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# **JOURNAL**

of veterinary botanical medicine

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*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 at the AHVMA conference in the USA, where the VBMA holds their symposium. 2019 exam details will be posted when available.

## BOARD OF DIRECTORS

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## 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:**  
VBMA Communications Coordinator  
[communicationscoordinator@vbma.org](mailto:communicationscoordinator@vbma.org)

# A Letter From VBMA President Ihor Basko

## Let Your Heart Be Your Guide and Your Gut Your Oracle

by Ihor Basko, DVM, CVA

Suicide rates in the USA have increased by 25% since 1999, and veterinarians have taken over the number one spot from all of the other professions. As a "public servant" we are serving people and their animals, but are we remembering to "serve" ourselves? We follow "good ideas", the "shoulds", what's practical, and what people expect from us... Often times. We can live a life of being deaf to one's Nature...within.

Upon graduation from veterinary college we strive to act, do, and be like "veteran veterinarians". Perhaps in this journey we are not connecting to our "truth? Some of us have lost "heart" in their practice of medicine. I had good ideas and romantic dreams of what it meant to become a veterinarian. I strove to become a great surgeon and after 5 years of learning thoracic, orthopedic, ophthalmic, and general surgery, managing a specialty hospital and emergency clinic. I discovered I became "the pet mechanic" and "drug pusher" not a healer. As the line in the Talking Heads song "Once in a Life Time" from the album "Stop Making Sense" goes...." this is not my beautiful house! .... this is not my beautiful life!" I decided I needed a change in my life, so I quit everything.

I went camping with my 3 dogs for 6 months in the forests of the Pacific Northwest, read the books of James Herriot, played my guitar and meditated in the presence of my favorite trees. My life changed drastically from what it was...it felt correct inside my heart and soul. I enrolled in animal acupuncture training and research at UCLA, began my training as a hospice volunteer with Elizabeth Kubler-Ross and helped to create the first hospice center in the South San Francisco Bay area The Center for Living with Dying. When I returned to the practice of veterinary medicine by starting the first house call practice in the San Francisco area. It satisfied a need inside. It felt "right" and good, and life was inspiring again.

Perhaps even as wholistic minded veterinarians and herbalists our life becomes habitual and mundane filled with financial and personal worries and difficult challenges that come with our type of quest at work. Perhaps we lose curiosity, excitement and the "romance" of being a maverick investigator and wholistic veterinarian...healer and instead, some of us have reverted due to overwhelm becoming too automatic to dispense, too quick to turn to technology to diagnose and thus lost faith in our instincts and what we have learned from TCVM, i.e., using our senses.

We might have also lost the "magic" with the use of herbs, in our practice and Rx herbs no different than any other veterinary antibiotic or drug. We sell bottles, count pills and package the powders mechanically having lost the intrinsic value and connection to the "nature" of those plants used in healing.

Has your practice of medicine become another routine? Do you feel like the "pet mechanic" instead of the Healer?

What Else is Possible?

**"See if you can catch yourself complaining in either speech or thought, about a situation you find yourself in, what other people do or say, your surroundings, your life situation, even the weather. "**

**"To complain is always nonacceptance of what is. It invariably carries an unconscious negative charge. When you complain, you make yourself a victim. Leave the situation or accept it. All else is madness."** -Eckhart Tolle

The challenges within our practices are huge, and the challenge of living a happy, healthy, and harmonious life are great. Where to begin?

We need to break from the Mind, what is sensible, conventional, practical, secure, and comfortable and listen to our Heart. Breathe, give thanks and listen to the "inner voice".

Letting go of the Mind... the good ideas, "the shoulds", and expectations is difficult unless one steps out of one's current environment (home, work, relationships) and steps inside to Feel what is in the Heart.... don't think. We must all take the time to just Be, play and relax.

Living an inspired Life is possible by following one's own Heart and "heart's desires". Making life choices from our "gut feelings" (feels good or feels heavy?) instead of our Mind's agendas will help us stay on our "path" and "purpose" in Life. In making life decisions, let your Heart be your Guide, and your Gut be your own inner "authority" and connection to the subconscious, i.e. the part of you than knows when we listen.

The Nature of plants can get us back in touch with our own Nature and our "purpose" and "path" in the magic of being a healer. We have to take the time to step out of our regular life and step into the forest, field, desert or cold running stream. Use our senses of sight, smell, taste, feel and bathe in the glory and wonder of Nature. Be in the sun, gaze up at the stars and moon with a childlike wonder.

We have to learn to trust our inner knowing.....as we are running out of time and have a lot of work to do that takes away more time, and family responsibilities...etc. The challenge is taking the time for one's Self. (Me too!)

**Be Open**  
**Take it In**  
**Digest**  
**Absorb what is Useful**  
**Discard what is not.**

**Knowing is not enough**  
**We must Apply**  
**Willing is not enough**  
**We must DO**  
- **-Bruce Lee**



IHOR'S GARDEN, KAUAI, HI

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## VBMA EDUCATIONAL SCHOLARSHIP

The Veterinary Botanical Medicine Association offers a yearly educational scholarship for veterinary students in the amount in order to promote herbal education.

What has turned you on to herbal medicine? How has herbal medicine influenced your course in veterinary school? Have you had a personal experience with herbs (either for yourself or your pet) that first peaked your interest in herbal medicine? Tell us a about yourself and you could win a \$500 scholarship to further your herbal education! Spread the word and tell your friends!

**Note:** There is no expiration date for monies awarded so you can use it on future continuing education needs!

Submissions should be emailed to [office@vbma.org](mailto:office@vbma.org).

**Deadline is 7/15/2018.**

## VBMA ANNUAL MEETING & HERBWALK

The VBMA will hold its annual meeting in conjunction with the AHVMA Annual Conference in Kissimmee, FL this coming October. We're working on finding just the right place to gather, and details will be posted on our website as soon as they are available.

On Friday, October 3rd 2018 our Annual Herbwalk will take place at 4 PM, also in Kissimmee FL. We're very fortunate to have Dr. Christopher Hobbs, a fourth-generation, internationally renowned herbalist, licensed acupuncturist, author, clinician, botanist, mycologist, and research scientist with over 35 years of experience with herbal medicine, leading our walk this year! As always, the Herbwalk is free for all VBMA members, but donations to help cover our administrative costs are welcome. We hope to see you there - registration will be open soon, so be sure to check our website, follow us on Twitter @VetBotMed, or keep an eye on the listserv.



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- Reputation for Quality Amongst Veterinarian Community
- VBMA Proud Supporter, AHVMA Sponsor, Member NASC & AHPA Animal Products Committee
- Wholesale Accounts for Veterinarians/Practitioners
- Over 250 Herbal Products Made From Certified Organic or Ecologically Harvested Herbs

# NYCAVMA ANNUAL SPRING CONFERENCE

The New York Complementary and Alternative Veterinary Medical Association was proud to host world renowned herbalist, David Winston, for a four day botanical delight at the incredible Menla Mountain from May 3rd - 6th, 2018.



Herb Walks on this amazing mountain were interspersed with Lectures on Herbal pain relief, Lyme disease, Adaptogens, Autoimmune disease and Allergies with a Summary and comparison of Organ System Remedies. Starting in the morning of May 3rd, Cindy Lankenau, DVM covered basic energetics of western herbs for those who needed a refresher on Western Botanical Medicine and on how to translate human herbal material into veterinary use. David's lectures began the afternoon on May 3rd and continued daily through 1 PM on May 6th.

If you'd like to see some of our photos from this event, please [click here](#). If you'd like to purchase a PDF copy of presentation slides & lecture notes from both David and Cindy, please [click here](#). Available individually or as one 804 page master file of all eight conference presentations!

- Adaptogens - Herbs for Strength, Stamina & Stress Relief
- Analgesia - The Search for Effective Pain Relief
- Autoimmune - Herbal Approaches to Autoimmune Disease & Allergies
- Eclectic Herbalism - The Genius of John Scudder, MD Specific Indications and Specific Medicine
- Energetics of Western Herbs - The Importance for Optimal Treatment
- Herbal Nuts & Bolts
- Herbal Synergy
- Tick-Borne Diseases - Their Effective Treatment, Including Botanical & Complementary Therapies



# ACVBM 2018 ANNUAL CONFERENCE



The 2018 American College of Veterinary Botanical Medicine's Annual Conference will be held in Kissimmee, FL on October 3rd, 2018 in conjunction with the AHVMA Annual Conference and will feature lectures by Dr. Christopher Hobbs and Herbalist Guido Masé. VBMA Member cost is only \$175 and includes the ACVBM & VBMA Herbwalks.

