

Commonplace and Undervalued Herbs

NEW INSIGHTS, APPLICATIONS, AND RESEARCH

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See supplemental readings at: <http://naimh.com/roots>

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Introduction

Inverse pyramids of knowledge

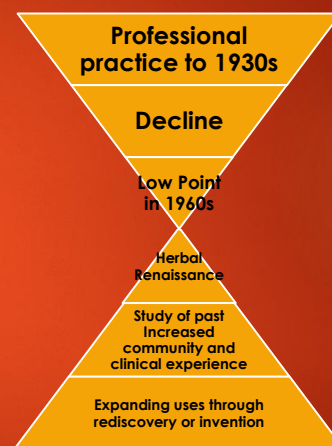


Physiomedicalism then and now

- ▶ In 1936, A British herbalist was expected to learn almost 400 herbs, and know 6-8 properties or uses for each. Based on underlining in an old copy of *Physiomedical Therapeutics* by T.J. Lyle published by the NIMH. Consider this to be 2400 to 3200 "bits" of information.
- ▶ Today a professional herbalist in North American may know, on average, something about 150-200 herbs but know only 2-3 uses or properties. Consider this to be 300-600 "bits"
- ▶ The knowledge of the multiple uses and properties of herbs has declined precipitously during the "dark middle years" of the 20th century.
- ▶ Most contemporary herbal education does not approximate the former level.

Sources of expanding uses

- ▶ From "mining" old sources.
- ▶ From personal, community, and clinical hands-on practice.
- ▶ Synthesis of Western and Asian systems
- ▶ New uses evolving in folk medicine throughout the world
- ▶ Modern scientific trials of traditional or folk uses.
- ▶ Insights from modern constituent science.



Types of information

- ▶ Folk or professional uses for 20th century diseases not formerly common
- ▶ Exploration of forms not traditionally used.
- ▶ Exploration of herbs for phenomena not previously recognized (biofilms for instance)
- ▶ Exploration of applications within the realm of modern conventional conventional medicine, such as surgery

Forms

- ▶ Herbs generally given as teas, tinctures, powders
- ▶ For some herbs, teas and tinctures have very different properties
- ▶ Powders generally possess the constituents and the properties of both the tea and the tincture.
- ▶ The modern clinic often avoids “messy” items, prefers tinctures, or pre-made formulas.
- ▶ In many cases, the “messy” form is superior to the tincture because effective doses are more easily obtained and not excessively expensive.

Urtica species

Nutritive properties

- ▶ Strong decoction offers significant mineral and trace element nutrition.
- ▶ Case: A woman of short stature (5'0") had brittle hair that would not reach past her neckline without fraying. She took 16 ounces of a strong nettle tea a day, in two doses, for six months.
- ▶ At six months, her hair reached to her waist without fraying.
- ▶ Consider implications for the mineral nutrition and health of all the cells and pathways in the body.

For nutritive purposes an herbal **defusion** may be made using a standard coffee maker hot plate.

This is like in **infusion** because it never reaches a very high temperature.

It is also like a **decoction** because it can be kept on low heat for several hours



Urtica here is placed in the carafe with a portion of *Althaea* and a little *Glycyrrhiza* to counter the dryness of the nettle



With the basket empty, hot water from the coffee maker pours over the plant material in the carafe.

It produced a useful tea within 20 minutes, but may be steeped for 1-3 hours, generally without excessive loss of aromatics.



The result at 30 minutes is a rich dark nutrient dense tea.



Urtica, Mentha, and molasses

	Nettle (oz)	Mint (oz)	Molasses (T)	Total
▶ Calcium (mg)	966*	540	176	1682
▶ Magnesium	286	220	44	550
▶ Iron	1.4	2	3.6	7.0
▶ Potassium	583	753	510	846

- ▶ 2 quarts of strong decoction potentially contains more than the RDA of calcium, magnesium, more than half the iron, and a third of the daily potassium requirement.

*** Amounts in dry plant material, much will remain in the marc

Alterative effects

- ▶ One of the premier alterative, blood purifying, depurative herbs.
- ▶ Unlike other alteratives, it is neutral in humoral temperature effects, and can be taken on a daily basis without heating or cooling.
- ▶ Its in drying and draining in effect, and thus useful for conditions on damp accumulation. Combine with nutritive demulcents.
- ▶ It produces diuresis through draining the tissues rather than through effects directly on the kidney.
- ▶ Combined with its anti-inflammatory effects, it is useful for conditions of damp heat.
- ▶ In Central European herbalism it is the first go-to herb for arthritis.

