yin tonic, cool, moist.
<i>Salix alba</i> (White Willow, <i>Salicaceae</i> , Willow Family) Salicylates (think acetylsalicylic acid or aspirin).
<i>Schisandra chinensis</i> (Five Flavour Berry, <i>Schisandraceae</i> , Schisandra Family) Particularly to liver.
<i>Withania somnifera</i> (Ashwagandha, <i>Solanaceae</i> , Nightshade Family) Only mildly anti inflammatory.
<b>ANTIFUNGALS: Fungus is neither plant or animal, Can only attack those things that have low vitality</b> <b>“Life force pushes back fungus”</b> <b>Aside; Candidiasis--balance is off, and that is a reduction in a way of reduced life force</b> <b>Can see fungi (saprophytic) living on living things i.e. mushrooms on trees</b> <b>To change whole biome--good idea to rotate the herbs, but usually the plant compounds are so complex, their killing force can't be outmaneuvered by the microorganisms</b>
<i>Berberis vulgaris</i> (Barberry, <i>Berberidaceae</i> , Barberry Family) Alkaloids disrupt microbial metabolism. Yeast, bacteria and fungus and parasites.

<p><b><i>Calendula officinalis</i></b> (English Marigold, <i>Asteraceae</i>, Aster or Composite Family) Antibacterial and antifungal in resin form.</p>
<p><b><i>Cryptolepis sanguinolenta</i></b> (<i>Apocynaceae</i>, Dogbane Family) African berberine containing plant, anti malarial.</p>
<p><b><i>Hydrastis canadensis</i></b> (Goldenseal, <i>Ranunculaceae</i>, Buttercup Family) Hydrastine, canadine, berberine, 3 alkaloids related in structure and higher content than in berberis, high in tannins, good for infection on mucous membranes. Can pour this tincture into a tub of water, it will stain skin for a day, used traditionally to tighten tissues or even for tanning/hardening hides.</p>
<p><b><i>Juglans nigra</i></b> (Black Walnut, <i>Juglandaceae</i>, Walnut Family) High iodine content, also applied topically for fungal infections.</p>
<p><b><i>Lomatium dissectum</i></b> (Lomatium, <i>Apiaceae</i>, Parsley or Carrot) Anti-fungal, viral and microbial, top 5 in Canada, even effective for multiple infections at once. Grows in desert lowlands--no farms--controlled harvest Wild crafters (United Plant Savers) CITES is the int'l board to measure plant's safety.</p>
<p><b><i>Mahonia aquifolium</i></b> (Oregon Grape, <i>Berberidaceae</i>, Barberry Family) Grows in higher altitude, effective for Giardia infections.</p>
<p><b><i>Oreganum spp.</i></b> (Oregano, <i>Lamiaceae</i>, Mint Family) As a leaf or EO - oil must be diluted, in hot water, tea of the <b>whole leaf is safer</b> and you would be getting the benefit of the whole plant with use of leaf vs single compound, grow it or get fresh. If EO not used in a few years, it is oxidized, EO goes through kidneys--burns tissues!</p>
<p><b><i>Tanacetum vulgare</i></b> (Tansy, <i>Asteraceae</i>, Aster or Composite Family) Antifungal internally.</p>
<p><b><i>Tahebuia impetigosa</i></b> (Pau d'Arco, <i>Bignonaceae</i>, Bignonia Family) Use the hardwood, one of the rare occasions that we use that part of the plant. Yeast infections, lyme and CA (in that it helps the immune system and addressing dysbiosis, not necessarily anti-neoplastic).</p>
<p><b><i>Zingiber officinalis</i></b> (Wild Ginger, <i>Zingiberaceae</i>, Ginger Family) EO's are antifungal to entero fungi. Aromatherapy can awaken the whole limbic system--elicit memories/feelings--can give space to remember the calm, the relaxation, etc.</p>
<p><b>ANTIMICROBIAL:</b> <b>During the plague years, people would be weak</b> <b>Thieves would rob them after coating themselves with antimicrobial solutions, see article "potent protection" re: history of 4 thieves vinegar</b></p>
<p><b>Treatment of infection:</b> Know organism - cross reference with herb lists Stimulate certain area of immune system i.e GI tract, Respiratory tract Know tropism/constitution of body that is infected i.e dry/wet Treat the tissue state ( Hot, wet, etc) Treat symptoms Replenish nutrients being used by the infection =treatment specific to the individual</p>
<p><b><i>Alchornea cordifolia</i></b> (Alchornea, <i>Euphorbiaceae</i>, Spurge Family) Difficult to find--grows in Africa, used for antibiotic-resistant organisms--only to be used in those cases.</p>

