VOLUME 13, ISSUE 21

JOURNAL

of veterinary botanical medicine

A publication of the Veterinary Botanical Medicine Association

Veterinary Botanical Medicine Association

VBMA Purpose

The Veterinary Botanical Medicine Association is a group of veterinarians and herbalists dedicated to developing responsible herbal practice by encouraging research and education, strengthening industry relations, keeping herbal tradition alive as a valid information source, and increasing professional acceptance of herbal medicine for animals.

VBMA Goals

- Represent member veterinarians and herbalists as political and professional issues arise.
- Establish standards of training and herbal training programs and to identify established programs with the goal of developing or reviewing certification standards and Degree Programs in Herbal Medicine.
- Support ethical scientific clinical research in herbal veterinary medicine and maintain avenues for exploration of traditional care in veterinary botanical medicine.
- Explore cultural traditions such as TCM, Greek/western herbalism and Ayurveda for their proper translation to and application in modern day animal conditions and communicate these.
- Compile databases of existing science, ethnoveterinary medicine advances, and eventually a library online.
- Liaise with manufacturers so that they have an expert body to advise them on the needs of veterinary herbalists and quality control concerns.
- Support sustainable environmental, agricultural and husbandry practices.

VBMA Certification of Competency

The VBMA seeks to provide animal owners, farmers, and veterinarians with some standard of competency by which to choose a veterinary herbalist. Veterinarians certified by VBMA will earn the title "Certified Veterinary Herbalist". Non-veterinary herbalists "Certified Veterinary Herbalism Educator." Certification by the VBMA will require passing the exam with a grade of at least 70%, submission of 3 publication-quality case reports for peer review within 1 year of taking the test and donation of at least 10 test questions for future exams. Guides available online HERE. Examination is administered yearly by VBMA. Please visit www.vbma.org for location and date.

SUBMITTING CONTENT

The VBMA invites contributions to the Journal of Veterinary Botanical Medicine. The JVBM publishes material on all aspects of veterinary medical herbalism with emphasis on the clinical application of medicinal plants in veterinary medicine, the philosophy of veterinary herbal medicine, and the phytochemistry, pharmacology, herb drug interactions and research that applies to veterinary botanical medicine.

Editorial Policy
Subject material must relate to veterinary botanical medicine. Accepted articles become the property of the Journal of Veterinary Botanical Medicine. Contributions are subject to peer review and editing. Contributions to the Journal of Veterinary Botanical Medicine must not be submitted elsewhere.

Contribution Requirements
Contributions should be word processed and forwarded by email to the editor, with the file(s) saved in plain text or Microsoft Word formats. All statements must be referenced and a full reference list must be included. If the statement is the author's observation or opinion, this should be made clear. All statements should be of a professional nature and exclude any inappropriate style of writing. An abstract of the article should be included. A brief profile of the author should be included.

Peer Review
All feature articles will be reviewed by two independent peer reviewers. Reviewed articles will be returned to the author for modification if required.

Referencing
Textual citation methods should be employed. Requires the name of author and year of publication in brackets at the end of statements or paragraphs. The reference list should be arranged in alphabetical order. *JOURNALS:* Author's surname Author's initials. Year. Title of article. Journal name volume; issue: page numbers. *BOOKS:* Author's surname Author's initials. Year. Book title. Edition. City of publication: Publisher.

Send all submissions via email to:
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communicationscoordinator@vbma.org

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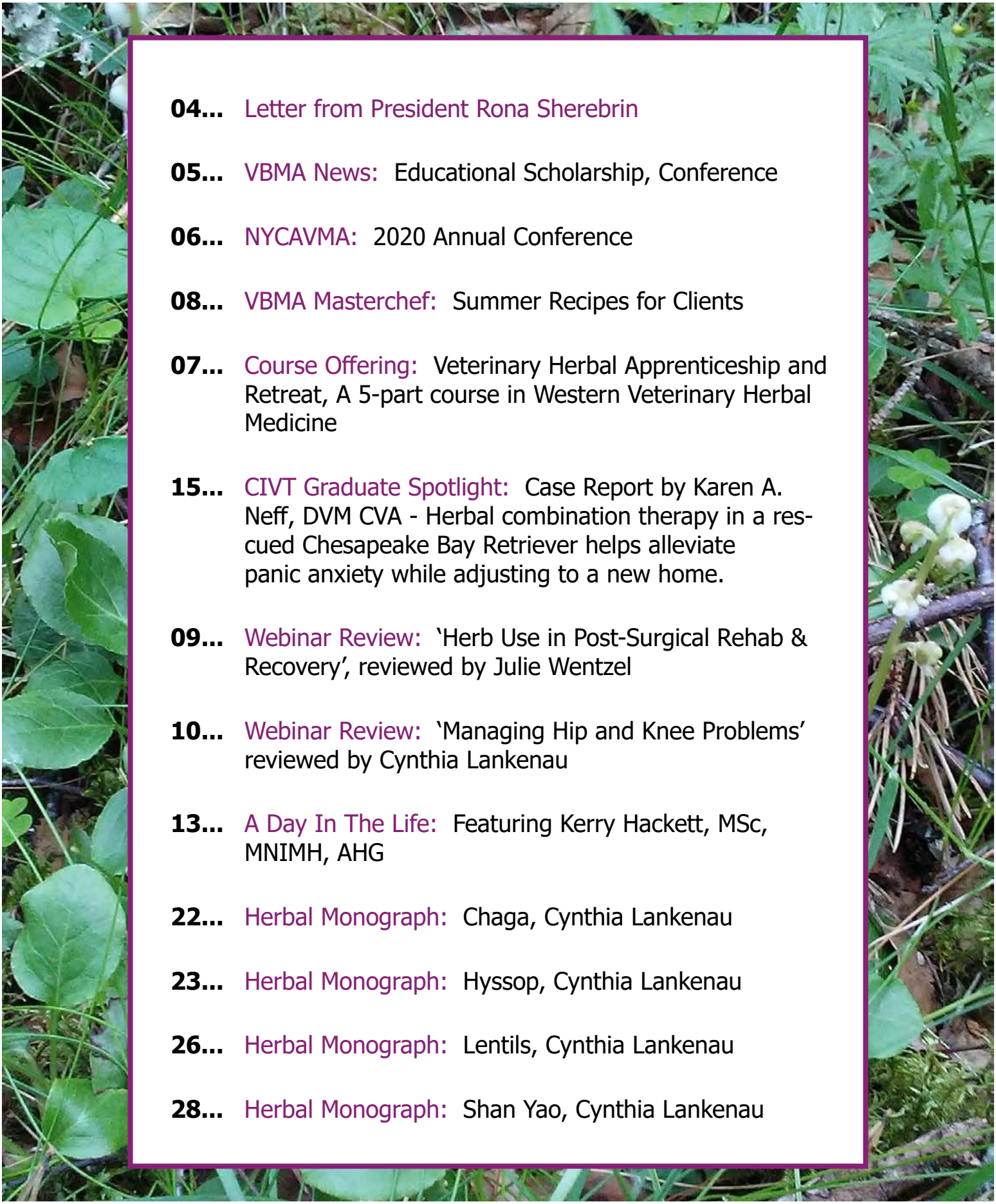

A LETTER FROM PRESIDENT RONA SHEREBRIN

July, 2020

I recently returned from a camping trip with 2 of my almost adult children (and 1 friend each).

I found some Wintergreen (*Gaultheria procumbens)* growing near the campsite, and was very surprised because I have been casually yet unsuccessfully looking for it in my area for many years. I figured that I was just too far north... even though its range is across Eastern North America up to the top of Hudson's Bay. Which means it definitely grows in my area.

I was amused to hear the things that were mentioned when the kids tasted the leaves...Toothpaste! Bubblegum!

They had no idea that Wintergreen was actually a plant, not a made-up gum and mouthwash flavor.

Their excitement to learn what the plant looked like and where it grew made me proud that I had the knowledge to pass on to them, knowledge that I've gained primarily from my involvement with this group.

I learned to identify Wintergreen at one of the first VBMA herb walks I went on (just before AHVMA's conference in Framingham Mass). We went on a herb walk in the woods somewhere close to the conference centre, and only got about 100 yards from the parking lot in the hour we were there. I met many of you, my herby "tribe", there. I know that even though I miss you all terribly, what with no in person events for the past 16 weeks and none for the next while, we are all staying connected through the Listserv and webinars. And this journal of course!

My next project is to make a short video herb walk exploring all the plant medicine abundance in my downtown Toronto urban alleyway. I encourage you all to do the same in your corner of the world, and our wonderful webmaster can post them all for us to share and stay in touch.

Healthy regards,

Rona

Wintergreen in bloom.
Image courtesy Wikipedia.

Wintergreen berries.
Image courtesy Wikipedia.

VBMA NEWS

VBMA EDUCATIONAL SCHOLARSHIP

The Veterinary Botanical Medicine Association currently offers an annual educational scholarship opportunity, open ONLY to veterinary students, in order to promote herbal education. International vet students with proof of vet school enrollment are encouraged to apply. This scholarship is funded in part by one of our incredibly generous VBMA members...thanks for your support!