Anti-inflammatory effects

- ▶ Decoction or powder have traditionally been used for inflammatory conditions.
- ▶ New research into the tincture, not generally a traditional form, have shown anti-inflammatory properties in-vivo and in human clinical trials.
- ▶ In a trial of medicated diabetics a percolation of *Urtica dioica* with 45% alcohol and taken in high doses for 8 weeks, a profound lowering of CRP was achieved. See following slide.
- ▶ Significant lowering of HbA1C (7.3 to 6.11%) and fasting glucose (112 to 88 mg/dl (in medicated patients) was also achieved.
- ▶ An herbalist with Type 1 diabetes relates that *Urtica* tea has no effect on her insulin requirements, but eating the whole plant lowers them.
- ▶ One anti-diabetic/anti-inflammatory constituent soluble in alcohol but not water is **chlorogenic acid**, shared with *Vaccinium*, *Coffea*, and *Helianthus* seed

Doses of *Urtica* tincture (mL) per body weight (lbs)

Lbs	Daily dose	Dose per meal (x3)
165	15 mL	5 mL
198	18	6
220	20	6.7

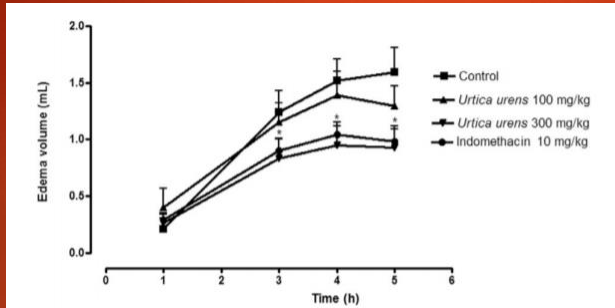
Changes in hsCRP (mg/L) in group of 50 subjects

	Low	Mean	High
Baseline	1.46	2.52	3.58
Eight weeks	1.26	1.37	1.48

- N = 1.0 to 3.0
- No change in placebo group (avg 3.0)
- Interleukin-6, an inflammatory marker, fell from 3.52 to 1.19 pg/mL

Namazi N, Esfanjani AT, Heshmati J, Bahrami A. The effect of hydro alcoholic Nettle (*Urtica dioica*) extracts on insulin sensitivity and some inflammatory indicators in patients with type 2 diabetes: a randomized double-blind control trial. Pak J Biol Sci. 2011 Aug 1;14(15):775-9.

Urtica ethanol extract equivalent to indomethacin



Intraperitoneal administration
In mice.

300 mg/kg as extract in 80%
ethanol

Marrassini C, Acevedo C, Miño J, Ferraro G, Gorzalczy S. Evaluation of antinociceptive, antiinflammatory activities and phytochemical analysis of aerial parts of *Urtica urens* L. *Phytother Res.* 2010 Dec;24(12):1807-12.

Useful combinations

- ▶ *Urtica* with *Althaea* and/or *Glycyrrhiza*. The demulcents counter the excessive dryness of the nettles
- ▶ *Urtica* with *Avena* straw. Enhances nutrition without altering humoral effects
- ▶ *Urtica* with *Arctium*. Broad general alterative. Hot skin conditions.
- ▶ *Urtica* with *Arctium* and *Echinacea*. Decoction. Acute skin conditions, boils.
- ▶ *Urtica* with *Arctium*, simmered with cloves of garlic. Same as above, a traditional Gypsy remedy from Spain.

Matricaria species

Digestion

- ▶ Complex herb with synergistic effects on GI tract.
- ▶ Near-temperate in humor, near balance of hot, cold, moist, dry, with slight inclination to dryness. May be taken regularly and in substantial doses without producing a humoral imbalance.
- ▶ Bitter, carminative, anti-spasmodic, anti-inflammatory, nervine. It thus supports secretions, motility, and barrier function of the gut.
- ▶ Pairs well with *Mentha* for digestive purposes. The pair makes the foundation for further digestive formulation with addition of such herbs as *Althaea*, *Foeniculum*, *Glycyrrhiza*, *Filipendula*, *Agrimonia*, *Achillea*, *Plantago*, *Calendula*