<p><b><i>Andrographis paniculata</i></b> (Chiretta, <i>Acanthaceae</i>, Acanthus Family) Energetically icy cold, VERY bitter, good for Liver infections (Hep B and C). For Upper Respiratory infection--cold and flus, breaks fevers.</p>
<p><b><i>Arctostaphylos uva-ursi</i></b> (Bearberry, <i>Ericaceae</i>, Heath Family) Antimicrobial to bladder/urinary tract.</p>
<p><b><i>Artemisia absinthium</i></b> (Wormwood, <i>Asteraceae</i>, Aster or Composite Family) One of 4 in the thieves vinegar, forms peroxide on contact with iron in blood, good for pathogenic organisms that utilize iron, GI tract and neurological stimulants--amplifies transmission of colour in the brain, hence why Impressionists loved it!</p>
<p><b><i>Berberis vulgaris</i></b> (Barberry, <i>Berberidaceae</i>, Barberry Family) Bitter, good for anything in GI, active against a variety of bacteria.</p>
<p><b><i>Bidens pilosa</i></b> (Spanish Needles, <i>Asteraceae</i>, Aster or Composite Family) Grows here, not many picking it as it disappears in tall grass and flowers late, used for antibiotic resistant bacteria (+ or -?)</p>
<p><b><i>Calendula officinalis</i></b> (Marigold, <i>Asteraceae</i>, Aster or Composite Family) Astringent, vulnerary, antibacterial, antifungal, used in creams and salves. Used for mouth infections/inflammation.</p>
<p><b><i>Commiphora mol-mol</i></b> (Myrrh, <i>Burseraceae</i>, Torchwood Family) Dental/oral antiseptic, one of strongest antimicrobials on the planet! Pack wound with it, brush teeth with it. Water extracts yield gum, alcohol extracts yield resins. Thought to have effect on Peyer's patches to have systemic effect.</p>
<p><b><i>Coptis chinensis</i></b> (Chinese Goldthread, <i>Ranunculaceae</i>, Buttercup Family) High in berberine alkaloids, cold, bitter. Chinese grow in sandy soil (would require Organic certification)--don't want to buy wild crafted.</p>
<p><b><i>Cryptolepis sanguinolenta</i></b> (Cryptolepis, <i>Apocynaceae</i>, Dogbane Family) Traditionally for malaria in South Africa. For stronger resistant strains ie. Lyme with co-infection or MRSA.</p>
<p><b><i>Echinacea angustifolia</i></b> (Echinacea, <i>Asteraceae</i>, Aster or Composite Family) Stimulates the proliferation of immune cells (phagocytes), increases motility of phagocytes/macrophages.</p> <p>Purpurea most common--its a hybrid, but strength is not there Root of <i>E. angustifolia</i> used in traditions Isobutylamides--buzz on the tongue---stimulates activity of WBC and antibiotic Sweetwater extract used for topical or poultice for local perfusion Glycosides--will affect your mouth too Inhibits hyaluronidase(drying/irritating) produced by snakes/insects and bacteria, protects extracellular matrix</p> <p>Leaf, stem and flower--antimicrobial-- but some would consider that you are only diluting the root if you are making a whole plant tincture(use the root), flower and above ground--concentration is not effective. If pharmaceutical--compounds extracted using multiple solvents (toxic).</p>
<p><b><i>Glycyrrhiza glabra</i></b> (Licorice, <i>Fabaceae</i>, Pea or Legume Family) Anti-microbial and viral and effective on microbes of GI and LV. Cooling and adaptogen.</p>
<p><b><i>Hydrastis canadensis</i></b> (Goldenseal, <i>Ranunculaceae</i>, Buttercup Family) Cooling, and mucus tract and so strong can upset digestive microbes (i.e. use longer than 2 weeks). Rotating: yeast infection--1 week on of hydrastis and then something else. Good for infections with E.coli--effective in treatment within 2 days--to a week.</p>

<p><b><i>Inula helenium</i></b> (Elecampane, <i>Asteraceae</i>, Aster or Composite Family)  Compounds inulin sugars that are a prebiotic, therefore food for probiotic--compounds to address bacterial and viral pneumonia. Perfumed root, loves the wetlands.  Better respiratory. Infection plant treating root and digestive rebuilders.</p>
<p><b><i>Isatis tinctoria</i></b> (Woad, <i>Cruciferae</i>, Mustard Family)  Used in dyeing, strongest for high cytokine and high heat **ONLY for short term use, bacterial infections with high fevers (resolved in 2 weeks--or becomes toxic--use something else)  Combine with detoxifying herbs ex Glycyrrhiza uralensis, plus honey.</p>
<p><b><i>Juniperus communis</i></b> (Juniper, <i>Cupressaceae</i>, Cypress or Cedar)  Preference for Kidneys, anything in urogenital tract, treated by the oil as it passes through, berries also sucked for respiratory Infection.</p>
<p><b><i>Ligusticum porteri</i></b> (Osha, <i>Apiaceae</i>, Carrot or Parsley Family)  Mountain, EO and strong scent, in spring, bears are witnessed digging up Osha, and also--STRONGEST antimicrobial and antiviral growing in Canada, problem is that it is overused.  Grows West of Lake Superior---sacred plant (throat singers suck on it) grows only in high altitude.  Tastes like celery.</p>
<p><b><i>Lomatium dissectum</i></b> (Desert Parsley, <i>Apiaceae</i>, Carrot or Parsley Family)  Lowland or 'Desert Parsley', very oily in comparison to Ligusticum, more abundantly available than Ligusticum.  Harder to harvest, delicate ecosystem, in lowlands and flat, can be reseeded (umbel of seeds).  On a watch list.  Oil within---can come out through skin and burns pts.  Natives would boil, cool overnight, skim off oil, bring to a boil and then use (NEED to ensure oil fraction is refracted).</p>
<p><b><i>Mahonia aquifolium</i></b> (Oregon Grape, <i>Berberidaceae</i>, Barberry Family)  Berberine alkaloids, Mountain berberis version of berberis. All the same things as berberis (low land version).  Liver stimulant, increase bile production, regulates sugar, antimicrobial (yellow colour)--great for parasites!!! (think about bringing with you for camping--Giardia)</p>
<p><b><i>Monarda didyma</i></b> (Bee balm, Bergamot, <i>Lamiaceae</i>, Mint Family)  Red/purple varieties.  Will spread, and high thymol EO content, wild and hybrid (latter doesn't give the EO) oil is citrus--flavour of Earl Grey tea.</p>
<p><b><i>Nigella sativa</i></b> (Black Cumin, <i>Ranunculaceae</i>, Buttercup Family)  Not actually a cumin, self-seeding buttercup, native to Middle East, in the Koran---Mohammed's chapters on health and hygiene, how to recognize skin dz, and infections--can cure "anything but death". Mixed with fats. Labneh, thick like cream cheese, microbial content of yogurt, and zaatar, and antimicrobial on the flat bread.  As a food, tea, tincture etc.  If in dried capsules---just ground seed (60 capsules for \$20)--can get a kilo for fresh seed for the same price.</p>
<p><b><i>Origanum spp.</i></b> (Oregano, <i>Lamiaceae</i>, Mint Family)  Origins of Greece, series of hybridizations based on where it grows--prefer high altitudes, due to sunshine, the EO is high to compensate for the sun, if taken internally take 10% with olive oil.  Cup of tea of oregano leaves vs. the oil. Add Sage, thyme--high EO content and all antimicrobial.  Tradition of sage and thyme---turkey hunting used to be used to protect against microbes.  Aside: curry herbs are antimicrobial digestive aids---mainstays for cooking.</p>
<p><b><i>Picrorhiza kurroa</i></b> (Kutki, <i>Plantaginaceae</i>, Plantain Family)  Very bitter and cold plant, digestive bitter, particularly good for Hep infections (all A--&gt;D), native of India.</p>
<p><b><i>Propolis</i></b>  The black sticky substance that bees use for gluing their hives together, bees also use propolis to mummify invaders  Resin collected to make salves. Highly antibiotic/antiseptic---keeping hives clean. Throat, and respiratory infections.  Extraction through etOH Works in Lymph, Kupffer cells, Peyer's patches, a cascade of events beginning in digestive tract  Honey: Can kill staph infections. When adding to hot water, stir after water has cooled.</p>