Christopher Hobbs is a fourth-generation, internationally renowned herbalist, licensed acupuncturist, author, clinician, botanist, mycologist, and research scientist with over 35 years of experience with herbal medicine. Christopher has a doctorate from UC Berkeley in phylogenetics, evolutionary biology and phytochemistry. He is also a founding member of the American Herbalists Guild. He'll be lecturing for six hours, first on Medicinal Mushrooms for Pets. Fungi of all kinds have been shown to contain cell wall components called beta-glucans. When animals consume them, complex and beneficial immune stimulation occurs that can help prevent and treat various infections, viral syndromes, support cancer treatments, helping to reduce symptoms and the side effects of chemo. He will discuss the history of use, recent scientific research supporting their use, including clinical trials in humans. Dr Hobbs will also discuss the mechanism of action of medicinal mushrooms, detailing a wide range of biological actions, supported by published and peer-reviewed research.

For his second lecture, Dr. Hobbs will discuss the Understanding and Treating Chronic Inflammatory Diseases. Chronic inflammation is initiated at the cellular level through the inflammasome after exposure to various triggers like dietary agents, drugs, injury, and many more. This chronic inflammation is currently believed to be a strong etiological factor in cardiovascular disease, cancer, and autoimmune diseases, among others. The lecture will examine at inflammatory triggers and how to avoid them, and detail science and standard of practice for treating these conditions with herbal medicines such as turmeric, St. John's wort, boswellia, pineapple stem (bromelain), hops, and many more, foods, and other dietary supplements (such as vitamin C). We will look at the current evidence base for their use.

Guido Masé is a clinical herbalist, herbal educator, and garden steward. The co-founder and co-director of the Vermont Center for Integrative Herbalism, he is a professional member of the American Herbalists Guild, the American Botanical Council, and United Plant Savers. He lives in South Burlington, Vermont. Guido will lecture for two hours after the VBMA Herbwalk on a variety of herbal-related topics.



If you'd like to register for the ACVBM 2018 Annual Conference please  
**CLICK HERE**

# 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](#)**

Adaptogens: Herbs for  
Strength, Stamina, and Stress  
Relief

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Webinar by David Winston  
Recorded June 22nd, 2016

Using Tonic Liver Herbs in  
Veterinary Practice

Presented by Greg Tilford, herbalist  
February 15, 2017

Webinar by Greg Tilford  
Recorded February 15th, 2017

THE ENERGETICS OF WESTERN  
HERBS: THE IMPORTANCE FOR  
OPTIMAL TREATMENT, WITH  
SPECIFICS FOR GI CONDITIONS

Cynthia Lankenau, DVM, RH (AHG)  
9002 Sunset Drive, Colden, NY 14033  
cyndvm@gmail.com

Webinar by Cindy Lankenau  
Recorded September 9th, 2017

Medicinal Cannabis sativa L:  
A Plant That Has Changed The World

VBMA Webinar December 2017  
Robert J Silver DVM, MS, CVA

Webinar by Robert Silver  
Recorded December 6th, 2017.

WINTER WOES

WIND, DAMP, COLD ARTHRITIS  
A JOINT DISCUSSION

Drs. Cindy Lankenau and Ihor Basko

Webinar by Cindy Lankenau & Ihor Basko  
Recorded February 21st, 2018.

A Farmacy Model  
of Essential Oils

by Dr. Nancy Brandt

Webinar by Nancy Brandt  
Recorded May 2nd, 2018.

# VBMA MASTERCHEF

## Berry Beauty Jam

by Dr. Constance DiNatale

I source the dried fruits from various Chinese suppliers. I often use Acumarket and Mayway. This jam uses berries and dates. Fruits go to the Wei Qi level and berries specifically to the Liver. We use Wei foods to address external manifestations of internal disease. Da zao enters the Stomach, Spleen, and Heart channels. It's used for weak digestion (Spleen/Stomach deficiency), shortness of breath, and loose bowels. It nourishes the Blood to calm the mind. Hong zao, black Jujube, may be substituted, and is said to be more Blood tonifying. Da zao is a very special food in Traditional Chinese Medicine because of its restorative and preventative properties. Sang shen zi enters the Liver and Kidney channels. It clears Heat from the Liver (think red, irritated eyes), expels Wind (tinnitus, dizziness) and is used to nourish Yin and Blood. It is useful for low back pain, premature greying of hair, and for dry hair and dry stool. Gou qi zi enters the Liver, Kidney, and Lung channels. It nourishes the Liver and Kidney Yin, thus being useful for insomnia, low back pain, tendon and ligament issues, and knee pain. We see it in the herbal formula Zou gui wan, where it's place is to nourish Liver Yin and Blood and replenish essence or Jing. It nourishes the eyes and helps with weak vision and dry eye. Long yan ru enters the Heart and Spleen channels. By strengthening Spleen Qi, it promotes Blood, and it nourishes weak Heart Blood. It is useful for dizziness, shortness of breath, insomnia, palpitations, and for too much dreaming/barking/moving in our sleep. Any of these may be left out, and you can substitute in some seeds (black sesame, Suan zao ren (can be quite sedating)); or nuts such as pine nuts and walnuts. Also feel free to change proportions depending on what you are trying to accomplish.



**200 gm Da zao, Fructus Ziziphi jujubae, Jujube, Chinese date**  
**150 gm Sang shen zi, Fructus Morus alba, Mulberries**  
**150 gm Gou qi zi, Fructus Lycium barbarum, Lycium berry, Go ji berry, Wolfberry**  
**125 gm Long yan ru, Fructus Dimocarpus longan, Longan fruit, Dragon eyes**



Place the Da zao in a heavy pan. It has seeds which must be removed. Place about an inch, more or less, of water in the pan, bring to a simmer and cover for about 10-15 minutes. Remove the fruit to a chopping board to cool a little, then squeeze the fruit to remove the seeds. The skin may be discarded if desired but it's not necessary. Place the fruit back in the pan and add the other fruit. Bring the pan back up to a simmer and cook, covered, for about 45-60 minutes.

Leave the pan partially covered to sit for 15-20 minutes to let the steam come off. If it's very watery, remove the lid and place it back on low to reduce. Spoon small batches into a blender and blend to desired consistency. Place in glass jars and allow to cool completely before covering and refrigerating.

For humans and large dogs, a 'good' tsp bid. For small dogs, 1/3 tsp bid. My technician does not love the taste of this so she spreads it on toast. I love it off the spoon or in a smoothie of mango, coconut meat, almond milk, and some frozen cherries. I started sleeping deeper within 3 days of starting this.

### Contraindications:

This recipe is taxing on a Damp Spleen, so use cautiously or avoid if there are signs of Damp such as weepy eyes, body odor, 'wet' or yeast ears or feet, flatulence, or other gut signs caused from stagnation or Damp. Start with a small amount. If you get loose stool or the animal develops 'wet mouth', then it just self-diagnosed that it has a Damp issue, so go ferret it out!

# A DAY IN THE LIFE

## Featuring Dr. Constance DiNatale

Winter Park, FL



Unlike most of the "Day in the Life" people featured in the VBMA journal, I do not rise early and I do not eat a healthy breakfast involving special green powders and power foods on awakening. I gave myself permission a few years ago to not eat breakfast for at least 2 hours after rising, and I have much better digestion for it. Do yourself a favor, if you're not quite hungry in the morning, wait 2-3 hours before eating. You'll feel better.

I take the dogs to work with me every day, Sophie and Jordy. I opened my practice 19 years ago in an old building on an industrial street, and the street is finally growing some nice shops and better businesses the past 5 years. I'm lucky that my location is central and convenient, in a very nice city in central Florida, but my rent has been very stable over the years since the building is not so beautiful. For a holistic practice, it's ideal: great location, cheap rent.



My first patient, Davey Crocket, comes in with his owner Ann. He is one of three Dobermans she owns. Daniel Boone and Jerimiah Johnson are the other two. They are well trained, polite and loyal. Over 2 years ago, Daniel Boone and Davey Crocket presented with rear leg lameness. Both had enlarged bilateral stifles and both dogs were painful. They live on a large farm and run around a lot. Acupuncture and herbs really helped Boone but Crocket got worse. We also put him on Meloxicam. I sent him in for radiographs and the vet called and said the stifle just looked arthritic. I asked for the radiographs, but the owner kept forgetting. Over the next 4 months he became completely non-weight bearing with a huge hot stifle. I insisted on more radiographs which showed cancer above and below the joint, presumptive synovial cell. Since then we have done autologous therapy, Chinese herbs, mostly homemade food, and monthly injections of A & D. He gets 400,000 iu each time. It freaked me out giving that much A and D the first year but now I don't worry too much. I'm not sure how long to keep repeating them, but I'm in that, 'don't fix it if it's not broken' mind set. The leg is slightly enlarged with bony changes, there is no heat, minimal pain, and he runs around the farm on all four legs with no trouble. His owner and I are humbled every month that this beautiful boy is there with us, this incredible gift, and he's thriving.