2020 Essay Topic: Herbal medicine in the time of climate change: how does climate change impact on how we select herbs and use them responsibly?

The total amount of scholarship funds awarded in 2020 will be $5000.00 One scholarship will be awarded at $3000.00, and two scholarships will be awarded at $1000.00 each. **Deadline for submissions is 7/15/20 - CLICK HERE for all the details.**

VBMA MERCHANDISE

Show your support for the VBMA wherever you go with our VBMA themed item collection! Travel and ceramic mugs, T-shirts, tank tops, and even a pet sweater are available for you to purchase.

All orders are processed and fulfilled by Zazzle with the VBMA receiving a portion of the sale proceeds.

VBMA 2020 ANNUAL CONFERENCE & ECOTOUR

The 2020 VBMA Annual Conference will be held in Eugene, Oregon at the Hotel Eugene on October 27th 2020, in conjunction with the ACVBM Annual Meeting and the Mount Pisagah Arboretum Mushroom Festival, then followed by the VBMA EcoTour.

TENTATIVE SCHEDULE IS AS FOLLOWS:

- ***Sunday, October 25th:*** **Mount Pisagah Arboretum Mushroom Festival**
- ***Monday, October 26th:*** **ACVBM Conference Day, featuring Medical Herbalist Chanchal Cabrera as our speaker.**
- ***Tuesday, October 27th:*** **VBMA Conference Day, featuring an additional lecture by Chanchal as well as other speakers TBA.**
- ***Thursday, October 28th - Friday October 30th:*** **VBMA Ecotour at Belknap Hot Springs in McKenzie Bridge, Oregon, located approximately an hour away from Eugene. You can bring a dog, camp in a tent or RV, rent a lodge room, a cabin or a house!**

This event is still on track to take place as scheduled - CLICK HERE to register.

NYCAVMA 2020 ANNUAL CONFERENCE

Advanced Acupuncture With Linda Boggie

October 7th- 11th 2020, Menla Mountain in Phonecia NY - the Tibet of the Catskills

The Channel of Acupuncture – exploring the road maps of development and sustenance for the individual. When learning TCM we are overwhelmed with the language and concepts of Chinese medical theory and philosophy. It is enough to try and grasp one system of channels – the Primary channels – and understand the effects that acupuncture can have throughout the body through these 12 channels. We may also learn about the Du Mai and the Ren Mai, but the rest….not so much. However, there are five other "channel" systems that were discussed in classical acupuncture texts. We will explore these channels through lectures given by Linda Boggie, DVM, a student of Jeffrey Yuen. Through intellectual discussion and practical applications, we will explore the channel systems which provide the road maps for the development and sustenance of an individual; physical and mental, human and animal. They provide understanding of how an individual may respond to challenges in life, be they internal or external; in other words, the progression of disease and possible pathways to resolve pathology. Understanding the different channel systems is an invitation to explore one's self, and as we gain a greater understanding of self we develop a greater awareness in using acupuncture as a therapeutic healing modality.

PRICING:
Members $625, Non-members $690

CANCELLATION POLICY:
Full refunds provided for COVID-19 related cancellations.

LODGING:
All housing and food will be registered through Menla Mountain. Once your seminar registration is received, you will be sent the housing and food link. Note that even if you're staying off site a computer fee will apply.

REGISTRATION NOW OPEN AT WWW.NYCAVMA.ORG

VETERINARY HERBAL COURSE

Veterinary Herbal Apprenticeship and Retreat

A 5-part course in Western Veterinary Herbal Medicine

Presented by Drs. Laurie Dohmen and Kris August, Purple Moon Herbs & Studies

This Veterinary Herbal Apprenticeship and Retreat is intended to train veterinarians in the use of Western Herbal Medicine. This is a comprehensive course including organ system-based Materia Medica, medicine-making, herb walks, self-care and more. This course is intended to help prepare the veterinarian to become a board-certified Veterinary Herbalist. Each 3-day weekend will include multiple Materia Medica lectures with organoleptic components, an extensive medicine-making lab, and an herb walk to a different part of the Island, plus additional lectures and activities. There will be homework consisting of writing Materia Medica and formulating herbal products between every session, as well as a presentation of an herb walk in the student's native area. Self-care is also a large focus of this training. We believe that healthier veterinarians make better practitioners. We will have lectures and extra evening activities focus on self-care, as we believe good health starts with ourselves. Bonus offerings will include Qi Gong in the breaks, picnics, shared meals, and a movie night! Breakfast will be included every morning in the classroom. All in all, we plan to present an overall holistic experience to our fellow veterinarians. While teaching Western Veterinary Herbal Medicine, we want to provide not only alternative ways to care for patients, but also additional ways to care for ourselves.

CE credits approved for VHAR: 81.5 CE credits, 56 IVAS

September 11-14, 2020

October 16-19, 2020

November 14-16, 2020

March 20-22, 2021

April 17-19, 2021

Location: Lowood Educational Center, Duck, North Carolina

Pricing: $3225.00 for all 5 Modules

Deposit Due: $1000.00

Remainder due by August 1, 2020

Payment accepted by check, money order or through PayPal.

CLICK HERE to learn more and register!

VBMA MASTERCHEF

Summer Recipes for Clients

by Dr Ihor Basko, DVM, CVA

Add Fresh Green "Smoothies" To Your Commercial Food

Raw Egg & Salad

- 1 raw Egg
- 1 cup Spinach
- 1 cup Lettuce
- 1 Green pepper
- 2 teaspoons Parmesan
- 1 teaspoon Nutritional yeast
- ½ teaspoon Spirulina
- ½ cup Water

Dose: 1 - 4 oz, each meal

Dr. Basko • All Creatures Great & Small

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Dr. Basko • All Creatures Great & Small

At right are a few recipes I use for summer to get people to "add something healthy" because they buy the "best" dog food and they "don't even cook" for themselves. What would that be? Because summer is Hell with the heat and the fires and all, we need to "cool down with greens". But clients will say, "he won't touch vegetables" or "he eats everything and then spits them out".

With all the chaos going on, people are less inclined to be cooking pet food or even preparing it this summer. So they buy dog food, which usually heats up the body energetically, and then we have multiple skin problems popping all over the place as "cases", "hot spots", food allergies, plant allergies, etc. No fun for the dog or cat and the veterinarian. And they are reluctant to cook, but willing to buy "something" "holistic" commercially available.

So another option...adding "greens", some raw, some cooked, but processed into a "smoothie" via a Blender...to add to the commercial food. "Cool it down". You do the food preparation on a weekend, and make enough for the whole week. Store some of the smoothie liquid in the freezer in ice cube trays, and keep a 2 day supply in the fridge in shot glasses. Everything is raw unless specified.

These are my sample recipes, BUT, depending upon where you live (geography and climate), and the condition of the animal you can add or subtract to what is available and is needed (nutritional, anti inflammatory, anti-histaminic, mineral,detox).

Besides substance (ingredients), you have to factor in Flavor and Smell. I added parmesan smelly cheese to appeal to the olfactory senses of the dog, and the nutritional yeast to the taste of cheese. You can play around with these "flavorand olfactory sense enhancers". Instead of water, in the recipes, you can use coconut water, meat broth and yogurt.

VBMA WEBINAR REVIEW

Herb Use in Post-Surgical Rehab and Recovery with Dr. Janice Huntingford

reviewed by By Julie Wentzel, DVM, CVA, CCRT, CVPP

Dr Janice Huntingford is a well-known and respected Diplomat of the Academy of Sports Medicine and Rehabilitation, who combines physical modalities as well as TCM and herbal medicine in her practice. In this webinar, she discusses the integration of both Chinese and Western herbs with physical and non-pharmaceutical options in the management of common orthopedic and neurologic conditions. This lecture has something for everyone – both seasoned herbalists and those familiar with or new to rehabilitation and integrative care.

We learn the consequences of immobilization of joints due to pain, fibrous tissue, and disuse and how this affects ligament strength, joint stability, and leads to the loss of lean muscle loss and deterioration of cartilage. This helps us to focus on the goals of rehabilitation including decreasing pain, promoting healing, maintenance of muscle mass, and building muscle and joint. In addition, with rehabilitation we work to retrain proprioception, balance, and coordination, prevent degenerative joint disease, and rebuild cardiovascular endurance.

Dr Huntingford covers 4 primary indications for herbs in rehabilitation – post operative recovery, disc disease, lumbosacral disease, and tendon/ligamentous injuries.

Herbs can be used immediately post op through 3-4 weeks. Goals are to limit bleeding, resolve pain and inflammation and stimulate early healing. Yunnan Baiyou can help with hemostasis but also has properties to assist with inflammation. Western herbs to help with pain and inflammation include Boswellia, Turmeric, Devils Claw, Willow Bark, and CBD. Corydalis can also be used for pain, anxiety, and acute and chronic inflammation.