<p><b><i>Rosmarinus officinalis</i></b> (Rosemary, <i>Lamiaceae</i>, Mint Family)  As a hedge between you and your neighbour, we can't winter this plant (7-9 on growth chart, we are at best, region 5 in Toronto) therefore take it in or harvest it, does well in a bathroom where there is moisture, for the winter  Excellent antibiotic, digestive</p>
<p><b><i>Salvia officinalis</i></b> (Sage, <i>Lamiaceae</i>, Mint Family)  Strep infections --honey (first) then add sage and then lemon juice---perfect combination with throat infections that are inflamed--classic folk rx!  Citric acid changes the terrain</p>
<p><b><i>Sida cordifolia</i></b> (Country Mallow, <i>Malvaceae</i>, Mallow Family)  seed, leaf, root, we use the seed extract,  Called mallows , close cousins to our Althea---this herb is effective against Gm +ve bacteria/ also antibx resistant</p>
<p><b><i>Thymus vulgaris</i></b> (Thyme, <i>Lamiaceae</i>, Mint Family)  So many hybrids now. Has thymol--recall: Joseph Lister, early fathers of antiseptics used thymol, eucalyptus, sage, carbonic acid. Test: Sewer water sample, and allow to colonize---1-10 of increasing of EO--what [ml] will kill the microbes ---thyme, cinnamon and clove are the strongest killers of microbes.  Often used in mouthwashes.</p>
<p><b><i>Uncaria tomentosa</i></b> (Cat's Claw, <i>Rubiaceae</i>, Madder Family)  Amazonian plant, used for wide spectrum of microbial conditions---we use for anti-cancer capabilities  Vines that grow on trees, wild crafted (Brazilian, but stripping forest and making SE)</p>
<p><b><i>Usnea barbata</i></b> (Old Man's Beard, <i>Parmeliaceae</i>, Lichen-forming fungus)  Loves humidity and moisture.  Get it from the rainforest in Pacific NW--Oregon, BC---mushrooms and lichens--abundant due to climate.</p>
<p><b><i>Zingiber officinalis</i></b> (Wild ginger, <i>Zingiberaceae</i>, Ginger Family)  Goes through digestive tract.  Japanese eating raw fish--accompanied with pickled ginger in food and wasabi (<i>Eutrema japonica</i>) allows you to eat fish with high bacterial count/parasites.  <i>Nasturtium</i> also has same compounds as horseradish.</p>
<p><b>ANTIOXIDANTS:</b>  <b>Not a herb's medicinal ability---has to do with sharing electrons and Reactive oxidative species</b>  <b>Rosemary added to potatoes (french fries) can neutralize the oxidization</b>  <b>The top ten antioxidant supplements include Vitamin C, Vitamin E, some of the B Vitamins like B-12 and folic acid, alpha-lipoic acid, manganese, selenium, zinc, amino acids like L-carnosine and N-acetyl cysteine, L-taurine, melatonin, and coenzyme Q10.</b></p>
<p><b><i>Glycyrrhiza glabra</i></b> (Licorice, <i>Fabaceae</i>, Pea Family)</p>
<p><b><i>Ocimum sanctum</i></b> (Holy Basil, <i>Lamiaceae</i>, Mint Family)</p>
<p><b><i>Panax ginseng</i></b> (Korean Ginseng, <i>Araliaceae</i>, Ginseng Family)</p>
<p><b><i>Panax quinquefolius</i></b> (North American Ginseng, <i>Araliaceae</i>, Ginseng Family)</p>
<p><b><i>Polygonum cuspidatum</i></b> (Japanese Knotweed, <i>Polygonaceae</i>, Buckwheat)  Resveratrol</p>
<p><b><i>Schisandra chinensis</i></b> (Five Flavour Berry, <i>Schisandraceae</i>, Schisandra Family)</p>
<p><b><i>Withania somnifera</i></b> (Ashwagandha, <i>Solanaceae</i>, Nightshade Family)</p>