Topical anti-inflammatory

- ▶ Patient with gluten intolerance and eczema right sided on ankle and elbow.
- ▶ Was generally unresponsive to internal treatments with poor compliance with gluten free diet for six weeks.
- ▶ After agreeing to complete "gluten fast" was advised to make strong tea of *Matricaria* and *Achillea*, and soak foot TID.
- ▶ Inflammation was resolved in four days on ankle, but unchanged on elbow.
- ▶ Both plants contain azulene/chamazulene and related anti-inflammatory compounds
- ▶ **Consider benefits for inflammation in upper GI as well.**

Acute Abdomen

- ▶ ND-Herbalist Tania Neubauer developed use of tincture for acute abdomen in rural Nicaraguan primary hospital setting.
- ▶ Primitive hospital without imaging or surgical capacity.
- ▶ Patients with acute abdomen might be transported by boat and car for several hours to regional hospital for evaluation. Cost of transport greatly exceeded the average daily cost of living in this poor rural area.
- ▶ For screening, Dr. Neubauer would give the patients large doses of *Matricaria* tincture. Many cases then resolved completely due to anti-spasmodic effects, and transport was not necessary.

Nervine

- ▶ *Matricaria* is near to neutral in both temperature and humidity.
- ▶ It may be taken regularly without producing humoral imbalance
- ▶ It maybe be combined with either warming or cooling nervines depending on the patient
- ▶ *Matricaria* with *Scutellaria* and/or *Verbena* is a remarkable nervine/hypnotic for the patient with heat signs accompanying insomnia, whether true or deficiency heat. This combination works well in powder or tea but should never be boiled, which destroys the sedative properties of *Scutellaria*.

Historical use for fever

- ▶ Around 1800 the three chief herbs in the US used to treat malarial fever were *Cinchona*, *Eupatorium perfoliatum*, and *Matricaria*.
- ▶ Large doses of the tea, up to a quart, were administered.
- ▶ Large doses may induce vomiting
- ▶ The use for the fever and chills of malaria recorded also in Egyptian medical literature.

Allium sativum

History

- ▶ Garlic has appeared in the official materia medica of every major system of natural medicine since medical books have been written down.
- ▶ Its major uses are: topical disinfectant/antifungal; gastrointestinal disinfectant for bacterial or parasitic infection; immune enhancement, especially antiviral and antitumor mechanisms; respiratory expectorant and antimicrobial; circulatory and blood tonic.

Garlic constituents

Within the Cell

Aliin = *allicin* plus a sugar molecule
(inactive)

Aliinase = enzyme to remove sugar from *allicin*

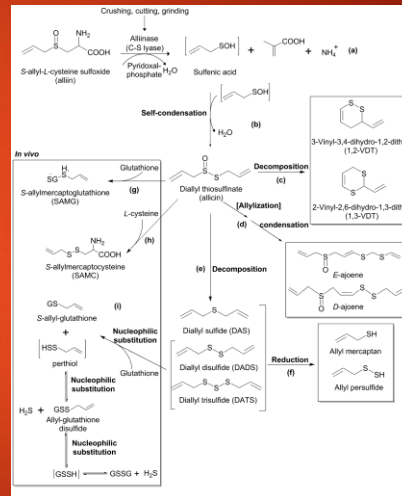
Cell destruction allows *aliinase* to act on *aliin* to free up active *allicin*

Allicin

- ▶ Responsible for the burning of garlic.
- ▶ A plant anti-feedant to protect the plant from browsing microorganisms and others.
- ▶ A broad-spectrum antimicrobial, to protect the plant from bacterial infection.
- ▶ A broad-spectrum anti-fungal, to protect the plant from fungi.
- ▶ Cytotoxic, will kill almost any cell it comes in direct contact with in sufficient concentration
- ▶ Can cause third degree burns on human skin.

Allicin degradation

- ▶ The half-life is 18 hours. After that time, only 50% of the allicin remains. After 36 hours, only 25%, and so on.
- ▶ The degradation produces about 30 sulfur-containing chemical byproducts, many of which have potent medicinal activity.
- ▶ Heat rapidly destroys allicin, and also generates new constituents that do not occur without heating.
- ▶ Some breakdown products have selective solubility in water, alcohol, oil, or vinegar.