Disc Disease is also a common presentation seen in rehabilitation. The pattern tends to be Qi or blood stagnation – either exterior or spinal. Commonly utilized herbs include Da Huo Luo Dan for acute IVDD. This is a strong herb and utilized short term. Xiao Chai Hu Tang treats disturbances in the movement of Yang and generates circulation. It is utilized not only in IVDD, but also hip dysplasia, cruciate disease, arthritis, and degenerative myelopathy.

Du Huo Ji Sheng Tang invigorates the blood, expels wind, cold, and damp. It is especially useful in dachshunds and with bony bi. It increases peripheral circulation to muscles, discs, ligaments, and nerves. Western indications include DJD, back and hind limb lameness as well as muscle spasm and neck pain.

Lumbosacral disease is another disease that can benefit from herbs and integrative therapy. Yi Yi Reng tang is useful when a warming formula is indicated. Other herbs and formulas to consider include San Ren Tang, Si Miao San, Shen Tong Zhu Yu Tang.

In tendon and ligament injuries, goals are to tonify and move blood as well as harmonize the Shao Yang meridians. Tendon and ligament formula, Body Sore, Benefits hips and knees, and Boswellia are examples of herbs that support patients with these injuries.

This is a brief overview of Dr Huntingford's herb recommendations and much more can be found in the webinar and her handouts.

Boswellia

Corydalis

Devil's Claw

VBMA WEBINAR REVIEW

Managing Hip and Knee Problems with Dr. Steve Marsden

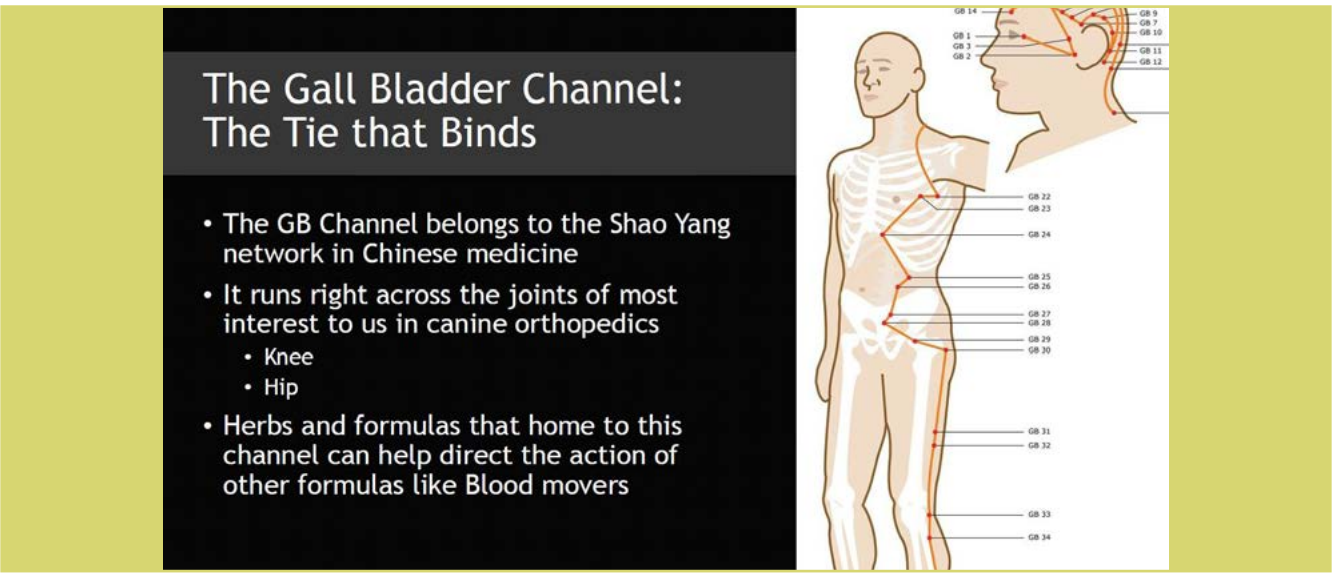
reviewed by Cynthia Lankenau

Dr. Steve Marsden held another extraordinary webinar for the VBMA on managing hip and knee problems. One of the first points stressed is the importance of the Shao Yang layer and using the Gall Bladder meridian to direct blood moving herbs to the hip and knee. The Gall Bladder meridian controls the sinews; the fascia. The GB Channel parallels exactly the location of the lateral fascial line (LFL). The elasticity of the LFL allows twisting of the torso to propel movement of the entire body. This means that the GB points along this line are key players in facilitating movement in general. Pain and inflammation at the knee or hip propagates to other locations in the LFL. Physical and herbal treatment of the GB channel is thus the ideal means of addressing hip and knee issues. One of the main formulas used is Xiao Chai Hu. True to form, impressing us with science, Dr. Marsden continued with a discussion on endothelial dysfunction. The tissue suffers from vasoconstriction, heightened permeability, increased chemotaxis, inflammation, edema, impaired vessel growth, tissue degeneration, and, vulnerability to infection. Science and current research strongly supports this formula as a treatment for endothelial dysfunction; and that endothelial dysfunction is often the underlying cause for many of the hip and knee issues seen. Dr. Marsden has modified Xiao Chai Hu with Qin Jiao, large-leafed Gentian root. This herb adds an additional analgesic, anti-inflammatory to the formula. With case presentations, the use of modified Xiao Chai Hu in the treatment of hip dysplasia was illustrated. Once the endothelial dysfunction has been controlled there may be a need tonify the area with tonics like Bu Gan Tang and You Gui Wan. They can be used to strengthen ligamentous structures, improve micro–circulation, and make the back more supple and remove it as an aggravating effect.

Dr. Marsden strongly feels that cranial crucial ligament injuries are grossly over diagnosed. He feels many of these cases are instead referred pain from S-I joint and adjacent hard and soft tissues. This inflammation and fixation creates sciatica from nerve compression from associated muscle spasms. Sacral exams are very important to properly diagnose this condition. Modified Xiao Chai Hu is also indicated in this situation. This formula can also assist even if there is an actual tear in the ligament as it can help return circulation to the stifle area and assist in the healing of a torn ligament. If torn, Blood tonics are needed to bring in platelets into the joint. You Gui Wan and Bu Gan Tang can be very helpful. Another helpful formula is Xiao Huo Luo Dan which moves the Blood in order to support the circulation and limit the inflammation.

The final syndrome discussed was patella luxation. Since animals compensate for mild to moderate patellar luxation by tightening the tensor fascia lata, low back discomfort extending to the gluteal muscles, interferes with the resolution of the patella issue. Treatment priority is then to restore comfort and mobility to low back and sacrum. Herbally this can be achieved through addressing the Tai Yang layer, using Pubescent Angelica and Loranthus Combination, Du Huo Ji Sheng Tang.

A wonderful webinar!! I strongly encourage all to listen to this talk. This and all other previous webinars are available for purchase on the VBMA website, here: https://www.vbma.org/previous-webinar-programs.html.

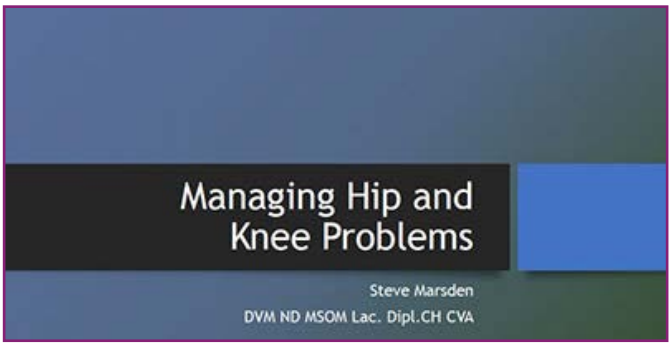


VBMA WEBINAR RECORDINGS

Missed a Webinar? We offer recordings of previous programs for you to purchase!

Use your computer and a web browser to view the recorded version. Q & A portion included, member price only $70.

CLICK HERE TO ORDER

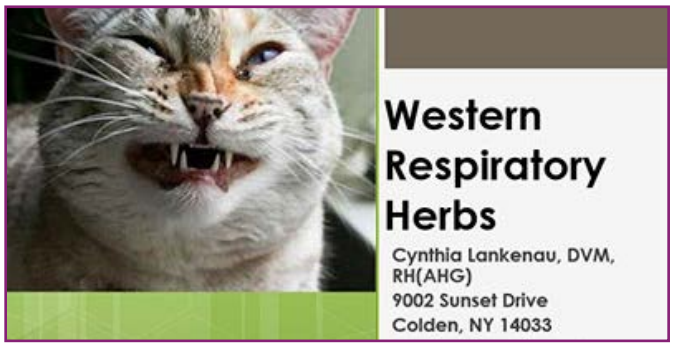


Webinar by Steve Marsden
Recorded May 14th, 2020

Webinar by Robert Silver
Recorded December 6th, 2017.

Webinar by Kendra Pope
Recorded December 12th, 2019.