ANTIVIRAL: Either active against virus or works in harmony with body's antiviral activities
<p><b><i>Andrographis paniculata</i></b> (Chiretta, <i>Acanthaceae</i>, Acanthus Family) Used against Hep C (also A and B), for URTI (influenza) and tend to cause fevers. Cold and bitter to break fevers.</p>
<p><b><i>Artemesia absinthium</i></b> (Wormwood, <i>Asteraceae</i>, Aster or Composite Family) Anti-parasite and anti-viral--chilling and for hepatic viruses.</p>
<p><b><i>Artemesia annua</i></b> (Sweet Wormwood, <i>Asteraceae</i>, Aster or Composite Family) Anti-parasite, anti-viral, antimalarial -- chilling (turns iron oxide into hydrogen peroxide) to destroy the plasmodium which feeds off red blood cells, used in cancer therapy--tumours concentrate Fe (aggregate).</p>
<p><b><i>Echinacea angustifolia</i></b> (Echinacea, <i>Asteraceae</i>, Aster or Composite Family) Works against viruses, mostly by stimulating immune system into activity.</p>
<p><b><i>Glycyrrhiza glabra</i></b> (Licorice, <i>Fabaceae</i>, Pea Family) Immunomodulator and stimulant, specific against hepatic viruses.</p>
<p><b><i>Hypericum perforatum</i></b> (St. John's Wort, <i>Hypericaceae</i>, St John's Wort Family) Herpes, any viruses that attack the nervous system, or that occupies nervous tissue. Stimulates liver detox.(protein breakdown, which there is plenty of during viral infection).</p>
<p><b><i>Isatis tinctoria</i></b> (Woad, <i>Cruciferae</i>, Mustard Family) Viruses that causes high infections.</p>
<p><b><i>Ligusticum porteri</i></b> (Osha, <i>Apiaceae</i>, Carrot or Parsley Family) Respiratory viruses.</p>
<p><b><i>Lomatium dissectum</i></b> (Lomatium, <i>Apiaceae</i>, Carrot or Parsley Family) Respiratory viruses.</p>
<p><b><i>Melissa officinalis</i></b> (Lemon Balm, <i>Lamiaceae</i>, Mint Family) Herpes, topically or internally.</p>
<p><b><i>Panax notoginseng</i></b> (Notoginseng, <i>Araliaceae</i>, Ginseng Family) Hepatitis C specific.</p>
<p><b><i>Phytolacca decandra</i></b> (Pokeweed, <i>Phytolaccaceae</i>, Pokeweed Family) Strong lymphatic stimulant, causes lymphatic circulation for improved elimination of toxins/compounds in the lymph fluid. Can be toxic if taken in large doses!***(fresh juice can cause burns) Wear gloves, mask and goggles when processing fresh. Fresh extracted into castor oil and distributed over tissue. Can be used for shrinking uterine fibroids with castor oil.</p>
<p><b><i>Picrorhiza kurroa</i></b> (Kutki, <i>Plantaginaceae</i>, Plantain Family) Another Indian plant, digestive bitter, all types of Hepatitis viruses.</p>
<p><b><i>Polygonum cuspidatum</i></b> (Japanese Knotweed, <i>Polygonaceae</i>, Buckwheat Family) Resveratrol/antioxidant component, with anti-viral properties.</p>
<p><b><i>Sambucus nigra fruc.</i></b> (Elderberries, <i>Adoxaceae</i>, Adoxa Family) Too much can cause diarrhea(was utilized traditionally for emesis and laxative properties), used as a diaphoretic, will increase activity in the immune system(WBC production).</p>
<p><b><i>Tahebuia impetigosa</i></b> (Pau d'Arco, <i>Bignoniaceae</i>, Bignonia Family), S. Am plant, using the red hardwood of the tree (through wood chipper), excellent anti-fungal. Link between cancer and fungus--minor anti-cancer herb--if patients have terrain with or is susceptible to fungal infections (i.e. damp heat), for topical or internal fungal infections.</p>