Dora comes in, she is a 15 year old DSH Calico. She's come for many years. She was diagnosed with chronic renal failure about 3 years ago. Shortly after, she had horrific bowel issues that resulted in intestinal biopsies showing intestinal lymphoma. She was very sick and the owner did not want surgery or conventional therapies. This tiny girl

amazingly went into remission on herbs and diet, so we have mostly been addressing kidneys. She crashed about 2 weeks ago and was hospitalized at her regular vet. She was down to 4 pounds today, usually she is about 6.5 pounds. We did acupuncture and a small autosanguinous treatment on her and sent her home with a homotoxicology remedy for appetite and digestion. She wants to eat but can only eat small volumes. Her owner thinks her mouth may hurt. The owner was told to try finely chopped white fish, meat baby food and pork. I'm not worried about the protein yet as she is eating so little but we will address it once she gets an appetite. She's on a slippery elm – chlorophyll – aloe – probiotic concoction and the owner will add a tiny amount of calcium ascorbate to the concoction to try to stabilize the gums.

Next is Gracie, a rather large 7 year old Cavalier King Charles Spaniel presenting for rear leg lameness. The owner knew her right hind leg had MLP but a few days after she showed right hind issues, she started to hold up the left hind. This was in October of last year. The owner did not realize the radiographs showed spondyloses of multiple lumbar vertebrae, presumptive ACL and collateral ligament damage on the left, plus I found a grade 3/6 murmur that the owner was unaware of. I did a lot of "chiropractic" which is my bastardized hybrid of cranial-sacral, rudimentary osteopathy, and gentle manipulation. We did acupuncture and made a plan for exercises (sit-stand-sit, neck stretches to the hip, swaying side to side, etc.) and made a formula combining Evergreen Chronic Knee and Ankle, Flex MLT, and Herbal ANG. She also went home with Standard Process Ligaplex II. I advised her to start on CoQ10 as soon as possible and to keep her mouth immaculate. She'll come back weekly for 4-6 weeks, then we'll evaluate her progress and may need to add a rear stifle support or even send her for a surgery consult if she shows no improvement.

I then worked on some agility dogs. Hope and Bella came in, 5 and 11 year old Pug/Basset Hound crosses. They are long and low, and Hope who is slick and shiny and black like a seal, has Easty-Westy feet like an old-fashioned Dachshund. Both have been in agility, though Bella is mostly retired. Hope was in rough shape musculo-skeletally as well as skin-allergy wise when she came in years ago. Regular "chiropractic" visits and autosanguinous treatments for allergy have her showing in agility regularly, often in ribbons and her skin is doing light years better. The owner knows that a few venues cause her to have terrible skin outbreaks and she no longer goes to those shows. Oh, how do we love clients who look out for their animals! I had to go watch her compete a few times. She canters to jump, not very quick, but steady, and she approaches from a side angle and vaults over rather than directly jumping. It's remarkable. Bella was always a gassy dog, and we worked on that for many months until she was rarely gassy. Rare gas is fine, but daily gas is not allowed. Ask every client, is your dog gassy, gurgle-y? It's amazing how many people just think dogs are naturally gassy. Some cats too. What in their food or supplements is causing the colon to proliferate vile bacteria that produce gas? I tell my clients, their pets are living in post-Thanksgiving hell every day. That sends the message home, I think. Anyway, I love these two girls. They are a real joy.



It's usually a nice break to have relatively healthy dogs come in for body work. I always take a full 30 minutes or more, because I try hard to convince the nervous systems and soft tissues to behave themselves. Then I don't have to see them so much. I've trained most of my agility clients to train low on the jumps and A frames to preserve their dogs' bodies. All the horses I know who are still competing in eventing at advanced ages are preserved by training easy. Some of my clients have special words they use to let the animals know the jumps are raised higher for a competition or practice so it doesn't take them off guard. We have some 10 and 11 year olds still running competitively and they still love it.

The day ends with Solo, a 17 year old Border Collie. She had 2 seizures about 6 and 8 days ago. The owner had her on self-prescribed antibiotics for 45 days. All I smell is renal failure. I have not seen her in over 8 months. Her renal values had been elevated last year. We received the blood from her regular vet after her last visit to us in August 2017. The owner did not realize the bloodwork was so bad at the time. We did phone her at the time and recommended she start fluids, etc., but I'm not sure why the owner had a disconnect. She was still eating very well but was very weak,

dehydrated, and anemic. We sent out blood and taught the owner how to give fluids and B12, did some acupuncture, and sent her home with Floressence by Flora. Floressence is an expanded version of Essiac tea and is lovely for toxic overload. I love it for very damaged kidneys and livers. I've seen it work in conjunction with a few dietary additions, to seroconvert some FIV and FELV cats to negative status. Maybe the viral load was just too low to detect, but we followed up with these cats for years and had no relapse. It acts as an alterative, and has extra herbs to support blood. It is a kind yet effective remedy. I don't use it very often, I usually save it for "radioactive" animals. I've never had it do anything for cancer directly though it can help an animal with cancer feel much better when they get too 'toxic'.

I went home and had to make food for my animals. Sometimes I get too busy on Sundays, dog food day, and end up scrambling during the week. Tonight, it's pork chops, oats, butternut squash, calcium citrate, oils, minerals, and antioxidants. I also made a new concoction for my tech's dog Jada, who was in yesterday and looks like an itchy dry hypothyroid mess. The blood actually did come back a week later with a significant autoimmune hypothyroid result from Hemopet, with a 73 autoantibody, highest I've ever seen. However, at the time I was making this for her, we didn't have the results back. I took Longan berry, Lycium berry, Mulberry, and Chinese date (da zao, Jujube) and simmered them together for about an hour. I used 125-200 gm of each. The berries are nice Blood/Yin tonics and Da zao is a gentle Spleen tonic. I pulsed the mix in the blender and poured it into jars. Now we are all taking a generous teaspoon of the jam twice a day because it tastes great and I made plenty. We're expecting gorgeous hair, bright eyes, flexible tendons, tranquil sleep, and lustrous skin! We will all be glorious! Longan berry is best if there's a little Heart Deficiency, nervousness, or insomnia, but it is still a nice tonic. I was going to decoct black sesame seeds into the mix but, alas, I was out of them, which is very rare. A lot of Chinese Food Therapy books use combinations of these foods, as well as Bai he (Lily bulb), for beauty remedies. I always tell my clients, the skin and hair are the most important thing on their animal; because if it is beautiful and streaked with gorgeous highlights, if the legs sparkle with metallics in the sunlight, if the entire body is as slick and colorful as the head, and if the foot pads look like expensive Italian leather driving gloves, then the gut must be doing its job of digesting and transporting the food, the Blood is getting all the nutrients it needs to make perfect hair, and all the internal organs are working together to make this happen. Even if one organ is sub-functioning, the coat and hair and nails will suffer.

Now here is the part where the 'Day in the Life' vet talks about how amazing it is to be a holistic vet and how they love to wake up and go right back to work. I'll say this. I do love my work but I also feel it's so hard on our hearts and often on our bodies. It challenges us daily to find ways to deal with difficult clients and diseases and paperwork. We as a group are often so hard on ourselves when we can't pull yet another miracle out of our back pockets for every animal that walks in the front door. I've had associates in the past so I could leave this behind and go travel worry free. I've been on my own for a few years now, so I still travel and try to go for at least 2 weeks every year for a real vacation, and then on some extended conference get-aways where I meet up with all of you. My techs run blood work specials on thyroid testing, blood panels, and vaccine titers while I'm gone so they can generate money towards their paychecks. It usually works out, and I stress less. And that's the day!



*Dr. DiNatale graduated from the University of Florida School of Medicine in 1992. While in veterinary school she became certified in veterinary acupuncture through the International Veterinary Acupuncture Society (IVAS). In 1999, she completed her certification in veterinary chiropractic and opened the practice in Winter Park. She is a professor at the Chi Institute in Reddick, Florida, teaching acupuncture and traditional Chinese medicine to veterinarians. A much sought after speaker, Dr. DiNatale lectures around the country at veterinary conferences on acupuncture, herbs and food therapy. She enjoys spending her "spare" time with her son Valentine and her three dogs - Jordy, Sophie & Bailey.*

# REVIEW: JEFFEREY YUEN DISCUSSION

## Jeffrey Yuen's Discussion on Phlegm - February 2018

by Cynthia Lanckenau, DVM, CVA, RH (AHG)

At the Daoist Tradition's College February 2018, Jeffrey Yuen gave a day's presentation on Phlegm. The following herbal notes and formulas are from this day's discussion. The notes may seem disjointed but as all of us who have gone to Jeffrey's lectures know, it is hard to listen and write and understand the first time hearing a topic. But there are some very good formulas to consider, and herbs to learn. But the most important thing is that throughout the notes you will find pearls of Jeffrey's sage advice.