Galen's treatment for arterial wounds in gladiators

- ▶ Crush and soak garlic in wine overnight. Retains a reduced level of allicin, and adds the allicin breakdown products.
- ▶ Make a wet poultice of flour with this and pack into the wound to stop bleeding.
- ▶ Cover with a cloth, and keep moist with the garlic/wine tincture.
- ▶ Stops bleeding with the flour matrix, and prevents infection and formation of biofilm with the garlic/wine mixture.

Processing

- ▶ Prevent exposure to heat to maintain allicin
- ▶ Or, stir fry or boil to transform the allicin and eliminate it.
- ▶ Pulverize the cloves, mix them with a liquid, and use them immediately for very high allicin content.
- ▶ Let pulverized cloves sit in water, vinegar, or wine for three to six hours or overnight to create a "soup" of allicin plus many new components.
- ▶ Let them soak and age for two or three days to eliminate the allicin and many of the irritating effects of garlic
- ▶ Macerate pulverized cloves in warm oil to yield constituents not present in raw garlic or in most commercial products.
- ▶ Make your own powder with low-temperature drying of garlic slices, then powdering.

Allium and infections

- ▶ Topical use
 - ▶ Direct antimicrobial action
 - ▶ Anti-biofilm action through inhibition of quorum-sensing
 - ▶ Constituents inhibit bacterial efflux pumps
 - ▶ Historical use in Egypt, Greece, Rome, Britain
- ▶ Internal use
 - ▶ Strengthens anti-viral defenses (T-killer cell proliferation)
 - ▶ Constituents may circulate as systemic antibiotics
 - ▶ Constituents may circulate with anti-biofilm effects.

Garlic vs Flagyl for Bacterial Vaginosis

- ▶ 500 mg powder of *Allium sativum*
- ▶ 250 mg Metronidazole
- ▶ Two tablets with meals orally each 12 hrs.
- ▶ Successful oral application with reduction of the biofilm implies that the anti-microbial and possibly the anti-biofilm constituents are delivered systemically to the vaginal mucosa

Mohammadzadeh F, Dolatian M, Jorjani M, Alavi Majd H, Borumandnia N. Comparing the therapeutic effects of garlic tablet and oral metronidazole on bacterial vaginosis: a randomized controlled clinical trial. Iran Red Crescent Med J. 2014 Jul;16(7):e19118.

Table 4. Comparison of Laboratory Improvement in Women With Bacterial Vaginosis ^{a,b}

Group	Garlic	Metronidazole	Total
Lab Improvement	41 (68.3)	33 (55)	74 (61.7)
Lack of Lab Improvement	19 (31.7)	27 (45)	46 (38.3)
Total	60 (100)	60 (100)	120 (100)

^a Data are presented as No. (%).
^b Chi square = 2.256 and P > 0.05.

Table 5. Comparison of Treatment Success in Women With Bacterial Vaginosis ^{a,b}

Group	Garlic	Metronidazole	Total
Successful Treatment	38 (63.3)	29 (48.3)	67 (55.8)
Failure in Treatment	22 (35.7)	31 (51.7)	53 (44.2)
Total	60 (100)	60 (100)	120 (100)

^a Data are presented as No. (%).
^b Chi square = 2.737 and P > 0.05.

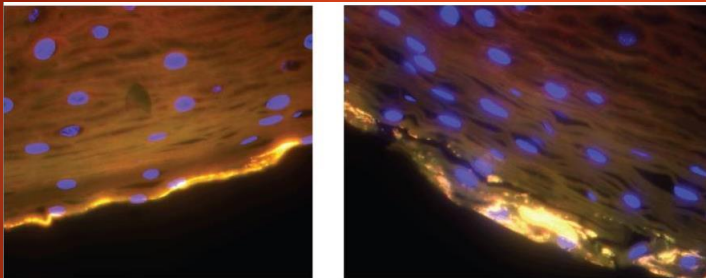
Table 6. Comparison of Medication Side Effects in Women With Bacterial Vaginosis ^{a,b}

Group	Garlic	Metronidazole	Total
With Side Effect	9 (15)	20 (33.3)	29 (24.2)
Without Side Effect	51 (85)	40 (66.7)	91 (75.8)
Total	60 (100)	60 (100)	120 (100)

^a Data are presented as No. (%).
^b Chi square = 5.502 and P > 0.032.