<p><b><i>Usnea barbata</i></b> (Old Man's Beard, <i>Parmeliaceae</i>, Lichen-forming Fungus)  Broad spectrum antimicrobial, bacteria or viruses.  Anti-fungus, one of best broad spectrum antimicrobials.</p>
<p><b>DIAPHORETICS: Supporting the effective fever, encourages motion of heat/toxins outward</b></p>
<p><b><i>Achillea millefolium</i></b> (Yarrow, <i>Asteraceae</i>, Aster or Composite Family), opens pores!**  Moves blood in and down (start periods), out if drink as a tea.  Diaphoretic, the EO gathered in skin and opens the pores, sweat that follows that is evaporated off the skin.</p>
<p><b><i>Asclepias tuberosa</i></b> (Pleurisy Root, <i>Apocynaceae</i>, Dogbane Family),  Respiratory infections, like pleurisy, alleviated by this herb.</p>
<p><b><i>Capsicum annuum</i></b> (Cayenne Pepper, <i>Solanaceae</i>, Nightshade Family),  Moves blood from core to periphery.</p>
<p><b><i>Eupatorium perfoliatum</i></b> (Boneset, <i>Asteraceae</i>, Aster or Composite Family),  Mobilizes the immune system by activating the WBC and causing a diaphoresis.  Combines with Sambucus flowers, mint leaves.</p>
<p><b><i>Mentha piperita</i></b> (Peppermint, <i>Lamiaceae</i>, Mint Family)  Cooling and warming alternately, moves blood to surface, combine with sambucus and eupatorium.</p>
<p><b><i>Nepeta cataria</i></b> (Catnip, <i>Lamiaceae</i>, Mint Family), gentle diaphoretic, good to sensitive individuals ie children  Enema---where kids can't drink, or are throwing up---Lukewarm, rectal tea, will see beads of sweat--lq into the diaper, sweat, break the sweat and it's a nervine/sedative.  50 ml for baby, 100ml for toddler, more for older children.</p>
<p><b><i>Sambucus nigra flos.</i></b> (Elder flowers, <i>Adoxaceae</i>, Adoxa Family)  Flowers become berries---5 kg of berries, 1kg if just the flower.  Harvest some for winter, and keep fruit for slight purgative.</p>
<p><b><i>Sambucus nigra fruc.</i></b> (Elderberries, <i>Adoxaceae</i>, Adoxa Family), not as diaphoretic as the flowers, however  More immunostimulant, more active and effective at warmer body temperature (i.e. immune cells move/ migrate faster--self-propelled to migrate into tissues)****important to allow the cells to do their work!</p>
<p><b><i>Zingiber officinale</i></b> (Wild ginger, <i>Zingiberaceae</i>, Ginger Family)  Mild diaphoretic, if core overheats, will move out to periphery,</p>
<p><b>HEPATOPROTECTIVE: these plants have different ways of protecting the liver as it processes toxins</b>  <b>Turn a compound into a toxin</b></p>
<p><b><i>Bupleurum falcatum</i></b> (Bupleurum, <i>Apiaceae</i>, Carrot or Parsley Family)  Saponins are anti inflammatory to the liver.  Keep compounds out of blood and into bile system.</p>
<p><b><i>Chelidonium majus</i></b> (Greater Celandine, <i>Papaveraceae</i>, Poppy Family)  highly bitter, <b>chilling to liver</b>,  <i>Very bitter, and extreme maker of bile (large quantities)</i>  <i>E.g. petrochemical--LV will soak it up, only way to leave is with bile</i>  <i>Conjugate with toxin to remove from circulation</i>  <i>NB: pt with Hep, can feel heat over LV</i></p>
<p><b><i>Curcuma longa</i></b> (Turmeric, <i>Zingiberaceae</i>, Ginger Family)  Anti inflammatory systemic. Hepatoprotective.</p>

<p><b><i>Glycyrrhiza glabra</i></b> (Licorice, <i>Fabaceae</i>, Pea Family)  Kills hepatitis.  Saponins anti inflammatory, increase cortisone (endogenous), prevents destruction (for alcoholics and viral hepatitis and acetaminophen abuse).</p>
<p><b><i>Hypericum perforatum</i></b> (St John's Wort, <i>Hypericaceae</i>, St. John's Family)  Anti inflammatory, stimulates liver detox pathways.</p>
<p><b><i>Panax notoginseng</i></b> (Notoginseng, <i>Araliaceae</i>, Ginseng Family)  Only Hep C.</p>
<p><b><i>Picrorhiza kurroa</i></b> (Kutki, <i>Plantaginaceae</i>, Plantain Family),  Antiviral, cholagogue.</p>
<p><b><i>Schisandra chinensis</i></b> (Five Flavour Berry, <i>Schisandraceae</i>, Schisandra Family),  Anti inflammatory, cholagogue, protects liver.</p>
<p><b><i>Silybum marianum</i></b> (Milk Thistle, <i>Asteraceae</i>, Aster or Composite Family),  Oil in seed, combines with toxins and effects compounds going through the liver.  The Amanita mushroom---will shut down the liver--this herb is the only cure!!!  It often grows in the same regions where find these mushrooms.  Will protect against petrochemical poisons--neutralized by this herb.  One plant that highly recommends the etOHic extract.  Pills require very high quantity vs. tincture.</p>
<p><b><i>Taraxacum officinalis rad.</i></b> (Dandelion root, <i>Asteraceae</i>, Aster Family),  Mild, anabolic, hepatoprotectant.</p>
<p><b>IMMUNOMODULATORS:</b>  <b>Not stimulants , or suppressors</b>  are in fact amphoteric---i.e. if immune system is swinging towards autoimmune states, or anaphylactic, will bring it back  Mushrooms all have effect in bone marrow--helps the differentiation  Works at most fundamental area of immune system  Good for patients with cancer, autoimmune conditions, helps to reset/normalize the immune system activity</p>
<p><b><i>Astragalus membranaceus</i></b> (Milk Vetch, <i>Fabaceae</i>, Pea Family)</p>
<p><b><i>Glycyrrhiza uralensis</i></b> (Chinese Licorice, <i>Fabaceae</i>, Pea Family)</p>
<p><b><i>Panax ginseng</i></b> (Korean Ginseng, <i>Araliaceae</i>, Ginseng Family)</p>
<p><b><i>Panax quinquefolius</i></b> (North American Ginseng, <i>Araliaceae</i>, Ginseng Family)</p>
<p><b><i>Withania somnifera</i></b> (Ashwagandha, <i>Solanaceae</i>, Nightshade Family)  Mild</p>
<p><b>MUSHROOMS</b>  <b><i>Fomes fomentarius</i></b>  <b><i>Fomitopsis pinicola</i></b>  <b><i>Ganoderma applanatum/lucidum/tusgae</i></b>  <b><i>Hericium erinaceus/americanum/coraloides</i></b>  <b><i>Inonotus obliquus</i></b> (Chaga, not really a mushroom per se)  <b><i>Phelinus ignarius</i></b>  <b><i>Piptoporis betulina</i></b>  <b><i>Trametes versicolor</i></b></p>
<p><b>CHILDREN'S COLD &amp; FLU</b></p>