Phlegm issues are typically thought of as St/Sp excess; which cause fluids to accumulate; others say phlegm is always a deficiency problem. The Earth school is based on diet and a Spleen deficiency of transformation. Phlegm, when a by-product of insufficient transformation can go into chest; this can also be a fault of diaphragm/Liver. Historically though, the formative element is Fire, A Yang decline allows you to become sick. Therefore Phlegm is related and rooted in Fire. Note: A True Healer has no expectations. One must consider healing for the sake of healing; miracles happen when the heart opens.

It is important to recognize that Phlegm is the result of hundreds of diseases; it is the negative aspect of Qi and blood.

### 4 types of Phlegm

1. Xuan Yin-pathologic fluid above the diaphragm- oppressive chest, migraine, tinnitus-suspended to rib cage
2. Zhi Yin-postural-stoop over-epigastric region
3. Yi Yin-fluid stuck in limbs-Pinellia is needed herb for phlegm in the Chest above diaphragm- then if goopy things go into the intestines
4. Intestinal -mucus in stool/Worms- 2 colors white and red; shape,3-tape round pinworms; 4 locations-lung, diaphragm, intestine, flesh
5. Phlegm starts in chest moves up affects posture and the down and out limbs; if it moves-Wind Phlegm

Tai Yin level; the Spleen and Lung is related to the diaphragm. Often this is the opening strategy needed to treat Phlegm. Some herbs to consider when formulating an herbal approach:

- To Open diaphragm, Platycodon, Jie Geng and Buplerum, Chai Hu are very useful herbs.
- Liver/Lung affinity-Peppermint Bo He
- A very useful herb when conditions of phlegm exist: Dichora, Chang Shan: This is a Spicy, bitter, cold and toxic; treats phlegm in Lung, liver, and Heart, use when it is difficult to expectorate; also if you have a terrain of worms or malaria; or lumps; e.g. cystic fibrosis-a parasitic terrain; helpful if viral influenza and pneumonias; use caution if pregnant; if give too much will vomit; give with fresh ginger.
- Evodia, Wu Zhu Yu

### How to deal with Phlegm:

1. Lung-expel phlegm
2. Sp-transform-but failure with food and drink
3. Kd-warm to move

Hot Phlegm-Frittilaria; Trichosanthes, bamboo, sea weed

Tonify TH, to deal with Phlegm

Polygala-expels phlegm

All phlegm dx: lack of transportation-obstacle of Qi-cause water to accumulate; edema, swelling; head ache; body heavy, copious salivation, lethargic, dyspnea

### Obstacle of Qi

1. Open Chest
2. Evaluate Yang Qi (TH)

### 3. Regulate the Qi- Ju Huang/Pi; Chen Pi

Phlegm often forms a Qi obstruction; must move qi; to regulate Qi use Lung points

Nature of Phlegm is to be stuck in Chest; struggle between Hot and cold; can have cold and hot phlegm simultaneously.

Cold Phlegm: weakness Stomach/Spleen-transportation/transformation; chest will feel cold; poor appetite with decreased thirst.

Hot phlegm: due to long term retention; it holds on to pathologic fluid in chest; Qi Stagnate-heat holds onto Qi begins to get Hot and then consumes Fluid both good and bad- can be a Deficiency Heat; dry up but damage Yi fluids.

Knotted Phlegm: Both Cold and Hot congeals in chest-sharp pain in chest; heat expand chest, chest epigastric, BP issues; heat can cause to hyperventilate; can seem like excess-binding; heart attack; ;stroke; sudden blindness; hot and cold struggle at level of chest; must open chest when knotted phlegm exists.

Phlegm in diaphragm - if wind, moves, before goes out must go up cause head pressure-enter brain, forgetful, decrease mental capacity; phlegm mists the mind. Do not consume too many topical fruits. Large intestines govern the thin fluids; governs the waterways.

**4 types of Phlegm:** 1. Suspended, 2. Branch, 3. flooding, 4. pathology

Phlegm wants to travel down; LI has spaces that can hold the fluids-go into pockets.

**Strategy:** 1. open chest/diaphragm; 2. Regulate the Qi; 3. Support the Tai Yin and Yang Qi

One formula to use:

Minor Pinellia soup; Lesser Pinellia Formula to open chest and diaphragm Main herbs: Ban Xia Pinellia; Ju Hong, Chen Pi ; Fresh ginger root

If below the diaphragm-suspended phlegm-epigastric pain use instead:

Big Pinellia formula use when Qi connect rectify itself; Pulse is wiry and slippery, when you are not able to let go of judgement; phlegm sits on diaphragm and gets stuck there

Pinellia -30 g

Fresh ginger - 6 g

Ginseng - 6 g

Aconite - 6 g

Licorice - 6 g

Rou gui - 6 g (strengthen Yuan Qi)

Fu Ling - 6 g

Bai Zhi - 9 g

If also abdominal fullness and pain add Angelica, Dang Gui - 6 g

If rumbling water: Gut sounds

Licorice Decoction

Gan Cao

Rou Gui, Cinnamon

Bai Zhi

If there is a Weak Spleen must tonify Spleen use Bai Zhi-Magically transform; Fu Ling-Poria. That which you cannot transform begins to hide-it can hide with hidden pathogens-perverse to life. To prevent this one must strengthen St/ Sp.

Phlegm in chest-if settle beneath the heart-must invigorate Blood

Rou Gui and Salvia are two herbs that can help treat epigastric pain.

If Phlegm settles below, the Spleen will be weakened and you will need White Atractylodes and toasted Astragalus with Fu Ling-to drain dampness; and to also strengthen Spleen to resolve phlegm.

Ban Xia, Pinellia-treat damp, cold phlegm or Hot phlegm/with Trichosanthes and Coptis. They have a Tai Yin affinity and can open chest and bring energy down; treats vomiting with coughing/wheezing; descends Qi & helps expectoration. Do not use if dry cough; use if St is weak; descends Qi to help St; it is as strong as a source point.

**Other phlegm herbs to know:**

Qian Hu, Peucedenum  
Inula, Xuan Fu Hua  
Sterculia, Pong Dai Hai,  
Usnea

Hot and Cold Phlegm: signs in Chest - use Qian Hua formula

Qian Hua - 9 gr  
Fresh ginger - 9 gr  
Ginseng  
Pinellia - 6 gr  
Scutellaria, Huang Qin - 6 gr  
Licorice  
Evodia  
Rhubarb

Inula-Elecampane - bitter, spicy, salty - Intestine; St/LI/Lung. This is an herb to use if there is: Diaphragm Knotted Phlegm above the diaphragm; try to cough out but stuck; helps expel phlegm, descends Qi breaks up nodules in intercostal phlegm/shingles. Can apply topically to break up shingles; treats all phlegm, damp, hot or cold.

Evodia Formula-use if cold Liver; Cold in Liver and Lungs

Evodia - 9 gram  
Ban Xia - 12 g  
Freh Ginger - 9 g  
Jujube - 20 pieces  
Licorice - 3 g  
Ginseng - 6 g

Inula formula: cough, wheezing

Inula - 6 gr  
Asasium - 6 gr  
Peucedenum - 6 g  
Pinillia - 30 g  
Fresh ginger - 24 g  
Cinnamon - 12 g  
Poria - 6 gr  
Licorice - 6 g  
Aconite - 3 g

**Four herbs to know:**

Qian Hu, Peucedenum  
Inula, Xuan Fu Hua  
Sterculia, Pong Dai Hai - throat pussy gums, hot phlegm, gingivitis; help to clear throat; but also open chest and regulation Qi, sweet and cold  
Usnea used for tumors on breast; oozing wounds apply directly- knotted phlegm

### **Basic Strategy:**

1. Open Chest/Diaphragm-use Pinellia
2. Regulate or rectify Qi-use Ginger; if need to tonify Qi- Ren Shen; if phlegm via St/Spleen-Licorice-honey roasted; can use Bai Zhi or Bai Shao; Kidney- use Rou gui; or Fu Zi
3. Nature of Phlegm: if hot-malar flush-use Huang Qin; if Cold-lower symptoms- Pinellia- lack of sensation
4. Diaphragmatic-Head Inula-see migraine, Throat Bi, sinus; knotted Phlegm-flank, chest before the heart-can have nodules; if below the heart- abdominal symptoms; Dai Mai/urogenital symptoms-use Evodia or Usnea

**Er Chen Wan** - if sputum is fluid, white; if yellow need Bamboo, Fritillaria, Trichosanthes, Sea weed

1. Pinellia
2. Fu Ling
3. Chen Pi, citrus Peel
4. Gan Cao, honey fried Licorice

Bamboo-hot phlegm; mucus sitting in body; difficult to expectorate, sits in chest at night

Fritillaria: use when dry mouth and need to nourish back moisture

Trichosanthes: chest tight, binds chest

If Spleen is weak no expectorate will help; need to add Spleen tonics

Citrus Peel is warming; if need cooling use Zhi Shi or Zhi Ke

Fu Ling: strengthens Spleen; if you drain too much you will weaken Yang

Fox Nut- Euryale: Tonify Spleen, Lung and Kidney

Pulse: rapid-Hot; Slippery Damp Phlegm; if Kidney is weak then must transform

Cold Phlegm: Thick glob/white-Wild Ginger; Minor Blue Dragon

Wind Phlegm-Bai fu Zi/Typhonium-tend to be toxic- cannot be used long term; can use topically esp. on fatty deposits or ganglion

Use Da Huang to treat Hot phlegm.