Webinar by Cynthia Lankenau
Recorded February 26th, 2020



Webinar by Cynthia Lankenau
Recorded February 28th, 2019

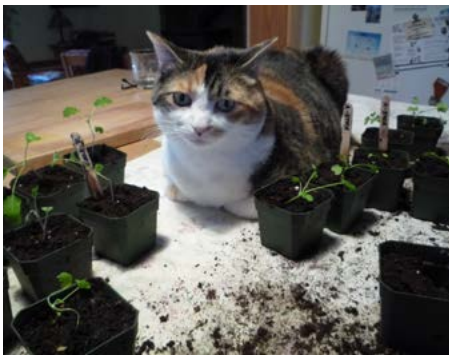
Webinar by Dr. Janice Huntingford
Recorded May 16th, 2019

A DAY IN THE LIFE

Featuring Kerry Hackett, MSc, MNIMH, AHG

Medical Herbalist and Doctoral Candidate

Regardless of the season, my day generally begins with a meditation and a combination of stretching and yoga, followed by a thirty-minute walk and a hearty breakfast. However, as spring is finally here (I hope!), the morning list also includes checking, rotating and watering a wide range of indoor seedlings. I love the verdant green of vigorous new growth as well as the energy, potential and hope that this season inspires. Spring must be my favourite time of year.



My partner and I live on seventeen acres of mixed woods and wetlands in Central Ontario – to which we have added extensive fruit, vegetable and herb gardens. This of course means we have had to learn to coexist with deer, raccoons, squirrels, rabbits, foxes, osprey, turkeys and all manner of other animals, birds and insects. Not always an easy balance, especially when an army of persistent chipmunks decides to feast on our strawberries! Turtle season will also soon arrive: painted and snappers will make their way to the newly seeded plots and do their best to redistribute the rows, followed (as always) by a hungry family of neighbourhood skunks. Keeps us humans on our toes! All of this fun provides great entertainment for our polydactyl wonder-cat Chloe (left), who watches from a safe (and sunny) distance. Chloe *(photo, left)* loves to help with everything in the house, including gardening!

Unfortunately, this spring has been incredibly late, which means that plant germination, growth, harvest and tincture making will be behind as well. The same holds true for wild crafting: normally, the first round of Nettle and Dandelion leaves would already have been gathered and happily macerating in my dispensary. Not this year. So far, there hasn't even been enough for Nettle soup!

In running a clinical practice as a Medical Herbalist over the past twenty (plus) years, I have found that the most effective medicines are those made from fresh plants. There is just something so wonderfully healing in the earthy, grounding aroma of medicines made from newly dug roots and the indescribable ethereal taste of fresh leaf and flower tinctures. Beyond these organoleptic benefits, I have also been impressed by their complex ability to generate positive results.

Of the tinctures, glycerites, infused oils, creams, salves and tea blends that make up my dispensary, the majority have been created in house – gathered from fresh herbs whenever possible, either cultivated or wild. I really enjoy the process of medicine making and am thankful for all I continue to learn from plants. Whether seeding, tending, watering, or harvesting, the love and care that accompanies each step reminds me that our survival as a species depends not only on our relationship with the land but also our ability to live sustainably on the planet. Indeed, we share the same building blocks and rhythms as Nature – infirmity and disease generally result when we stray too far from that course. *(Pictured: Rosa gallica, Apothecary Rose)*

How many herbs can you spot? *Calendula officinalis, Eupatorium perfoliatum (Boneset), Inula helenium (Elecampane), Verbascum thapsus (Mullein), Stachys betonica (Wood Betony), Sambucus nigra (Elder), Echinacea purpurea, Marrubium vulgare (White horehound)*

I was trained as a Western herbalist, on the British system of practice. Although this system harkens back to Physiomedicalist and Graeco-Roman roots, my classmates and I were educated from a very biomedical and constituent-based perspective. To counter the deficit in this approach, I have added homeopathy, flower essences and nutrition to my work and for many years have studied Western historical and energetic (humoural) medicine. In fact, the latter plays a central role in my current doctoral dissertation, which is centred on several nineteenth century medical receipt books from the American Northeast.

So, never a dull moment – every day is packed to the brim. If not in clinic (currently by phone or Skype), I am likely in the dispensary making medicines or readying packages for the post. If not there, I could be in the garden or field. And, if in none of those places, I'm probably at the computer, writing up the results of my research analysis for school.

The day usually ends with another half hour walk, a plant-based dinner and a few hours of reading, chatting or quietly watching the sunset. Time for bed – all is well.

CIVT GRADUATE SPOTLIGHT: CASE REPORT

Herbal combination therapy in a rescued Chesapeake Bay Retriever helps alleviate panic anxiety while adjusting to a new home.

By Karen A. Neff, DVM CVA

ABSTRACT

A combination herbal therapy was used to help mitigate marked anxiety in a 3 year old rescued Chesapeake Bay Retriever. The herbal formula showed how herbs can be beneficial in treating extreme anxiety.

CASE HISTORY

A spayed female, 32.3 kg Chesapeake Bay Retriever of an estimated age of 3-4 years was found wandering the Colorado countryside. She was placed in a Chessie rescue for several weeks before being placed for adoption. Blood work revealed low normal thyroid and her tail was amputated due to an injury. The current owner lives in Iowa and had her for a couple of weeks before seeking help for the dog's anxiety.

The owner stated that when the dog's mind was made up you couldn't change it. The dog was anxious to the point of being terrified in certain environments (kitchen noises, light switch clicking) and she couldn't be coaxed out of her hiding place (e.g. if a kitchen noise scared her she'd run to the bedroom, stand and look out and no amount of coaxing would get her to leave the bedroom). She had to lift the dog into the house. Her diet was Diamond Naturals beef meal topped with a raw egg. The owner also gave Purina Calming Care® once daily.

On initial examination for complementary care, the dog appeared anxious, had numerous facial scars and a short tail due to amputation. Her coat was dull and thin in places.

TREATMENT

The owner desired a holistic approach to treating the dog's anxiety before trying conventional medications such as clomipramine or fluoxetine.

HERBAL FORMULA

A traditional herbal approach was chosen with a formula containing the herbs *Withania somnifera*, *Gycyrrhiza glabra*, *Hypericum perforatum,* and *Passiflora incarnata*.

Withania somnifera	1:1	40 ml
Hypericum perforatum	1:2	30 ml
Passiflora incarnata	1:1	15 ml
Glycyrrhiza glabra	1:1	15 ml
	Total	100 ml

Dose: 5 ml, divided daily given with meals.

The dog's anxiety decreased until month 3 when the owner attempted to wean her off of the herbs. The owner wanted to continue with herbal management and thus the herbs were refilled, modifying the herbal formula to include *Eleutherococcus senticosus* and *Rehmannia glutinosa* (uncured).

Withania somnifera	1:1	36 ml
Hypericum perforatum	1:2	36 ml
Passiflora incarnata	1:1	20 ml
Eleutherococcus senticosus	1:2	36 ml
Rehmannia glutinosa	1:3	75 ml
	Total	203 ml

Dose: 10 ml daily, divided and given with meals.

HERB SELECTION AND RATIONALE (Bone, 2003; Bone and Mills, 2013; Mills and Bone, 2005; Wynn and Fougere, 2007)

WITHANIA (*Withania somnifera*)

Synonyms: Winter cherry, Indian ginseng, ashwagandha, blrerreger

Family: Solanaceae (nightshade)

Parts used: Root, leaf, whole plant

Energetics: Warm, sharp pungent, sweet

Actions: Tonic, adaptogen, mild sedative, nervine, anodyne, anti-inflammatory, immune modulator, anti-anemic; anti-microbial, anti-stress, neuroprotective (Dar, Hamid and Ahmad, 2015); thyroid stimulant (Winston, 2013, p 205)

Indications: Nervous exhaustion, malnourishment, fatigue, stress. Contraindications: None known, abortifacient in large doses

Interactions: May potentiate phenobarbital, benzodiazepines. Use with caution with sedatives and anxiolytics.

Constituents: Steroid compounds: lactones withaferin A, sitoindoside IX, X and acylsteryl glucosides sitoindosides VII, VIII. Alkaloids: tropane-type (tropine, pseudotropine), isopelletierine, anaferine. Iron.

Mechanism of Action: The root contains steroidal with anolides which are thought to give Withania's tonic and adaptogenic effects. Glycowithanolides reduced levels of Tribulin (an endocoid marker of clinical anxiety) in rat brains as well as having anxiolytic effects in pentylenetetrazole-induced anxiety in rats (Dar, Hamid and Ahmad, 2015). Mice given Withania root via gastric tube for 20 days had a significant increase in T4, but no changes in T3, indicating a direct thyroid stimulating effect of the gland (Verma and Kumar, 2011).