<b>DEEP IMMUNE ACTIVATION</b>
<b>IMMUNOSTIMULANTS:</b>
<i>Andrographis paniculata</i> (Chiretta, <i>Acanthaceae</i> , Acanthus Family), Conditions immune cells to move more effectively and faster.
<i>Asclepias tuberosa</i> (Milkweed/Butterfly plant, <i>Apocynaceae</i> , Dogbane Family) Respiratory.
<i>Astragalus membranaceus</i> (Milkvetch, <i>Fabaceae</i> , Pea Family) Functions in the bone marrow, stimulates the activity of the Peyer's patches in response to allergen agents. Helps to generate stem cells, in differentiation--into its correct state-- for Leukemia where cells no longer properly differentiate (with Ganoderma).
<i>Codonopsis pilosula</i> (Parasitic Fungus) Like Ginseng ---the longer the root is in the ground, the better (2-10 years) immunostimulator and slight blood sugar and endocrine regulator.
<i>Echinacea angustifolia</i> (Echinacea, <i>Asteraceae</i> , Aster Family) Stimulates proliferation and motility of WBC's (phagocytes), John prefers <i>E. angustifolia</i> .
<i>Eleutherococcus senticosus</i> (Siberian Ginseng, <i>Araliaceae</i> , Ginseng Family) Should be considered for radiation poisoning(chemotherapy/Chernobyl) and subsequent physiological stress. Immunomodulator, and adaptogen, consider this a poor man's ginseng (can be grown at cheaper price). In PNI---called upon by large numbers of practitioners to regulate the complexity of the immune systems under stress IMPORTANT plant (concentrates 2:1, 4:1---don't need to be this high to be effective), we do 1:5
<i>Eupatorium perfoliatum</i> (Boneset, <i>Asteraceae</i> , Aster Family) More of a stimulant than a modulator.
<i>Glycyrrhiza glabra</i> (Licorice, <i>Fabaceae</i> , Pea Family) Stimulant and immunomodulator. Immuno-endocrine modulator, this herb often needed, amphoteric. Will up and down regulate Immune and Endocrine systems. Concentrated Extracts: Warning for overdose.
<i>Usnea barbata</i> (Old Man's Beard, <i>Parmeliaceae</i> , Lichen-forming Fungus) More immunostimulant, actively antimicrobial, antiviral.
<b>LYMPHATICS:</b> <b>Lymph system- cavities/vessels/channels inhabited by immunological cells/substances and fluids</b> <b>Water connects/unites all individuals in the system ie. cells/tissues/organs, thus it is important to keep channels clean</b> <b>Lymphatics help water/fluids/substances/metabolic byproducts/toxins move through lymph pathways and its various boundaries for elimination or recycling</b>
<i>Arctium lappa</i> (Burdock, <i>Asteraceae</i> , Aster Family) Works with liver and kidneys, used whenever there is an infection of the liver or infection to be treated within the GI tract, or linked with toxicity, infections that have endocrine disrupting functions (i.e. diabetes as a result of tropic infections)--helpful with high insulin levels, and not stimulating the blood sugar levels.
<i>Ceanothus americanus</i> (New Jersey Tea/Red Root, <i>Rhamnaceae</i> , Buckthorn Family) Astringent, popular with the eclectics, one of few plants with strong affinity to spleen and lymphatic tissues. If have infection/ inflammation in Spleen a herb of choice, reduces effect of blood cells sticking to each other - improves the fluid/substance dynamics in bloodstream.