Bacterial vaginosis multispecies biofilm

“Currently, it is consensus that BV involves the presence of a dense, structured and polymicrobial biofilm, primarily constituted by *G. vaginalis* clusters, strongly adhered to the vaginal epithelium”



Red, yellow, and green hues show different species.
Blue circles are nuclear DNA from the host cells

The implication is that the anti-biofilm constituents of garlic survive a pass through the gut and liver and are distributed to the site of the infection.

Machado D, Castro J, Palmeira-de-Oliveira A, Martinez-de-Oliveira J, Cerca N. Bacterial Vaginosis Biofilms: Challenges to Current Therapies and Emerging Solutions. Front Microbiol. 2016 Jan 20;6:1528.

Garlic connoisseur's cocktail

- ▶ Alcohol, water, oil, and vinegar, each extract a different portion of allicin and its degradation byproducts.
 - ▶ Three cloves of garlic
 - ▶ 1 Tbls of red wine
 - ▶ 1 Tbls of vinegar
 - ▶ 1 Tbls of olive oil
- ▶ Blend well in a blender. Add 1/4 cup hot water, blend again.
- ▶ Let stand for 3-12 hours. Do not strain.
- ▶ Stir and add one-third of this to 4-8 ounces of hot water.
- ▶ Take a dose every 3-6 hours.
- ▶ Use as a medium to deliver other tinctures for cold/flu/fever

Althaea species

More than just some slime

- ▶ *Althaea officinalis* has been used persistently since ancient times as a demulcent, anti-inflammatory for oral, respiratory, digestive, and urinary complaints, and for topical effects on inflammations, infections, and wounds.
- ▶ Historical uses and comments suggest that it may have broader systemic effects on immunity and other health parameters, and recent scientific research is supportive of this.
- ▶ The Roman Pliny: "Whosoever shall take a spoonful of the mallows shall that day be free from all diseases that may come to him."

Effect on skin tissues

- ▶ Water soluble constituents of the root of *Althaea* tested on cultured human skin cells,
- ▶ Polysaccharides were taken up into the cytoplasm of the epithelial cells and stimulated their activity without triggering a higher proliferation.
- ▶ Formed bio-adhesive layers on the membranes of fibroblasts with a resulting upregulation of genes related to cell junction proteins, growth regulators, the protein matrix in the extracellular spaces, the release of chemical cytokines, and programmed cell death and turnover

Deters A1, Zippel J, Hellenbrand N, Pappai D, Possemeyer C, Hensel A. Aqueous extracts and polysaccharides from Marshmallow roots (*Althaea officinalis* L.): cellular internalisation and stimulation of cell physiology of human epithelial cells in vitro. *J Ethnopharmacol.* 2010 Jan 8;127(1):62-9.

Effect compared to steroid

- ▶ Water soluble fraction of *Althaea* was compared to a 0.05% concentration of the steroid dexamethasone on experimental inflammation.
- ▶ *Althaea* showed anti-inflammatory effects, though not as potent as the dexamethasone.
- ▶ When the *Althaea* extract was combined with the steroid, the effect was greater than that of the steroid alone.

Beaune A., et al. (1966). Anti-inflammatory experimental properties of marshmallow: its potentiating action on the local effects of corticoids. *Therapie*, 21: 341-347.

Systemic demulcent effects

- ▶ *Althaea* held in the mouth will produce moisture in the sinuses, lungs, the gut, and the genitourinary urinary tract.
- ▶ The effect is felt equally with the tea or the tincture, and with a smaller or larger dose.
- ▶ Taken persistently it acts as a "yin tonic" and improves the ability to hold moisture in a dry constitution.
- ▶ Contemporary science has no explanation for these widely observed and easily reproducible phenomenon.
- ▶ Generic demulcent tea: 4 *Althaea* 1 *Ulmus* 1 *glycyrrhiza*

Immune stimulation

- ▶ Thirty years ago, Wagner and his colleagues in Germany demonstrated that *Althaea polysaccharides* showed strong immunostimulating effects in test animals, more than doubling the rate of phagocytosis in a lab assay.

Wagner H., Proksch A. (1985). Immunostimulatory drugs of fungi and higher plants. In: Wagner H., Hikino H., Farnsworth N.R., eds. Economic and Medicinal Plant Research vol. 1. Academic Press, London 1985: 113-153

Immune stimulation

- ▶ *Althaea* ethanol extract effect on the non-specific activity of macrophages and neutrophils, and the antibody response of the humoral immune system of mice.
- ▶ *Althaea officinalis* extracts was equal to *Echinacea* in effect on humoral immune response and the phagocytic and antibacterial effects of macrophages
- ▶ It was superior to *Echinacea* in its effects on blood neutrophils.