Pharmacokinetics: No Data Available

Dose: (1 :2) 35 - 90 ml per week (human); (1 :2-1 :3) 1.0 - 2.5 ml per 10 kg (20lb); divided daily (small animal)

ST JOHN'S WORT (*Hypericum perforatum*)

Synonyms: Hypericum, hardhay, Hyperici herba, millepertuis pefore, iperico, echtes Johanniskraut, tupfel-Johanniskraut, erba di San Giovanni, Hartheu, Sonnenwendkraut, herb de millepertuis, prikbladet perikon

Family: Hypericaceae

Parts used: The dried flowering tops or aerial parts.

Energetics: Bitter, cool (Wynn and Fougere, 2007) with an affinity for the nervous system (College of Integrative Veterinary Therapies [CIVT], n.d. VWHM10027 Topic 6).

Actions: Nervine, antidepressant, vulnerary, antiseptic, antiviral; nervine trophorestorative, anxiolytic, serotonergic agonist (CIVT, n.d. VWHM10027 Topic 4); neuroprotective (Oliveira et al., 2016).

Indications: Neuralgia, sciatica, peripheral neuropathy, anxiety, irritability, nervous fatigue, social phobia; post amputation (CIVT, n.d. VWHM10027 Topic 1)

Contraindications: Not to use in pregnancy or lactation without professional advice, in severe depression; or with chemotherapy as Hypericum may increase the chemo drug's clearance (CIVT, n.d. VWHM12). Hypericum has the potential for photosensitization. Discontinue use 1 week prior to surgery as it can delay anesthesia and emergence from anesthesia.

Interactions: lndinavir, digoxin, theophylline, may potentiate MAO inhibitors, amitriptyline, anticonvulsants, antihistamines, anticoagulants, benzodiazepines, immunosuppressives, omeprazole (a low level risk), SSRls; reserpine, tetracyclines, sulfonamides (CIVT, n.d. VWHM122).

Constituents: Volatile oil, napthodianthrones (hypericin, pseudohypericin), phloro glucinols (hyperforin, adhyperforin), flavonoids (hyperoside, quercitrin, isoquercitrin, rutin), catechin tannins.

Mechanism Of Action: Hyperforin inhibits the reuptake of the neurotransmitters serotonin, dopamine, noradrenaline, GABA, and L-glutamate (Oliveira et al., 2016). Pseudohypericin is the major constituent involved in analgesia by inhibiting PGE2, NO, and pro-inflammatory cytokines such as tumor-necrosis-factor (TNF)-a and interleukin (IL)-1 (Asgarpanah, 2012).

Pharmacokinetics: Hypericum perforatum extracts (HPE) can have numerous drug interactions because they activate CYP enzymes and increase the activity of the drug transporter P-glycoprotein (Russo et al., 2013). In healthy volunteers given HPE, hypericin was detected in the blood after 1.3 hr and it peaked at 4.6 hours reaching steady-state levels by4 days. Because of its affinity of albumin and lipoproteins, the T112 of hypericin is 25 hours. Peak plasma levels of pseudohypericin occur between 0.4 - 0.6 hours and hyperforin are reached 2.8 - 3.6 hours later (Russo et al., 2013).

Dose: (1:2) 15 - 40 ml per week (human); (1:2 to 1:3) 0.5 - 1.5 ml per 10 kg (20 lb), divided daily.

PASSION FLOWER (*Passiflora incarnata*)

Synonyms: Maypop, passionvine, apricot vine, wild passion flower, passiflore, fleur de la passion, fleishfarben, passionsblume, passiflora

Family: Passifloraceae

Parts used: Aerial parts

Energetics: Cool, bitter

Actions: Anxiolytic, sedative, hypnotic, anodyne; a relaxing and a tonic nervine (CIVT, n.d. VWHM10027 Topic 4)

Indications: Anxiety, neuralgia, nervousness, epilepsy

Contraindications: Avoid in pregnancy, otherwise no contraindications. As a precaution, however, laboratory tests have confirmed cross-reactivity between latex and Passion Flower.

Interactions: Theoretically, there may be additive effects with anxiolytics and CNS depressants. Passion flower may increase the clotting times of anti coagulants and increase the effects and side effects of MAO inhibitors (CIVT, n.d. VWHM10023) and potentiate anticonvulsants (CIVT, n.d. VWHM10027 Topic 6). Hops, chamomile, skullcap, wood betony, valerian, L-tryptophan, and gamma-aminobutyric acid all enhance Passion flower's activity (Gompf, 2005).

Constituents: Flavonoids (up to 2.5%): C-glycosyl-flavones (isovitexin-2"-o glucoside, schaftoside, isoschaftoside , isoorientin, isoorientin-2 "-o- flucoside, vicenin-2, and lucenin-2), cyanogenic glycosides: gyno cardin (<0.1%; 0.01%2); trace of volatile oil, maltol (0.05%), harmane alkaloids (harman): trace, absent in many samples - Commission E recommends not more than 0.01%. Passiflorine (sedating), harmala compounds (stimulating) (CIVT, n.d. VWHM10027 Topic 4).

Mechanism Of Action: P incarnata is believed to increase GABA (gamma-aminobutyric acid) levels in the brain (CIVT, n.d. VWHM10023) which is supported by "the findings that flumazenil acted as an antagonist against P incarnata demonstrat[ing] GABA-mediated pathways for the anxiolytic effects." (Savage et al., 2017)

Pharmacokinetics: This author could not find any data.

Dose: (1:2) 20 - 40 mis per week (human); (1:2 - 1:3) 0.5 - 1.5 ml per 10 kg (20 lbs), divided daily.

LICORICE (*Glycyrrhiza glabra*)

Synonyms: Liquorice, sweet root, Subholzwurzel, Lakritzenwurzel, guang guo gan cao, gan cao, kanzo, kamcho, Russian licorice, Spanish licorice, Turkish licorice, reglisse, bois doux, liquirizia, Lakrids, yashtimadhu

Family: Fabaceae (Leguminosae, Papilionoideae)

Parts used: Dried roots and rhizomes and stolon

Energetics: Sweet, neutral

Actions: Anti-inflammatory, adrenal tonic, demulcent, taste improver, immuno stimulant, hypertensive, adrenal restorative, antiviral, immuno modulatory, moderates and harmonizes other herbs.

Indications: Withdrawal from corticosteroids, inflammatory conditions, to flavor formulas; as a skin adaptogen (CIVT, n.d. VWHM10026)

Contraindications: Hypertension, cholestatic disorders, cirrhosis of the liver, hypo kalemia, chronic renal insufficiency, pregnancy, prolonged use with thiazide and loop diuretics or cardiac glycosides (increases potassium loss); anorexia nervosa, edema, CHF.

Interactions: Thiazide and loop diuretics or cardiac glycosides, laxatives and other potassium depleting drugs, potentiates corticosteroids, may counter-act the contraceptive pill.

Constituents: Triterpene saponins glycyrrhizin (GL) (a mixture of glycyrrhizic acid [glycyrrhizinic acid] potassium and calcium salts) (2%-9%); glycyr rhetic acid (GA), aglycone of glycyrrhetic acid; flavonoids (liquirtin, chalcones, and isoflavonoids); minor components (sterols, coumarins, fatty acids, phenolics and arabinogalactans).

Mechanism of Action: GL and GA inhibit the breakdown of corticosteroids by the liver by inhibiting 5-beta-reductase; cytochrome P450 enzymes are induced by licorice or GL. Licorice extract (150 mg/kg dose) may have a MAO inhibiting effect, as shown in a mouse antidepressant study in which an antidepressant-like effect was comparable to imipramine (15 mg/ kg, ip) and fluoxetine (20 mg/kg, ip). The effect increased nor epinephrine and dopamine in the brain, but not serotonin.

Pharmacokinetics: GL undergoes hydrolysis to GA by commensal intestinal bacteria and thus is poorly absorbed. GA is well absorbed and binds to plasma albumin within 8 - 12 hours after oral GL. Half-life of GA is 23.6 hrs. Aqueous licorice extracts have less side effects than pure GL owing to lower bioavailability of GA, thought in part due to the presence of other constituents in the extract.

Dose: (1:1) 15-40 ml per week (human); (1:2-1:3) 0.5-1.0 ml per 10 kg (20 lbs) divided daily (small animal).

SIBERIAN GINSENG (*Eleutherococcus senticosus*)

Synonyms: Eleuthero, Devil's bush, many prickle, thorny ginseng, touch-me-not, devil's shrub, wild pepper, taigawurzel, Eleutherocoque, Wu Jia Pi, Cu Wu Jia, Gokahi, Ogap'I, Russisk rod, Eleuterokokka, Acanthopanax senticosus [botanical synonym]

Family: Araliaceae

Parts Used: Dried bark from the roots and rhizomes

Energetics: Acrid, sweet, bitter, warm

Actions: Adaptogen , tonic, nervine, immunomodulating, thymoleptic, anti fatigue, strengthens and restores the immune response, assists the body in adapting to many types of stress and restoring mental and physical capacity. Calms Shen.

Indications: Stress, fatigue; skin adaptogen (CIVT, n.d., VWHM10026)

Contraindications: Pregnancy, BP> 180/90 mmHg, acute infections, long-term use not recommended.