<p><b><i>Echinacea angustifolia</i></b> (Echinacea, <i>Asteraceae</i>)  Increases motility of phagocytes/immune cells.  Works through lymphatic (fluid motility at Peyer's and other areas via polysaccharides and isobutylamides) , used for edema, for infections or toxicities that affect the immunological system, this herb can be used to help filter out the fluids from tissues, protects against agents that break down extracellular matrix which is the fluids/substances between cells/tissues.  It is the essential role of the lymphatic system to maintain and detoxify the ECM.</p>
<p><b><i>Galium aparine</i></b> (Cleavers, <i>Rubiaceae</i>, Madder Family)  Causes fluid to leave tissue and into lymph system--good in edema.</p>
<p><b><i>Iris versicolor</i></b> (Purple Iris, <i>Iridaceae</i>, Iris Family)  Beautiful--strong lymphatic, some antimicrobial, and a lot of symbolic meaning.  Plant that is powerful and not to be fooled around with, MUST be mitigated with other plants.</p>
<p><b><i>Larrea tridentata</i></b> (Chaparral, <i>Zygophyllaceae</i>, with <i>Guaiacum</i> and <i>Tribulus</i>)  Greasy, oily plant (like creosote), great for urtications, popular in phytotherapy in cancer treatment.  NDGA??? Compound isolated (active ingredient)--if given only this portion, it is toxic, but as whole plant can be very helpful.  Hoxsey formula.</p>
<p><b><i>Phytolacca decandra</i></b> (Pokeweed, <i>Phytolaccaceae</i>, Pokeweed Family)  STRONGEST LYMPHATIC, if on the skin, will swell up with fluid under skin, drinking, moves fluids.  If have congestion, they will swell up adjacent, can't drain fast enough---lymph at neck, in chest, why needs to be mixed with other herbs.</p>
<p><b><i>Scrophularia nodosa</i></b> (Figwort, <i>Scrophulariaceae</i>, Figwort or Snapdragon Family)  Lymph nodes in neck swell--underarms, breast--used when palpable or visible.  Think: Black Plague and Bubos.</p>
<p><b><i>Smilax spp.</i></b> (Sarsaparilla, <i>Smilacaceae</i>, Greenbrier/Sarsaparilla Family)  Used for infection in Lymph glands, first used with STIs in LN.</p>
<p><b><i>Stillingia sylvatica</i></b> (Toothleaf, <i>Euphorbiaceae</i>, Spurge Family)  Popular in eclectics--safe and sure lymphatic for infections/ CA where Lymph congested, this is a herb of choice.</p>
<p><b><i>Tahebuia impetigosa</i></b> (Pau d'Arco, <i>Bignoniaceae</i>, Bignonia Family)  Reduces size of tumours and the pain they cause, effective against a variety of tumours (prostate, breast, leukemia, colon, liver), Cancer invades the Lymph glands, one most foolish thing someone can do is to remove the Sentinel nodes to determine <i>if</i> they have cancer--a guarantee that the glands are doing their job.</p>
<p><b><i>Trifolium pratense</i></b> (Red Clover, <i>Fabaceae</i>, Pea Family)  Strong lymphatic, too much will cause glands to swell moving fluids into circulation, another big anticancer herb (Dr. Christopher's Trifolium Compound, Hoxsey Tonic).</p>
<p><b><i>Viola odorata</i></b> (Sweet Violet, <i>Violaceae</i>, Violet Family)  For breast tumours (fresh viola with olive oil)--with phytolacca (CO) to move fluids, one of John's favourites.</p>
<p><b>SPLEEN: comprised of two distinct types of tissue: white pulp and red pulp. White pulp is lymphatic tissue, mostly lymphocytes, arranged around central arteries; red pulp consists of venous sinuses filled with blood, and cords of splenic tissue consisting of red blood cells, macrophages, lymphocytes, plasma cells and granulocytes.  A site of B cell proliferation into plasma cells, phagocytosis of bacteria and worn out RBCs and platelets, a blood reservoir, releasing blood in times of demand, such as during hemorrhage.</b></p>
<p><b><i>Achillea millefolium</i></b> (Yarrow, <i>Asteraceae</i>, Aster Family)  Directs blood, Spleen is a reservoir for blood.</p>
<p><b><i>Astragalus membranaceus</i></b> (Huang Qi/Milkvetch, <i>Fabaceae</i>, Pea Family)  Nourishing, sweet.</p>

<i>Baptisia tinctoria</i> (Wild Indigo, <i>Fabaceae</i> , Pea Family) Decongestant
<i>Ceanothus americanus</i> (Red Root, <i>Rhamnaceae</i> , Buckthorn Family) Relieves congestion, improves blood fluid dynamics.
<i>Eleutherococcus senticosus</i> (Siberian Ginseng, <i>Araliaceae</i> , Ginseng Family)
<i>Iris versicolor</i> (Purple Iris/Blue Flag, <i>Iridaceae</i> , Iris Family)
<i>Lentinus edodes</i> (Shiitake Mushroom, <i>Marasmiaceae</i> )
<i>Ligustrum lucidum</i> (Glossy Privet, <i>Oleaceae</i> , Olive Family)
<i>Polygonum cuspidatum</i> (Japanese Knotweed, <i>Polygonaceae</i> , Buckwheat)
<i>Schisandra chinensis</i> (Five Flavour Berry, <i>Schisandraceae</i> , Schisandra Family)
<b>THYMUS: Lymphocytes from bone marrow mature in the Thymus and develop into immunocompetent T and B cells</b>
<i>Achillea millefolium</i> (Yarrow, <i>Asteraceae</i> , Aster Family)
<i>Astragalus membranaceus</i> (Milkvetch, <i>Fabaceae</i> , Pea Family) Encourages stem cell production.
<i>Bupleurum falcatum</i> (Bupleurum, <i>Apiaceae</i> , Carrot Family)
<i>Echinacea angustifolia</i> (Echinacea, <i>Asteraceae</i> , Aster Family) Improves motility of immune cells.
<i>Eleutherococcus senticosus</i> (Siberian Ginseng, <i>Araliaceae</i> , Ginseng Family)
<i>Ganoderma spp.</i> (Reishi Mushroom, <i>Ganodermataceae</i> , Reish Family) Improves immune cell differentiation.
<i>Glycyrrhiza glabra</i> (Licorice, <i>Fabaceae</i> , Pea Family)
<i>Lentinus edodes</i> (Shiitake Mushroom, <i>Marasmiaceae</i> )
<i>Panax ginseng</i> (Korean Ginseng, <i>Araliaceae</i> , Ginseng Family)
<i>Panax quinquefolius</i> (North American Ginseng, <i>Araliaceae</i> , Ginseng Family)
<i>Tahebuia impetigosa</i> (Pau d'Arco, <i>Bignoniaceae</i> , Bignonia Family)
<i>Thymus vulgaris</i> (Thyme, <i>Lamiaceae</i> , Mint Family)
<i>Viscum album</i> (European Mistletoe, <i>Santalaceae</i> , Sandalwood Family)