Polygala, Yuan Zhi: summon your will -d ispel fear and phlegm; Heart/Lung/Spleen; Calm Shen, nourish Heart; Clear Heat, open Portals.

Both Amber and Pearl will calm Shen and soften phlegm

Worms: Tai Yin, 9 worms; 2 colors, 3 different shapes; 4 different locations

Things that cannot let go become perverse-unresolved turbidity; phlegm

Main herbs: Dichoria, Wu Mei, and Evodia

### **Vaporize Phlegm:**

Also you can use metamorphic stones: Garnet, lapis, Mica, feldspar

Meng Shi, Huang Qin, Aqualaria

This is when reflections face divine; the place where miracles happen; to clear fire; you are clearing the trapping of the world; to do this you must be comfortable with who we are in this world.



## Herbology: The Deeper You Go, The More You Know

by Ihor Basko, DVM, CVA

Clients of veterinarians who have their own pets, or of pediatricians who have raised families, trust that beyond their academic and professional experience the practitioners possess a deeper, heart-based knowledge of animals, or children. What about herbalists with no first-hand knowledge of growing the medicinal plants they prescribe? Is knowledge of plants gleaned from passive observation, reading, and lectures enough to effectively understand how and why plants can heal? Or is there a way to pursue a deeper connection to the plants we use in daily practice?

Most of us began our studies on medicinal herbs and plants through following an interest in a few plants, researching syndromes treated by plants, reading books or articles, or learning from knowledgeable clients and friends. Later, we may have supplemented our knowledge through classes with local herbalists, veterinary and lay teachers, reading more technical books, attending lectures and workshops, from mentors, and sometimes simply through trial and error. Within our herbalist community, the act of sharing also educates us. We often know something that someone else might not know. The value of sharing via e-mail on the LIST, or especially in person when we gather for conferences, is that we can contribute our ideas, experiences, concepts and formulas, thus learning from each other.

In pursuit of even more knowledge, some of us dive deeper – seeking to understand the molecules and compounds in medicinal plants and how they affect the physiology of the patient, through a review of biochemistry, nutritional biochemistry, physiology, phytopharmacology, and phytopharmacokinetics. It takes time and energy, but for those so inclined this in-depth study of herbal plants is rewarding and fascinating.

The deeper we go, the more we know... but there is always further to go. Most of us have no idea how the herbs we use are grown, let alone their personalities! You can't grasp the "personality" of a plant from studying a capsule, attending a lecture, or reading a textbook. What else can be done?

### Herb Walks and Time in Nature

We can become so engrossed in a patient, calculating which herb and how many milligrams, and perhaps prescribing herbs like we do drugs in some cases, that we lose touch with the intrinsic nature and personality of the plants themselves. How does the plant grow? Where does it grow and why does it grow there? What diseases are common where it grows, and what other plants growing in its environment can help? Learning this information out in nature, through direct interaction with and observation of the plants, is what can push our usefulness as practitioners to another level. Not enough of us are taking the time to walk and "bathe" in the forests, fields, jungles, and arroyos where healing plants grow, to discover the full depth of the mysteries they conceal. Wild-crafting herbs, the practice of foraging for useful plants in their natural, wild habitat, documenting them with a camera, noting their environment, climate, type of substrate, etc., provides an important way to learn more intimately about the plants we use. The VBMA, ACVBM, and the AHVMA Council of Elders all offer herb walks annually. Outside of veterinary organizational meetings, many opportunities also exist with professional herbalists and organizations. Take the opportunity to participate, or venture out on your own.

### Growing Knowledge by Growing Your Own

Although I have always had vegetable gardens, until recently I have had an "impersonal" relationship with what I grew. By planting medicinal trees, plants, shrubs, roots, and vines - moringa, papaya, Surinam cherry, datura, turmeric, medicinal nightshade (popolo), Syzygium, noni, coconut, passion flower, chayote, magnolia, jasmine, turmeric, ginger, comfrey, plantain, kava kava, gotu kola, hemp, and tropical ginseng - and personally caring for them (with the help of my wife Jane), I have discovered that I can learn a lot more about how these plants grow and thrive, or not. For example, I noticed the taste of the plants changes with the seasons and climate. Does that mean the actives will be different? Probably. Being directly involved with the plants' growth and welfare has made me think differently as a practitioner, and ask different questions.

When you "grow your own," whether from seed, sprout, or young starter plant, you become cognizant of the needs

of the plant to stay healthy, to thrive, and to bring fruit and/or beneficial compounds. You become a student of the plants' nutritional, soil, and moisture needs, as well as their vulnerabilities and susceptibilities to disease, weather, and temperature.

Planting herbs in a pot indoors also offers a different experience of them, because you can interact with them many times during the day. I spend a lot of time in my kitchen, where I keep "baby" plants on the windowsill. I am able to watch, observe, tend, water, and nurture them throughout the day. After a few weeks I begin to "feel" the plants responding to my efforts, and to my presence. I feel their living presence. Wow. More than just positive feedback for my efforts, I have discovered something else, a deeper contact that is difficult to put in words. It is an experience of engaging with the sacredness of the plants and the intelligence of the natural world, as described by Stephen H. Buhner in many of his wonderful (and highly recommended) books.

Take a step further in your relationship with what you grow by learning to make extracts. Use them, drink them, rub, massage or bathe in them, then do the same with the commercial extracts you have been buying for your patients, and compare the experiences.

Medicinal plants are multi-dimensional "beings" with unique personalities, temperaments, and intelligence. To prescribe them strictly intellectually and academically, as we would a drug to control symptoms, will limit our success in using them on our patients. Does "growing your own" make you a better herbalist? Absolutely. Through "knowing" the personality of the plant as well as its biochemistry, you can appreciate the plant's contribution to healing and well-being more holistically. Establishing a relationship with medicinal plants by connecting and interacting with them in their natural setting will give you knowledge and experience that will improve how you prescribe herbs.

*Photos below are from Ihor's garden in Kauai, Hawaii.*



# CASE REPORT: CANINE

## Herbal treatment of Dermatomyositis in Angel, a Shetland Sheepdog

Kris August, DVM, Grad Diploma VWHM (CIVT), CHPV (Hospice and Palliative Care)

### Abstract:

Dermatomyositis is a genetic disorder that occurs in Shelties (Shetland Sheepdogs) and Collies primarily, though is occasionally seen in other breeds. The pathogenesis is not fully understood, but it is thought that an immune-mediated microvascular vasculopathy results in inflammatory lesions of the skin, muscle and connective tissues. The condition can vary in severity from mild dermatologic signs early in life that never recur to life-threatening muscle atrophy causing megaesophagus and other complications (Medleau and Hnilica 2006; Lindsey, 2012; Shell, 2015). In Angel's case she has had periodic flare-ups with scabbing and inflammation of the skin leading to areas of permanent scarring and alopecia along her face, back, legs and tail tip. She does have muscle atrophy along her facial muscles, but has not had difficulty with ambulation or ingestion. Conventional treatment of this disorder has varying success with the primary goal being to control inflammation and progression of signs using immunosuppressive drugs such as prednisone and cyclosporine and to improve circulation to connective tissues using pentoxifylline (Trental) (Plumb, 2015). A Western herbal medicine formula was developed for Angel with good long-term success in controlling dermatological signs and flare-ups.