Interactions: Enhanced by Ginkgo biloba (Gompf, 2005), otherwise none.

Constituents: Phenylpropanoids: syringin (eleutheroside B), caffeic and chlorogenic acids, esters; Lignans: eleutherosides D, E, B4; coumarin: eleuthero side B1; sterols: beta-sitosterol, eleutheroside A, polysaccharides, heteroglycans (eleutherans A-G), simple sugars;Triterpenoid saponins (glycosides of protoprimulagenin A) - quite different from those in Panax (the ginsenosides).

Mechanism of Action: Stressed rats given Eleutherococcus had decreased adrenal hype-trophy and decreased depletion of adrenal ascorbic acid. It is not radioprotective, but improves self-repair when given prior to radiation treatment. It has normalizing effects on adrenal hypertrophy and atrophy.

Pharmacokinetics: "Early studies with intraperitoneal injections of eleutheroside B in rats suggested a short half-life in the blood, with some accumulation in the adrenal glands and elimination mostly through the urine." (Bone and Mills, 2013, p 821)

Dose: (1:2) 15 - 55 ml per week (human); (1:2 - 1:3) 0.5 - 2.0 ml per 10 kg (20 lb) divided, daily (small animal).

REHMANNIA (*Rehmannia glutinosa*)

Synonyms: Chinese Foxglove, Di Huang, Sheng Di Huang (raw root), Shu Di Huang (cured root), Shojio, Saengjihwang, Glutinous Rehmannia

Family: Scrophulariaceae

Parts Used: Root

Energetics: Enters kidney, heart and liver meridians. Sheng Di Huang (raw) - sweet, slightly bitter, cold; Shu Di Huang (cured) - sweet, slightly warm.

Actions: Renal tonic, renoprotective, adrenal trophorestorative.

Indications: Kidney and adrenal gland disorders (Burgoyne and Morgan, 2003), to support adrenal function.

Contraindications: None reported; diarrhea and indigestion, TCM - pregnancy with Blood Deficiency, Spleen Deficiency, Stomach Deficiency, damp phlegm, deficient yang.

Interactions: None reported. Caution for cured Rehmannia in gluten intolerant patients as it is cooked in millet wine.

Constituents: Iridoid glycosides, including aucubin, catalpol (0.3% to 0.5%), ajugol, rehmanniosides A - D, jioglutosides, rehmaglutins A - D, glycoside including phenethyl alcohol glycosides Uionosides), verbascoside, echinacoside, sugars and sterols.

Mechanism of Action: Raw rehmannia inhibited cortisol metabolism by hepatocytes by competing with corticosteroid hormone at the hepatocellular receptor and thus slowing cortisol catabolism. Cured rehmannia decreased renal lesions in rats with experimentally induced ischemia-reperfusion acute renal failure by decreasing expression of angiotensin II and AT1 receptors.

Pharmacokinetics: No data available.

Dose: (1:2) 30 - 60 mis per week (human); (1:2 - 1:3)1.0 - 2.0 ml per 10 kg (20 lbs) divided daily (small animal)

RESULTS

Two weeks after initiation of the herbs, the owner reported that the dog was doing better, not as anxious or hiding as often and that the dog was adjusting to her surroundings. There was no change in the herbal formula for 3 months at which time the owner started weaning the dog off of the herbs. The anxiety returned and the dog started doing again the unusual behavior of sitting and staring or of having to be pulled back into the house. The owner, a veterinarian, reported that the dog's coat looked better and a lot less like hypothyroidism.

The formula was modified to include *Rehmannia glutinosa* and *Eleutherococcus senticosus*. The dog did very well on the new formula. The owner reported that it was as if the dog's panic resolved enabling her to focus on training. This formula lasted for 30 days. The anxiety did not recur when the owner weaned her off of the herbs.

DISCUSSION

In the initial formula, *Withania somnifera* was chosen for its adaptogenic action to address the dog's chronic stress in relation to the numerous environments. The effects of Withania extract (WE) on chronic stress (cs) were explored in a rat study. The study revealed that WE's activity was nearly equal to Panax ginseng in inhibiting the harmful effects of cs on the retention of learned tasks (Verma and Kumar, 2011). Verma and Kumar (2011) describe a mouse study showing Withania 's thyrotropic action. Mice were given a WE via gastric intubation for 20 days (dose was 1.4 g/kg body weight). Serum T3 and T4 were measured at the end of the 20 days.

Appreciable increases in serum T4 were observed but no increases in T3, indicating a direct stimulatory glandular effect.

Although no pain was detected on physical exam it is not unreasonable to assume there may be phantom pain associated with the tail amputation which could exacerbate the dog's anxiety. *Hypericum perforatum* has an affinity for the nervous system and is a main herb to treat neuralgia. Traditionally it has been used to treat neuropathic pain ranging from "myalgia, sciatica, lacerated or injured nerves" and Dioscorides was the first to record using St John's Wort (SJW) for treating sciatica (Galeotti, 2017). A low dose SJW extract was shown to reverse "neuropathy-induced thermal and mechanical hyperalgesia" in murine models with long lasting analgesic effects 3 hours after oral administration (Galeotti, 2017). In homeopathic form (6C, taken three times daily) SJW totally relieved trigeminal neuralgia in a 53 year old Hispanic woman (Galeotti, 2017).

The primary herb used to address the dog's anxiety was Passionflower. In a double-blind randomized clinical trial consisting of 36 patients, *Passiflora incarnata* was found to be as effective as oxazepam in treating Generalized Anxiety Disorder (Miroddi et al., 2013, p 799).

Because chronic stress can activate the HPA axis for prolonged periods, which can result in panic anxiety as well as decreased thyroid stimulating hormone production (Tsigos and Chrousos, 2002), *Glycyrrhiza glabra* was included in the initial formula as the herb for adrenal support (Rouse ND, 1998). Licorice is also used to improve the taste of herbal formulas (Wynn and Fougere, 2007) as well as to harmonize other herbs (Bone and Mills, 2013).

In the second formula licorice was exchanged for *Rehmannia glutinosa* as the adrenal tonic because of the potential for hypertension with long term use of Licorice (Wynn and Fougere, 2007). Rehmannia is considered the major herb for kidneys and adrenals in Traditional Chinese Medicine (Burgoyne and Morgan, 2003). Serum corticosterone levels were significantly decreased when rabbits were given ora dexamethasone. Rehmannia given one week later increased these levels as well as prevented or reversed changes in the adrenal and pituitary glands by neutralizing the effects of glucocorticoids on the HPA axis (Burgoyne and Morgan, 2003). In retrospect, Rehmannia may have given a quicker response to the formula, but this author used licorice to also improve the taste of the formula.

Eleutherococcus senticosus is an adaptogen that helps the body adjust to many types of stresses as well as to restore mental capacity (Bone and Mills, 2013). It also has thymoleptic actions (CIVT, n.d., VWHM10027 Topic 4). Eleuthero markedly reduced adrenal hypertrophy in greatly stressed rats (evidenced by large adrenal glands) (Bone and Mills, 2013). In retrospect, a quicker response may have occurred if Eleuthero was included in the initial formula.

SUMMARY

This dog has been off of anxiolytics for 5 months and has been doing well. She no longer is frightened of minor noises and now will readily come into the house. She responded well to the herbs which decreased her anxiety so that she could focus on her new training. This case study supports using herbs as an aid in decreasing panic anxiety while adjusting to a new environment.

Dr. Neff's case report was part of her 10684NAT portfolio and published with permission from CIVT as part of the VBMA's 'CIVT Graduate Spotlight' feature. CIVT's 10684NAT-Graduate Diploma of Veterinary Western Herbal Medicine course enables practitioners to develop competency in utilising Western herbal medicine and Western herbal medicine principles in the assessment, treatment and management of animals in their care. Interested in this program? Please **CLICK HERE**.

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HERBAL MONOGRAPH: CHAGA

Photo courtesy Wikipedia

COMMON NAME: Chaga
LATIN NAME: *Inonotus obliquus*

OTHER NAMES: Clinker polypore

Common Name: Chaga	**Chaga, *Inonotus obliquus*; Clinker polypore**
Family	Hymenochaetaceae
Part Used	Sclerotium
Active constituents	Triterpenes: inotodiol, Obliquol, trametenolic acid, inonotsuoxides, Lanasterol; Phenols-protocatechic acid, caffeic acid, syringic acid, allomelanin, styrylpyrone, Glucan polysaccharides; Betulin flanosterols
Actions:	Spleen Qi Tonic; Analgesic, anti-inflammatory, antioxidant; antitumor, antiviral, bitter tonic, gastroprotective, hypoglycemic, Immune amphoteric
Indications	Cancers of lip, stomach, skin, rectum cervix, mammary gland, leukemia, Immune suppressive viruses; gastritis, influenza, bronchitis
Cautions	If allergic to mushrooms
Locations	Northern circumpolar region; northern US, Canada, Scotland, Russia, Scandinavia
Herb Drug Interactions	None found
Dosage (use animal doses where available, otherwise human doses can be included here but specify):	Human: Decoction: 2-4 cups per day; tincture: 3-5 ml three times a day

Notes: It is important to use Chagas that are found on birch trees; as that is responsible for the Betulin found in Chaga.