Borsuk OS, Masnaya NV, Sherstoboev EY, Isaykina NV, Kalinkina GI, Reihart DV. Bull Exp Biol Med. 2011 Jun;151(2):194-6. Effects of drugs of plant origin on the development of the immune response.

Borsuk OS, Masnaia NV, Sherstoboev Elu, Isaiikina NV, Kalinkina GI. New promising natural immunocorrective agents. Vestn Ross Akad Med Nauk. 2009;(11):9-12. [Article in Russian]

Antitussive Effects

- ▶ Significant historical use of *Althaea* in combination with honey or sugar for a cough. Has been recorded persistently since the time of Ancient Egypt.
- ▶ In animal trials, suppressant effects of *Althaea polysaccharides* on coughing and was stronger than that of the non-narcotic cough suppressant control drug.
- ▶ At the highest doses, the *Althaea polysaccharide rhamnogalacturonan* was as potent as codeine in suppressing the cough reflex, but without negative drying effects on expectoration that may occur with codeine.

Sutovska M, Capek P, Franova S, Joskova M, Sutovsky J, Marcinek J, Kalman M. Antitussive activity of *Althaea officinalis* L. polysaccharide rhamnogalacturonan and its changes in guinea pigs with ovalbumine-induced airways inflammation. *Bratisl Lek Listy*. 2011;112[12]:670-5.

Sutovská M, Nosálová G, Sutovský J, Franová S, Přisenznáková L, Capek P. Possible mechanisms of dose-dependent cough suppressive effect of *Althaea officinalis* rhamnogalacturonan in guinea pigs test system. *Int J Biol Macromol*. 2009 Jul 1;45(1):27-32. doi: 10.1016/j.ijbiomac.2009.03.008. Epub 2009 Apr 2.

Sutovska M, Nasalova G, Franova S, Kardosova A. The antitussive activity of polysaccharides from *Althaea officinalis* L., var. *Robusta*, *Arctium lappa* L., var. *Herkules*, and *Prunus persica* L., Batsch. *Bratisl Lek Listy*. 2007;108(2):93-9.

Human trial on cough

- ▶ *Althaea* in tincture form (20 mg of l material in 20 drops of the extract, three times a day) reduced by half the dry cough side effect of ACE inhibitors.
- ▶ Eight of the 20 subjects in the trial experienced complete suppression of the cough.

Rouhi H, Ganji F (2007) Effect of *Althaea officinalis* on cough associated with ACE inhibitors. *Pakistan Journal of Nutrition*, 6, 256–258.

For treatment of spasmodic dry cough

- ▶ Althaea as a syrup with honey or sugar.
- ▶ Lobelia inflata tincture.
- ▶ Dose 2-4 ounces, into each dose put 10 drops of lobelia tincture
- ▶ Has worked consistently in the dry cough of influenza
- ▶ Other coughs chronically and severaly disturbing the sleep.
- ▶ May add other herbs as desired.

Extracts

- ▶ For full extraction decoct at moderate heat (140 degrees)
- ▶ For partial extraction favoring the mucilage only, and omitting starches, cold water overnight maceration.
- ▶ Tincture in 40% alcohol. Will not contain polysacchadies.
- ▶ Consider administering as powder, in suitable medium such as warm water, honey water, or applesauce

Effect on biofilms

	Anti-inflammatory	Vulnerary	Antiseptic	Anti-biofilm	*MRDi	Local Immunity
<i>Althaea</i>	x	x	x	x	x	x
<i>Plantago</i>	x	x	x	x	x	x
<i>Calendula</i>	x	x	x		x	x
<i>Plantago</i>	x	x	x	x	x	x

* Inhibitor of bacterial efflux pumps.

Plantago species

Plantago spp. Plantain



- ▶ Not the thing like a banana.