### Angel— 6 yr old Sheltie mix, spayed female, 24.6 lbs

### History:

Angel was adopted from a Sheltie rescue organization 5 years ago at 1 year of age. At the time of adoption she had several areas of scarring and alopecia periocularly and over her nasal planum, back, tail tip and legs along with muscle atrophy of the facial muscles. She had been diagnosed with inherited dermatomyositis, though it is uncertain if biopsies were obtained. Breed and clinical signs including muscle atrophy and dermatologic signs, especially on the tail tip and around the face support a diagnosis of the condition. Angel was started on Vitamin E and fish oil supplements at the shelter and her adoptive family has continued those. Over the years, her skin has been relatively stable with occasional mild scabbing and inflammation, especially with stress such as kenneling and during winter months or summer sun exposure when sunscreen is forgotten. She has had occasional mild episodes of otitis and has developed significant periodontal disease over the past few years. At the time of this examination, her skin condition had significantly worsened following a dental cleaning 6 months prior (3/9/13) in which 2 teeth were extracted. In previous years, dermatological flare-ups associated with stress events resolved within a few weeks at most and topical calendula ointment was a helpful adjunct.

### Physical exam:

9/10/13

- Angel was bright and friendly, though a little nervous and high-strung, which is consistent with her personality. Normal activity and appetite were reported with no vomiting or diarrhea. Moderate tartar was present with visible gum inflammation.
- Inflammatory skin lesions with scabbing and raw areas were present especially on nasal planum, back and legs; areas of scarring and alopecia appeared larger than previously noted. Angel was chewing and rubbing at areas she could reach on her feet and legs exacerbating the lesions and causing them to bleed. No change was apparent in the long-term muscle atrophy of temporal and masseter muscles, with no signs of physical impairment to function including ambulation and ingestion.
- Her tongue color was lavender, overall she prefers cool surfaces for lying on and cooler weather and she has a nervous constitution.
- Diet was Science Diet light and T/D recommended by the clinic that performed the dental cleaning.

Current medications:

- Welactin Omega 3 Fatty Acids: 1,450mg / day. The current bottle that she had been taking was expired and potentially rancid.
- Vitamin E: 400mg orally daily
- Calendula ointment – beeswax and olive oil infused with calendula flowers – topically as needed for mild skin eruptions

### **Recent laboratory testing:**

CBC and chemistries were unavailable, but were reported to be normal at the time of dental cleaning 3/9/13, further testing was declined at this time.

### **Western Diagnosis:**

- Dermatomyositis – inherited inflammatory immune-mediated condition affecting microvasculature of skin, connective tissues and muscles
- Flare-up of dermatomyositis condition caused by a combination of factors: stress of recent dental cleaning; dental disease- inflammation and infection; dietary changes/ allergy?; pyoderma- primary or secondary to initial lesions?; expired fish oil supplement
- Chronic dental disease/periodontitis
- History of occasional mild otitis – possible concurrent allergy?

### **Conventional treatment options:**

Conventional treatment of dermatomyositis can vary greatly depending on the severity of disease. Most cases are supplemented with Omega 3 essential fatty acids for their anti-inflammatory properties and vitamin E for its antioxidant effect. Immunosuppressive drugs such as prednisone, azathioprine or cyclosporine are sometimes used, reduced to the lowest dose possible to control relapses. Immunostimulant drugs such as Immunoregulan have also been used to treat dermatomyositis. The current favorite, which seems to be more successful with fewer side effects, is pentoxifylline (Trental), which enhances microcirculation by increasing erythrocyte flexibility and also has some anti-inflammatory action by decreasing tumor necrosis factor alpha (TNF-alpha). Potential side effects of pentoxifylline in dogs and cats include GI signs of vomiting, inappetence, and diarrhea as well as CNS signs of nervousness or excitement. It is contraindicated with severe renal or hepatic impairment and patients at risk for hemorrhage (Plumb, 2015).

Pentoxifylline treatment was considered as an option with fewer side effects than immunosuppressive drugs and positive reports for treatment of dermatomyositis in the literature, but was unfortunately not available from suppliers at the time. With concerns about future drug availability and a desire to find a safe long-term supportive treatment for Angel, a treatment plan using Western herbs was formulated leaving the option open to consider pentoxifylline treatment in the future.

Pruritis is not generally associated with dermatomyositis lesions, though can be caused by a secondary infection. Antibiotics were not given, but kept as an option if needed. In Angel's case, the inflammation and ulceration seemed to be her primary source of discomfort and due to this, her owner elected to try a short-term treatment with steroids in addition to starting the herbal formula. Concerns about side effects and a desire to avoid long-term steroid use were discussed.

### **Western Herbal Medicine Considerations:**

From a Western herbal medicine perspective, Angel has a nervous, warm constitution with a condition that adds heat through its chronic inflammatory nature. Her pale/ lavender colored tongue may indicate poor circulation, this fits with what is understood about dermatomyositis being caused in part by a decrease in blood flow to skin, muscle and connective tissues.

Also, from a holistic perspective, the diet of dry kibble is higher in carbohydrates and less supportive of the digestive system and intake of nutrients than a whole food diet of fresh ingredients with unprocessed, bioavailable nutrients and antioxidants. Poor digestive health can affect other body systems and is often connected with dermatological condi-

tions including inflammation, allergy and susceptibility to infections. This could be a contributing factor for Angel's skin condition and occasional ear infections.

Treatment goals for Angel included providing support for multiple body systems to promote overall healing focusing particularly on her immune, dermatological and gastrointestinal systems. Anti-inflammatory actions were needed as well as support for the microcirculation and connective tissues. Anti-anxiety and nerve action was added to help support her nervous constitution and reduce reactions to stress. With the steroid treatment, liver and general organ system support was desired, as well as the goal to eliminate long-term steroid use.

The following herbs were chosen for Angel's initial oral formula (see material medica for details):

- Ashwagandha (*Withania somnifera*): Ashwagandha was chosen particularly for its effects as a calming adaptogen and its use in supporting the body's response to stress and improving adrenal function. The immune modulating, anti-inflammatory, antioxidant and general organ support actions are beneficial in this case. Ashwagandha reduces pro-inflammatory cytokines including TNF-alpha and several interleukins (Dar et al., 2015).
- Astragalus (*Astragalus membranaceus*): For a potentially immune-mediated condition, the immune-modulating effects of astragalus may be useful in balancing the immune system. Saponins from astragalus root have been shown to have "powerful immunoregulatory effects without the stimulation of inflammatory cytokines in mice, and have no significant effect on the inflammatory cellular targets in vitro." (Nalbantsoy et al., 2012) The anti-inflammatory properties of astragalus root extract have been demonstrated in its ability to reduce the expression of TNF-alpha as well as inducible nitrite oxide synthase (iNOS), cyclooxygenase-2 (COX-2), interleukin 6 (IL-6) and 1 (IL-1) in mice (Ryu et al., 2008).
- Gotu Kola (*Centella asiatica*): Gotu kola is particularly beneficial in this condition that affects the microcirculation and connective tissue. It has been shown to enhance angiogenesis, promote fibroblast proliferation and stimulate collagen synthesis (Shukla et al., 1999; Maquart et al., 1999) In addition to its benefits in wound healing topically and orally, gotu kola's adaptogenic and nerve tonic effects are supportive in this case.
- Licorice root (*Glycyrrhiza glabra*): Licorice root was chosen for its anti-inflammatory and adaptogenic effects, but primarily due to its action as an adrenal tonic that stimulates mineralocorticoid activity (Hosseinzadeh & Nassiri-Asl, 2015). The use of licorice root in combination with corticosteroids may allow for a more safe and effective reduction in steroid dosing.
- Marshmallow (*Althea officinalis*): The demulcent and supportive actions on the gastrointestinal system along with the benefits as a flavoring agent made marshmallow root an addition to this formula.

Herbal Formula and dosage:

- 6 ml Ashwagandha (*Withania somnifera*) 1:1
- 12 ml Astragalus (*Astragalus membranaceus*) 1:2
- 3 ml Gotu Kola (*Centella asiatica*) 1:1
- 3 ml Licorice root (*Glycyrrhiza glabra*) 1:2
- 8 ml Marshmallow (*Althea officinalis*) 1:5

2.5 ml orally twice daily.

Calendula (*Calendula officinalis*) ointment topically on lesions as needed.

Calendula infused olive oil in a beeswax base (anti-inflammatory and tissue healing properties)

### **Safety and potential herb-drug interactions:**

The herbs chosen have a wide range of safe dosage and were used at a relatively low-end dose. Licorice root was used at a low dose to help potentiate the effects of the steroid in order to reduce its need and continue to support the dermatologic inflammation.

**Additional therapies:**

- Diet change recommended to a more whole-food based diet, commercial or home-made. The owners did not wish to cook for their dog, but would add fresh vegetables and fruit to food and as snacks. An elimination diet for possible food allergy was considered if no improvement occurred.
- Continue Welactin – fresh bottle – at 1,450 mg/day
- Continue Vitamin E supplement – increase to 800mg/day
- Rx: Prednisolone 5mg 1xBID for 5 days, then 1x daily for 5 days, ½ daily for 5 days then ½ EOD

**General recommendations and concerns for patients with dermatomyositis:**

Protection from sun is recommended by avoiding mid-day exposure using a t-shirt to protect areas on the back and using a pet or baby-safe formula of sunscreen avoiding especially zinc and salicylate ingredients. Sterilization is recommended not only to prevent breeding, but also to reduce hormonal fluctuations of heat cycles, pregnancy and lactation, which can cause flare-ups. Stressors such as kenneling, surgery, hospitalization/illness, environmental and seasonal changes can induce relapses.