## SUMMARY OF ACTIONS

### ADAPTOGENS

*Aralia nudicaulis, Aralia racemosa, Astragalus membranaceus, Centella asiatica, Codonopsis pilosula, Eleutherococcus senticosus, Epimedium grandis orum, Glycyrrhiza glabra, Glycyrrhiza uralensis, Gynostemma pentaphyllum, Occimum sanctum, Oplopanax horridum, Panax notoginseng, Panax ginseng, Pfafa paniculata, Panax quinquefolius, Rehmannia glutinosa, Rhodiola rosea, Schisandra chinensis, Verbena off., Withania somnifera, DEEP IMMUNE ACTIVATION and THREE GINSENGS TONIC*

### ANTI-INFLAMMATORY

*Alchornea cordifolia, Bidens pilosa, Boswellia thurifera, Bupleurum chinensis, Coptis chinensis, Cryptolepsis sanguinolenta, Curcuma longa, Dioscorea villosa, Dipsaucus sylvestris, Glycyrrhiza glabra, Isatis tinctoria, Panax quinquefolius, Salix alba, Schisandra chinensis, Sida cordifolia, Withania somnifera*

### ANTIFUNGALS

*Berberis vulgaris, Calendula off., Hydrastis canadensis, Juglans nigra, Lomatium dissectum, Mahonia aquifolium, Oreganum spp., Tanacetum vulgare, Tahebuia impetigosa, Zingiber off.*

### ANTHELMINTIC/ANTIPARASITE

*Alchornea cordifolia, Artemesia absinthium, Artemesia annua*

### ANTIMICROBIAL

*Alchornea cordifolia, Andrographis paniculata, Arctostaphylos uva-ursi, Artemesia absinthium, Artemesia annua, Berberis vulgaris, Bidens pilosa, Commiphora mol-mol, Calendula off., Coptis chinensis, Cryptolepsis sanguinolenta, Echinacea angustifolia, Glycyrrhiza glabra, Hydrastis canadensis, Inula helenium, Isatis tinctoria, Juniperus communis, Ligusticum porteri, Lomatium dissectum, Mahonia aquifolium, Monarda didyma, Nigella sativa, Oreganum spp., Picrorhiza kurroa, Polygonum cuspidatum, Propolis, Rosmarinus off., Salvia off., Sida cordifolia, Thymus vulgaris, Uncaria tomentosa, Usnea barbata, Zingiber off.*

### ANTI-OXIDANTS

*Glycyrrhiza glabra, Lycium barbatum, Occimum sanctum, Panax ginseng, Panax quinquefolius, Schisandra chinensis, Withania somnifera*

### ANTIVIRAL

*Andrographis paniculata, Artemesia absinthium, Artemesia annua, Echinacea angustifolia, Glycyrrhiza glabra, Hypericum perforatum, Isatis tinctoria, Ligusticum porteri, Lomatium dissectum, Melissa off., Panax notoginseng, Phytolacca decandra, Picrorhiza kurroa, Polygonum cuspidatum, Sambucus nigra fruc., Tahebuia impetigosa, Usnea barbata*

### **DIAPHORETICS**

*Achillea millefolium, Asclepias tuberosa, Capsicum spp., Cryptolepis sanguinolenta, Dipsaucus sylvestris, Nepeta cataria, Eupatorium perfoliatum, Mentha piperita, Monarda didyma, Sambucus nigra os, Sambucus nigra fruc., Zingiber off.*

### **HEPATOPROTECTIVE**

*Bupleurum chinensis, Chelidonium majus, Curcuma longa, Glycyrrhiza glabra, Hypericum perforatum, Panax notoginseng, Picrorhiza kurroa, Schisandra chinensis, Silybum marianum, Taraxacum off. rad.*

### **IMMUNOMODULATORS**

*Glycyrrhiza uralensis, Lycium barbatum, Panax ginseng, Panax quinquefolius, Withania somnifera, CHILDREN'S COLD & FLU, DEEP IMMUNE ACTIVATION*

### **IMMUNOSTIMULANTS**

*Andrographis paniculata, Asclepias tuberosa, Astragalus membranaceus, Codonopsis pilosula, Echinacea angustifolia, Eleutherococcus senticosus, Eupatorium perfoliatum, Glycyrrhiza glabra, Isatis tinctoria, Usnea barbata*

### **LYMPHATICS**

*Arctium lappa, Ceanothus americanus, Echinacea angustifolia, Galium aparine, Iris versicolor, Larrea tridentata, Viola odorata Phytolacca decandra, Scrophularia nodosa, Smilax spp., Stillingia sylvatica, Tahebuia impetigosa, Trifolium pratense*

### **SPLEEN**

*Achillea millefolium, Alchornea cordifolia, Astragalus membranaceus, Baptisia tinctoria, Ceonothus americanus, Eleutherococcus senticosus, Iris versicolor, Lentinus edodes, Ligustrum lucidum, Polygonum cuspidatum, Schisandra chinensis*

### **THYMUS**

*Achillea millefolium, Astragalus mem., Bupleurum chinensis, Echinacea angustifolia, Eleutherococcus senticosus, Ganoderma spp., Glycyrrhiza glabra, Lentinus edodes, Panax ginseng, Viscum album, Panax quinquefolius, Tahebuia impetigosa, Thymus vulgaris*