- ▶ (they make a nice food)



- ▶ Anti-inflammatory, anti-infective, anti-biofilm, wound healing
- ▶ Case histories
 - ▶ Case: Plantain spit-poultice and brown recluse spider bite.
 - ▶ Case: 3 week chronic infection on foot and plantain poultice.
- ▶ Inside out; topical to skin and topical on gut.
- ▶ Internal, alterative effects. Bitter, mild hepatic alterative
- ▶ Traditional use for Kidney infection in Central America
- ▶ Combinations: with *Calendula* and/or *Althaea*

Calendula officinalis

Calendula off. – Pot Marigold

- ▶ But not the *Tagetes* species of garden marigold (not bad in its own right, though)



Left: *Calendula* Above: *Tagetes*

- ▶ Overlaps substantially with *Plantago* in all its actions
- ▶ *Calendula* very strong bitter alterative, cooling.
- ▶ Blood moving, emmenagogue,
- ▶ Mild Hepatic. A very powerful multifocal alterative
- ▶ Case study: Bleeding hemorrhoids.
- ▶ The infused oil, alcohol intermediate extraction.
- ▶ Effects on gut.
- ▶ Tincture vs succus.

Congenital Sucrase-Isomaltase Deficiency (CSID)

- ▶ Rare genetic disorder results in deficiency of intestinal enzymes necessary to break down sucrose and starches.
- ▶ Symptoms: Mild to severe gastrointestinal inflammation.
- ▶ Treatment: Sucrose and starch-free diet. Difficult to adhere to.
- ▶ Chronic persistent diarrhea and intestinal inflammation leading to bowel resection common in adults.
- ▶ A patient was able to manage this completely with the triplet of *Althaea*, *Plantago*, and *Calendula*.
- ▶ This triplet, alone or in combination with other herbs is a primary treatment for leaky gut syndrome.
- ▶ Prefer teas or powders in media such as applesauce.

Hypericum perforatum

Effects on liver detoxification

- ▶ Effects have been demonstrated in high-dose standardized extracts.
- ▶ Upregulates portions of the cytochrome oxidase system.
- ▶ Promotes clearance of some pharmaceutical drugs
- ▶ Alters the pharmacokinetics of oral contraceptives
- ▶ Standard doses of tinctures unlikely to have effect
- ▶ Standard doses of teas may affect.
- ▶ May improve liver clearance of stress hormones.

Berry-Bibee EN, Kim MJ, Tepper NK, Riley HE, Curtis KM. Co-administration of St. John's wort and hormonal contraceptives: a systematic review. *Contraception*. 2016 Dec;94(6):668-677. doi: 10.1016/j.contraception.2016.07.010.

Clinical trial: Effect on C-section scarring

- ▶ *Hypericum perforatum* (St Johnswort) ointment tested on cesarean section wound healing and scarring in a group of women in Iran.
- ▶ One hundred-forty-four participants were divided into 3 groups. One group received an ointment made from *Hypericum*, a second group received a placebo ointment, and a third group received no treatment.
- ▶ Assessment at 10 for redness, edema, discoloration, discharge, and healing.
- ▶ Assessment at 40 days for pigmentation, height, pliability, and vascularity of the scar, and patient subjective experience of pain or itching.
- ▶ The patients receiving the *Hypericum* preparation had significantly improved wound healing at day ten, and less scarring at day forty, compared to the other groups. There was also less pain and itching.
- ▶ There was no difference on any measurement between the placebo group and the group receiving no treatment.

- ▶ The average score at 10 days on the REEDA scale, a measurement of wound healing, was 0.17 for the women receiving Hypericum, compared to scores of 0.75 and 0.79 for placebo or for no treatment, respectively.
- ▶ In the *Hypericum* group no discharge was recorded for any of the women at the ten day point; all incisions had healed completely.
- ▶ In the other two groups, a percentage of women still had some discharge and some incisions had not healed at ten days.
- ▶ At forty days, scarring was 40% less in the Hypericum group than in the other two groups. Pain and itching of the scar at forty days was also reduced.

Samadi S, Khadivzadeh T, Emami A, Moosavi NS, Tafaghodi M, Behnam HR. J Altern Complement Med. 2010 Jan;16(1):113-7.

Preparation of ointment

- ▶ The ointment was prepared from the flowering tops of plants.
- ▶ The plant material was dried and powdered, and then macerated in grapeseed oil, one part plant powder in three parts oil, for one week.
- ▶ The oil was sterilized by heat, and the powder filtered, and then mixed with petroleum jelly base in a proportion of 20% infused oil and 80% petroleum jelly.

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<http://naimh.com>

See supplemental readings at: <http://naimh.com/roots>

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