Prognosis is quite variable from no recurrence or mild recurrences of scabbing lesions with or without scarring and alopecia to severe muscle atrophy causing ataxia, “sloppy eating or drinking” and in the worst cases megaesophagus leading to aspiration pneumonia.

**Follow-up:**

Verbal, e-mail and in-person visits continued regularly over the next few months. Highlights are listed:

**10/30/13**

Recheck exam – Angel’s skin improved while on the prednisolone, but seemed to be worsening and her activity level was decreasing since off the steroid. The scabbing was improved, but red/inflamed areas persisted. The owner switched the diet to Taste of the Wild lamb and rice, which from a TCM perspective would still be a warming diet, potentially contributing to the inflammation.

**Changes in treatment:**

Increased gotu kola and licorice portions in oral herbal formula:

- 24 ml Ashwagandha (*W. somnifera*) 1:1
- 48 ml Astragalus (*A. membranaceus*) 1:2
- 18 ml Gotu Kola (*C. asiatica*) 1:1
- 18 ml Licorice root (*G. glabra*) 1:2
- 28 ml Marshmallow (*A. officinalis*) 1:5

2.5 ml orally twice daily.

**Added topical herbal cream:**

- 2 oz Vitamin E cream - topical
- 0.5 ml Gotu Kola (*C. asiatica*) 1:1
- 0.5 ml Calendula (*C. Officinalis*) 1:4

Apply small amount to affected areas of skin 2-3 times daily as needed.

**Other treatments:**

- Owner giving 400mg Vitamin E daily – increase to 800mg daily.
- Continue Welactin – 1,450 mg/day

**11/26/13**

Angel continued to have pruritic and inflamed, scabbing areas, though somewhat improved from the initial visit. Her owner requested another short-term steroid treatment to help get through the holidays. Topical cream was not used very often.

Rx: Prednisolone 5mg 1xBID for 5 days, then 1x daily for 5 days, ½ daily for 5 days then ½ EOD

**Continue herbs and other supplements:**

\*\*Change in herbal formula adding in dandelion and albizia for more GI and skin support and for possible skin allergy (astragalus decreased to compensate):

- 24 ml Ashwagandha (*W. somnifera*) 1:1
- 20 ml Astragalus (*A. membranaceus*) 1:2
- 12 ml Gotu Kola (*C. asiatica*) 1:1
- 18 ml Licorice root (*G. glabra*) 1:2
- 20 ml Dandelion root (*T. officinale*) 1:2
- 20 ml Albizia (*A. lebeck*) 1:2
- 24 ml Marshmallow (*A. officinalis*) 1:5

2.5 ml orally twice daily.

**1/5/14**

Angel was back to her normal self – no more scabbing, pruritis, or inflammation. Prednisolone had been discontinued 3 weeks prior. Herbs, vitamin E and omega-3 supplements continued.

**5/28/14**

Recheck:

Doing well, mild flare-up in April – possible sun burn, spending more time outside. Recovered and healed quickly. Overall impression from her owner is that she feels better, has good energy and though she is still a high-energy dog, she is perhaps less stressed and anxious through her normal day.

Bloodwork – well-check: Full CBC and Chemistries all within acceptable limits (sl increase in ALP -171 IU/L, normal range 20-150 IU/L and Lymphocytes sl. decreased ( $0.67 \times 10^3 /\mu\text{l}$ , normal  $1.0-4.8 \times 10^3/\mu\text{l}$ )

Continue Herbs and supplements:

Albizia decreased and astragalus increased to previous level. Gradual decrease in licorice root portion over next 2 months:

**6/13/14**

Skin stabilized, doing well

- 26 ml Ashwagandha (*W. somnifera*) 1:1
- 32 ml Astragalus (*A. membranaceus*) 1:2
- 20 ml Gotu Kola (*C. asiatica*) 1:1
- 12 ml Licorice root (*G. glabra*) 1:1
- 18 ml Dandelion root (*T. officinale*) 1:2

- 12 ml Albizia (*A. lebeck*) 1:2
- 18 ml Marshmallow (*A. officinalis*) 1:5

2.5 ml orally twice daily.

### **3/23/15**

Milk thistle script for pre and post dental cleaning:

\* 28 ml Milk Thistle (*S. marianum*) 1:1

0.5ml orally 2-3 times daily.

For liver support pre and post anesthesia use 3 days prior to and 3 days after surgery.

### **3/27/15**

Bloodwork – pre-dental – normal

Dental cleaning with a smooth recovery. 2 more teeth removed.

No skin-flare-ups post hospitalization or when kenneled at times over the past year.

### **3/2/16**

Angel continues to do well with minor flare-ups from sun exposure that resolve quickly.

Current herbal formula:

- 30 ml Ashwagandha (*W. somnifera*) 1:1
- 35 ml Astragalus (*A. membranaceus*) 1:2
- 20 ml Gotu Kola (*C. asiatica*) 1:1
- 20 ml Dandelion root (*T. officinale*) 1:2
- 10 ml Albizia (*A. lebeck*) 1:2
- 15 ml Marshmallow (*A. officinalis*) 1:5

2.5 ml orally twice daily

### **Additional supplements:**

- Welactin Omega 3 Fatty Acids: 1,450 mg/day
- Vitamin E supplement: 800mg/day

### **Discussion:**

Though she did have some initial improvements, it took some time for Angel's condition to stabilize. Increasing the licorice proportions and adding the dandelion and albizia seemed to be helpful, potentially due to increased anti-inflammatory, alterative and anti-histaminic effects. There were many simultaneous treatment changes with Angel, so it is difficult to say which was most beneficial. Simply switching to a fresh fish oil supplement was surely helpful, though it still took a few months for improvement. Further dietary changes may have led to more rapid improvements, but were not an acceptable option for this family. The short-term use of low dose steroids did make her comfortable, but was always seen as a temporary measure and kept at a low dose due to concerns about side effects. Licorice root was added to the herbal formula to support the steroid effect while allowing us to decrease the prednisolone dose.

Angel has been taking her herbal formula now for over 2.5 years. Her owners have been very consistent with giving her treatments and do feel that they help her feel better overall and are supporting her as she goes into her senior years. Since she has been on the herbal treatment, her annual blood rechecks have remained normal, she has had fewer and more mild skin reactions to stressful situations and managed a dental cleaning with no incident whatsoever, which is a great improvement for her.

## **Materia Medica:**

### **Ashwaganda** (*Withania somnifera*)

Family: Solanaceae

Parts used: Root, leaf and whole plant

Chemical Constituents: Steroidal lactones (withanolides, withaferrins), saponins (sitoindoside) alkaloids, flavonoids, amino acids, iron

Clinical Actions: Immune-modulating (supports the immune system without overstimulating), tonic (used to counteract the effects of aging, increase energy, improve overall health and longevity), adaptogen (increases the body's response to stress acting on the nervous, endocrine & immune systems, allowing it adapt as needed to illness), nervine (tones, nourishes and strengthens the central nervous system.), sedative (calming), anti-inflammatory, anti-oxidant, anti-tumor effects at higher doses, thyroid stimulant, chemoprotective, hematopoetic, anodyne (relieves pain via topical application)

Energetics: Warm, pungent, sweet

Indications: Supportive in immune and inflammatory diseases, particularly arthritis and dermatological conditions; supportive in stressful conditions through calming effects and endocrine support; supportive during chemotherapy and long-term steroid use; adjunctive treatment for hypothyroidism, cognitive dysfunction, anemia and especially useful in aging and convalescing patients.

Contraindications/ Cautions: Do not use with pregnancy - high doses may cause abortion. Very high doses may cause GI distress, diarrhea or vomiting.

Potential Drug/Herb Interactions: Use caution in combination with barbiturates and anxiolytics, can increase the effects of sedatives.

Dose: Tincture (35-45% alcohol) 1:2 or 1:3 1-2.5ml/10kg divided daily.

### **Astragalus** (*Astragalus membranaceus*) -Huang Qi in TCM

Family: Fabaceae

Parts used: Root

Chemical Constituents: Triterpenoid saponins, polysaccharides, flavonoids, isoflavones, sterols, volatile oils, amino acids

Clinical Actions: Immune enhancing / supportive, tonic (used to counteract the effects of aging, increase energy, improve overall health and longevity), anti-viral, cardiotonic, vasodilator, diuretic, hypotensive, antitumour, adaptogenic, renoprotective.