David Winston: used as a ritual wash in Siberia for women after menses and childbirth; biiter flavor and can be used as a coffee substitute.

Recent research: acts on cancer cells through a mechanism by which AMPK triggers the apoptotic pathway via the opening of mitochondrial permeability transition pore, and reducing MMP, leading to an inhibition of ATP production.; exerts protective effects against adverse pregnancy caused by T. gondii infection in mice by promoting the balance of T helper (Th)17/regulatory T (Treg) through regulating TLR4/NF-κB pathway; effective antiulcer activity, which could be due to the presence of various biologically active compounds. This confirmed the traditional uses of I. obliquus in the treatment of ailments; IOP could inhibit tacrine-induced apoptosis in HepG2 cells. The protection is mediated by an antioxidant protective mechanism. Consumption of IOP may be a plausible way to prevent tacrine-induced hepatotoxicity; attenuate histamine-induced inflammation conducted vasodilation in second-order arterioles in the gluteus maximus muscle of C57BL/6 mice; protective effect of IOPS against Alzheimer disease and revealed the possible mechanism underlying the ability of IOPS to modulate oxidative stress, especially Nrf2 signaling, and mediate mitochondrial apoptosis; inhibits iNOS and COX-2.

HERBAL MONOGRAPH: HYSSOP

Photo courtesy Wikipedia

COMMON NAME: Hyssop
LATIN NAME: *Hyssopus officinalis*

Common Name: Hyssop	***Hyssopus officinalis***
Family	Lamiaceae
Part Used	Flowering tops and leaves
Active constituents	Fat, tannin, resin, mucilage, sugar; essential oil 0.5-1 %; flavonoids; phenlpropanoids
Actions:	Stimulant, aromatic, carminative, tonic; TCM1 1.Clear Exterior Wind- mild diaphoretic effect-fevers with influenza, cough with tension 2. Clear Lung phlegm-expectorant, mild spasmolytic-acute or chronic bronchitis 3. Regulate intestinal Qi, carminative and mild spasmolytic-colic 4. Calm the Heart Shen-nervous tension with cough
Indications	Qincy, sore throats; asthma, coughs; Deep seated respiratory infection with fever, hardened mucus, harsh, dry cough, hot , dry skin.; coughs irritable, harsh, wheezing; topically, the leaves applied to bruises to relieve pain; bronchitis; colic, weak digestion
Cautions	Pregnancy caution due to theoretical concerns of pinocamphone-containing varieties
Contraindications	None known.
Herb Drug Interactions	None known
Dosage (use animal doses where available, otherwise human doses can be included here but specify):	Humans: infusion can be drunk freely; Fresh dried herb: 3-6 g of herb or 2-4 g dried herb, infused TID:: Tincture 2-5 ml 1:5 TID

Notes:
Temperature: warm-cool; hot spicy
Taste: Acrid, aromatic, slightly bitter
Organ: Lu, intestines, Ht

Hildegard: says of Hyssop that it is dry and moderately hot. "Eaten often, it purges the weak and stinking foam of humors. It is useful in all foods. When it is eaten the liver becomes lively, and it cleanses the lungs. One who coughs and has pain in the liver, or who suffers from congestion in the lungs, or who suffers from both conditions, should eat hyssop with meats or with lard, not with water or wine."
She gave a formula of:
Licorice one part
Cinnamon 2 parts

Hyssop 4 parts
Fennel 7 parts
cook vigorously in a pot with honey. "He should keep the herbs in the pot for nine days and nights then strain. If he has pain in his liver or lungs, he should drink this every day for nine days.

Culpeper: "Dioscorides saith, that hyssop boiled with rue and honey, and drunk, relieves those that are troubled by coughs, shortness of breath, wheezing and rheumatic distillations upon the lungs; Taken with oxymel (Anyone know what that is??), it purgeth gross humours by stool; and with honey killeth worms: and with fresh and new figs bruised cureth costiveness." He also said that helps with jaundice if taken with figs. "If boiled with wine, it is good to wash inflammation, and taketh away black and blue spots..It is an excellent medicine for the quinsy, or swelling in the throat, to wash or gargle it, being boiled in figs...the hot vapours of the decoction taken by a funnel in at the ears, easeth the inflammation and singing noise of them...(I have used ear candles with hyssop and really helps.) The oil killeth lice, and taketh away itching of the head...It helpeth to expectorate tough phlegm, and is effectual in all cold griefs or diseases of the chest or lungs."

Cook in the Physio-Medical Dispensatory-Hyssops is a diffusive, aromatic, stimulating and relaxing, with mild tonic properties. It sustains capillary circulation gently, and also the nervous peripheries. It promotes expectoration, relieves asthmatic coughs, and may be employed in colds with soreness of the chest. It is often employed in gargles for quinsy and ordinary sore throat.

Wood: Interesting fact that the mold growing on the leaves produce Penicillin (Wood). Matthew Wood also says that Hyssop with its diaphoretic effect, opens the pores to allow the exit of fever while bringing cooling, lubricating, cleansing fluids into the interior organs; dredging blood and fluids to remove heat and congestion, bringing pathogenic heat to the surface and out through the skin. It is indicated when mucus is hardened from heat baking down the fluids.
Tissue state-depression
Specific Indication: Deep seated respiratory infection with fever, hardened mucus, harsh, dry cough, hot , dry skin.; coughs irritable, harsh, wheezing, chronic

Grieve: Expectorant, diaphoretic, stimulant, pectoral, carminative. The healing virtues of the plant are due to a particular volatile oil. It admirably promotes expectoration, and in chronic catarrh its diaphoretic and stimulant properties combine to render it of especial value. It is usually give as a warm infusion, taken frequently and mixed with horehound. Externally, an infusion of the leaves is used for the relief of muscular rheumatism. And also for bruises and discolored contusions, and the green herb, bruised and applied, will heal cuts promptly. A tea made with the fresh green tops, and drunk several times daily is one of the old-fashion country remedies for rheumatism. Hyssop baths, have also been recommended as part of the cure.

Richard Hoole: "In hyssop, when employed for the cure of continued or slow fever, we have one of the finest remedies that we can ever use, especially when children are the sufferers." (Slow fevers are when the nerves so affected so all movement is slow, numb and weak.

Kloss: loosens phlegm in the lungs and throat, excellent for infants' and children's' diseases

Juliette de Bairacli Levy used Hyssop for any poisoning in animals. She said that foxes would seek it out if they were poisoned.

Religious use: A sponge attached to a hyssop branch was used to give Jesus on the cross a drink of vinegar; Passover it was used to sprinkle the blood of the sacrificial lamb on the doorposts; used for purification of lepers; Purge me with Hyssop, and I shall be clean.

Lyle: a mild diffusive, stimulating and relaxing aromatic, in hot infusion it influences the circulation fiving a good outward flow of blood.

Christopher: colds, fevers, cough, whooping cough, bronchitis, chronic catarrh, hoarseness, sore throat, ulcerated throat, eruptive diseases, asthma, tonsillitis, weak digestion, flatulence, kidney and liver problems, blood pressure, epilepsy

Old Cookery Book: Infuse a quarter of announce of dried hyssop flowers in a pint of boiling water for ten minutes; sweeten with honey, and take a wineglassful three times a day, for debility of the chest. It is also considered a powerful vermifuge.

Recent Research: could help in prevention and treatment of some viral diseases; hyssop extracts inhibited the digestion of complex carbohydrates, but not that of absorbable monosaccharide, and might be a useful supplemental food for hyperglycemia; contains strong anti-HIV-1 activity that may be useful in the treatment of patients with HIV-1 infection

HERBAL MONOGRAPH: LENTIL

Photo courtesy Wikipedia

COMMON NAME: Lentil
LATIN NAME: *Lens esculenta*

OTHER NAMES: Phakos, Adas

Common Name: Lentils	Lentils, *Lens esculenta*; Phakos, Adas
Family	Fabaceae
Part Used	Lens shaped seed
Active constituents	63% carbohydrates including 11% dietary fiber, 25% protein, and 1% fat (table). Lentils are a rich source (20% or more of the Daily Value, DV) of numerous essential nutrients, including folate (120% DV), thiamin (76% DV), pantothenic acid (43% DV), vitamin B6 (42% DV), phosphorus (40% DV), iron (50% DV), and zinc (35%), among others (table). When lentils are cooked by boiling, protein content declines to 9% of total composition, and B vitamins and minerals decrease due to the overall water content increasing (protein itself is not lost).Lentils have the second-highest ratio of protein per calorie of any legume, after soybeans. Lentils contain the carotenoids, lutein and zeaxanthin, and polyunsaturated fatty acids
Actions:	Produces gas; constricts the tissues; reduces urine
Indications	From Avicenna: Use of a poultice prepared by cooking lentils with vinegar dissolves tuberculosis of the lymphatic glands and hard swellings. It contains the potency of collecting and depleting the pus. Using a boiled down form with vinegar heals deep ulcers, reduces or stops their discharge. If the ulcers are large, the lentil should be used with other substances that constrict the tissue or canals of the body like the peels of pomegranate. Use with sea water in treating Jacobi ulcers, herpes and an acute, fever producing disease characterized by diffusely spreading deep-red inflammation of the skin or mucous membranes and skin ruptures caused by cold. Useful in treating gout as a poultice mixed with fine flour. Poultice for treating hernias; used as a poultice with melilot, quince and rose oil, to cure hot swellings of the eye and anal swellings; poultice on the breast if congested with blood and milk; as a food: The low levels of readily digestible starch (5%) and high levels of slowly digested starch make lentils of potential value to people with diabetes.[20][21] The remaining 65% of the starch is a resistant starch classified as RS1.[22] A minimum of 10% in starch from lentils escapes digestion and absorption in the small intestine (therefore called "resistant starch").[23] Additional resistant starch is synthesized from gelatinized starch, during cooling, after the lentils were cooked
Cautions	An excessive use of lentils causes cancer and hard dense cancerous growth usually arising from connective tissue; Excessive use may cause leprosy; excessively used can cause dark sightedness due to its drying property. Lentils are difficult to digest; they are not suitable for the stomach that produces excessive gas in the digestive tract and heaviness. They should not be mixed with any kind of sweet because this might produce calculi in the liver; When cooked without the husk, lentils cause constipation.

Contraindications	From Avicenna: not suitable for the nerves, never use if suffering from painful urination ; Lentils also have antinutrient factors, such as trypsin inhibitors and a relatively high phytate content. Trypsin is an enzyme involved in digestion, and phytates reduce the bioavailability of dietary minerals.[25] The phytates can be reduced by prolonged soaking and fermentation or sprouting.
Herb Drug Interactions	None found
Dosage (use animal doses where available, otherwise human doses can be included here but specify):	Topical use as poultices; as a food must be properly prepared by boiling

Notes: The best lentil ripens quickly. It is characterized by with width and whit color. It should be thoroughly boiled before eaten.

Temperament: Galen states that it is either moderate in hotness and dryness or inclines towards hotness.

Avicenna: Lentil is a producer of excessive gas in the digestive tract. (a gas producing drug has foreign and dense humours. When innate heat acts on it, it does not dissolve swiftly, but is transformed into stomach gas.) It has compound potencies of constricting the tissues or canals of the body and cleansing. It induces bad dreams. Its husk is very constricting of tissues or canals. It makes the blood sticky. It reduces urine and menses. As a result it produces bloody humour and diseases. The combination of barley water or beetroot can make a good dish as they are opposite to lentils in properties. Oregano and mint can also be mixed with lentil. Do not mix with dried salty meat. In order to be cooked properly, 1 mann of lentil should be used with 7 mann of water.

Hildegard: Lentils, lens, are cold. (I think she is referring to the secondary effect). When used as food, they augment neither the marrow nor blood nor flesh of a person. Neither do they contribute to his strength, but only satisfy his stomach, filling its emptiness. They stir a person's weak humors to make a commotion. But if spots of scabies, or dirty hair with ulcers at the root, appear on a person's head, he should gently reduce lentils to a powder, over a glowing stone. He should also pulverize a snail shell, with whatever slime there is in it, and add it to an equal weight of lentil powder. Placed over the spots, it will strip off the discharge of this disease, and it will be cured

HERBAL MONOGRAPH: SHAN YAO

Photo courtesy Food For Health

COMMON NAME: Shan Yao
LATIN NAME: *Dioscorea opposite*

OTHER NAMES: Chinese Yam, Mountain Herb

Common Name: Shan Yao	Shan Yao, *Dioscorea opposite*; Chinese Yam, Mountain Herb, Batatatis
Family	Dioscoreaceae
Part Used	Root
Active constituents	Allantoin (5-ureidohydantoin); Choline (amine)-hypoglycemic Sapogenins: Diosgenin; Sinodiosgenin Dioscorin; Mannan, amylase, blycoprotein, Vitamine C; Batatasins I-V ;phenolics; arginine, glutamic acid, aspartic acid, Fe,Cu, Zn, Co, Cy
Actions:	Tonifies the qi/demulcent, nutritive. Anti-inflammatory (mild) Antispasmodic, Demulcent, Hypoglycemic Nutritive, Osteoprotective; TCM: 1.Tonifies the Spleen qi; 2. Tonify the Kidney Qi and Jing; demulcent, 3. Tonify the Lung Yin nutritive; 4. Binds the essence
Indications	Spleen Qi deficiency; poor appetite, diarrhea, fatigue; chronic cough due to deficient Lung Yin and Kidney Qi; diabetes; neonatal diarrhea; gum ulcers; spermatorrhea, frequent urination and vaginal discharge; Topical poultice for abscesses and boils
Cautions & Contraindications	Caution for excessive dampness and stagnation
Side Effects	None known.
Herb Drug Interactions	Use cautiously with insulin and other hypoglycemic medications. Monitor blood glucose to rule out potentiation of those medications
Dosage (use animal doses where available, otherwise human doses can be included here but specify)	Horses and cattle: 30-90 g; llamas, alpacas, goats, sheep and pigs: 10-30 g; Dogs: 5-15 g; Cats:1-3 g; Rabbits: 1-1.5 g; Birds: 1-5 g

Notes: It is native to Korea and China and grows in Hunan, Jiangsu, Guanxi and Henan provinces. Aggressive weedy plant; harvest in late fall.

Energetics: Neutral, sweet
Channel: Spleen, Lung, Kidney

Xie: Stir frying with wheat bran enhances its action to tonify Spleen to stop diarrhea; raw it will tonify Yin. Very effective for neonatal diarrhea and ulcers in the gums and mouth; it improves the digestive system, promotes urination, lowers blood sugar, lowers blood pressure, and has antiaging effects. This herb is neither hot nor cold; it can treat both Kidney yin and Yang deficiency; and can be used long-term, often in foods as well as teas, powders; and pills.

Winston: Chinese yam is used for stomach and spleen deficiency symptoms such as fatigue, lack of appetite, abdominal bloating and undigested food in the stool. It nourishes the yin of the stomach/spleen and is beneficial for gastritis,

gastric ulcers and IBS. It is also frequently used for wasting and thirsting syndromes (Xiao Ke) caused by diabetes mellitus as well as TB and HIV/AIDS. Shan Yao is also useful for deficient kidney yin with low back pain, low sperm count, impotence, chronic vaginal discharge (leucorrhea), vaginal dryness, night sweats or frequent urination

Chen: Stir-fried brown it stops diarrhea and reduces urinary incontinence or vaginal discharge

Combinations
From Dr. Xie:
Spleen Qi deficiency: with Ginseng, Ren Shen; codonopsis, Dang Shen; Atractylodes, Bai Zhu; Poria, Fu Ling (Formula: Shen Ling Bai Zhu San)
Chronic cough (Lung Yin, Kidney Qi): Ophiopogon, Mai Men Dong; Glehnia, Bei Sha Shen; Schisandra, Wu Wei Zi
Diabetes: Astragalus, Huang Qi; richosanthes, Tian Hua Fen; Rehmannia, Sheng Di Hang Pueraria, Ge Gan
Urinary leakage: with Alpinia Yi Zhi; Mantidis, Sang Piao Xiao

From David Winston:
For vaginal dryness, combine it with Shatavari, Dang Gui, Fresh Oat and Licorice
For metabolic syndrome, along with Cinnamon, Holy Basil, Bitter Melon, Fenugreek or American Ginseng.

Recent Research:
In an animal study an ethanol extract of the root reduced gastric HCL production, promoted gastrointestinal motility and improved the percentage of lactose-fermenting bacteria in the gut (Jeon, et al, 2006). In an animal study, a water extract of Shan Yao significantly lowered blood pressure and prevented left ventricular . In other animal research the root extract exhibited antioxidant and antiinflammatory effects in the colon, preventing abnormal intestinal polyp formation (Son, et al, 2014). It protected against osteopenia in ovariectomized rats (Zhang, et al, 2014) and had neuroprotective activity (Yang, et al, 2009). In animal studies, it reversed drug- or high-fat diet-induced insulin resistance and lowered blood glucose, HbA1c and insulin levels (Go, et al, 2015; Kim, et al, 2012; Gao, et al, 2007). It also inhibited high-fat diet induced obesity (Gil, et al, 2015) and alleviated peripheral neuropathy in diabetic mice (Moon, et al, 2014). improve the immunity of the common carp by modulating the intestinal microflora and enhancing the gut defence barrier and has the potential to be used as an immunostimulating feed additive in aquaculture; yam extract and allantoin can help to prevent skeletal muscle dysfunction through the stimulation of the energy metabolism; is an excellent candidate for treating septic cardiomyopathy

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Image: Board Member Jamie Moran's Garden, 2019