Energetics: Sweet, slightly warm

Indications: Increase energy and resistance to disease – increases endurance, immune strengthener and stimulator; prevent infection; support impaired immunity due to cancer, autoimmune disease or infectious immunodeficiency (FeLV, FIV); chronic bacterial or viral infections; geriatric support; congestive heart failure and early heart failure; renal disease; cancer support: restores hematopoietic functions of bone marrow – especially during chemotherapy or radiation treatment.

Contraindications: None known.

In Chinese medicine Huang Qi is avoided in acute infections and excess heat due to its warming effects.

Potential Drug/Herb Interactions:

- May be incompatible with immunosuppressive drugs.

Dose: Tincture (25%-35% ethanol) 1:2 or 1:3 1-2ml/10 kg divided daily.

### **Gotu Kola** (*Centella asiatica*)

Family: Apiaceae

Parts used: Aerial (leaves and stems), sometimes whole plant

Chemical Constituents: Triterpenes (Asiatic acid and madecassic acid), and triterpene ester glycosides derived from them (asiaticoside and madecassoside)

-“Studies done in accordance with standardized scientific criteria have shown it to have a positive effect in the

treatment of venous insufficiency and striae gravidarum. Centella asiatica also appears to be effective in the treatment of wound healing disturbances." (Brinkhaus et. al., 2000)

- "Asiaticoside exerted a preferential stimulation of collagen synthesis and was active at low doses only." (Marquart FX et. al., 1999)

Clinical Actions: Adaptogen (increases the body's response to stress acting on the nervous, endocrine & immune systems, allowing it adapt as needed to illness), connective tissue regenerator, nerve tonic (nourishes and strengthens the central nervous system), mild diuretic, alterative (traditional term - improves overall tissue metabolism)

Energetics: Bitter, cold, slightly astringent

Indications:

Topical: wound healing & scar reduction– lick granulomas, equine granulomatous lesions, delayed healing, degloving injuries, feline leprosy ulcers, anal furunculosis. (humans- keloids, hypertrophic scars, burns, skin ulcers)

Internal: helicobacter pylori infection with ulceration of stomach, aspirin/NSAID induced gastritis; lymphoma and possibly other tumors in mice; improves circulation - cognitive enhancement, edema

Contraindications: None known. Low toxicity even at very high doses. Possible topical sensitization.

Potential Drug/Herb Interactions: May possibly increase sleeping time when given with phenobarbital.

Dose: Tincture (25%-40% ethanol): 1:2-1:3 0.5-1.5ml/ 10kg divided daily.

### **Licorice** (*Glycyrrhiza glabra*)

Family: Fabaceae

Parts used: Roots and stolon, rhizomes

Chemical Constituents: Triterpene saponins, including glycyrrhizin (glycyrrhizinic acid, glycyrrhizic acid) 2-9%. Flavonoids, coumarins, starch, protein. Other minor constituents vary depending on species and geographic location.

Clinical Actions: Anti-inflammatory, adaptogen (increases the body's response to stress acting on the nervous, endocrine & immune systems, allowing it adapt as needed to illness), adrenal tonic, increases mineralocorticoid activity, antiviral (topically), antispasmodic, laxative, mucoprotective, demulcent, anti-ulcer (peptic), expectorant, antitussive, flavor-enhancer

Energetics: Sweet, neutral, moist

Indications: Used to augment or help reduce corticosteroid use in allergic dermatitis, Addison's disease, asthma, and other inflammatory conditions. Also used to treat gastric ulcers, bronchitis & cough.

Contraindications: Cholestasis / biliary obstruction, hypertension,

- Prolonged (>6 wks) use at large doses (>50g/day for humans) may cause water accumulation, sodium accumulation, potassium loss, and increased blood pressure.

- Avoid use with pregnancy or lactation

- Avoid use with hypertension, cardiovascular disease, renal disease, diabetes or liver disease

Potential Drug/Herb Interactions: May increase potassium loss, so prolonged use should be avoided with chronic renal failure, thiazide and loop diuretics or cardiac glycosides. May increase the effects of corticosteroids.

Dose: Tincture (usually 30-35% ethanol) 1:2-1:3 0.5-1 ml/10kg divided daily.

### **Marshmallow** (*Althaea officinalis*)

Family: Malvaceae

Parts used: Root, leaf

Chemical Constituents: Root: 5%-35% mucilage, asparagines, tannins

Leaf: mucilage, flavonoids, phenolic acids

Clinical Actions: Nutritive, demulcent (soothes, protects and restores mucous membranes), antitussive, vulnerary (aids in wound and skin healing, usually refers to external application or direct GI contact in this case), diuretic

Energetics: Sweet, bitter, cold

Indications: Gastroenteritis, gastric ulcer, stomatitis, diarrhea, urinary tract inflammation (cystitis, nephritis, urethritis), respiratory tract inflammation (laryngitis, bronchitis, cough)

Topically for open wounds, ruptured abscesses, ulcers

Contraindications: None known, except known allergy

Potential Drug/Herb Interactions:

- May interfere with the absorption of other medications given at the same time due to mucilage content.
  - May lower blood glucose (anecdotal), use with caution in patients at risk for hypoglycemia
- Dose: Tincture (usually 25-35% ethanol or glyceract) 1:2 – 1:3, 0.5-1.5ml per 10kg divided daily.

**Dandelion** (*Taraxacum officinale*)

Family: Asteraceae

Parts used: Roots, leaves, flowers

Chemical Constituents: Sesquiterpene lactones (such as: taraxinic acids, triterpenes: beta-amyrin, taraxol and taraxerol); carotenoids, including lutein; inulin; saponins; fatty acids such as myristic acid; flavonoids, including apigenin, luteolins and chrysoeriol; minerals (up to 4.5% potassium); phenolic acids (chicoric and monocaffeoyltar-taric acids); coumarins (cichoriin and aesculin); sitosterol, stigmasterol and taraxasterol; sugars; vitamin A; quercetin glycosides

Clinical Actions: Digestive/bitter tonic, liver tonic, alterative (improves overall tissue metabolism), choleric (stimulates bile production by hepatocytes), cholagogue (stimulates release & flow of bile), hepatorestorative, hepatoprotectant, diuretic, pancreatic stimulant, mild laxative, antihypertensive, anti-inflammatory

Energetics: Bitter, cold, dry

Indications: Liver disease; gallstones; pancreatitis; diabetes; GI disease including signs of dyspepsia, loss of appetite, flatulence, intestinal bloating and constipation; oliguria; cystitis; edema; muscular rheumatism; chronic skin diseases

Contraindications: Bile duct obstruction and acute bile duct inflammation, intestinal obstruction.

Potential Drug/Herb Interactions:

- High mineral content may interfere with the absorption of quinolone antibiotics.
- Increase in potassium, diuresis and mild BP lowering effects should be taken into account with other medication use. (though potassium in dandelion leaves could also serve to replace potassium lost through diuresis)

Dose:

Root or whole plant: Tincture (25-70% ethanol): 1:2 – 1:3: 0.5-1.5 ml per 10kg divided daily.

Leaf: Tincture (25-70% ethanol): 1:2-1:3: 1.0-2.5ml per 10kg divided daily.

**Albizia** (*Albizia lebbek*)

Family: Fabaceae

Parts used: Bark, leaves, seeds, and sometimes flowers

Chemical Constituents: Saponins, cardiac glycosides, tannins and flavonoids

Clinical Actions: Anti-allergic, anti-inflammatory, anti-diarrheal, anti-microbial, anti-cholesterolemic, antioxidant, antifungal, spasmolytic (smooth muscle), positive inotrope, immune stimulant

-Anti allergic activity was studied with Albizia having a significant action on mast cells and inhibition of the early sensitization and synthesis of reaginic-type antibodies.

-Albizia has an influence on GABA, serotonin and dopamine in vivo, leaves raise levels of GABA, anticonvulsant activity has been demonstrated in vivo.

Energetics: Cooling, dry

Indications: Asthma, bronchitis, allergic rhinitis, allergic skin disease, mast cell tumors and high cholesterol.

Contraindications:

May depress T and B lymphocyte activity. Some data suggest an anti-fertility effect in animals.

Potential Drug/Herb Interactions: Cautions with inotropic heart medications – may be synergistic.

Dose: Tincture 1:2-1:3 0.5-1 ml/10kg divided daily.

**Milk Thistle** (*Silybum marianum*)

Family: Asteraceae

Parts used: Primarily fruit (often referred to as seeds), flower heads, leaves

Chemical Constituents: Silymarin -a flavonoid complex w/ 3 parts: silibinin, silidianin, and silichristine. Silibinin is thought to be the most active.

Also contains: sterols, fixed oil, flavonoids (apegenin, quercetin, kaempferol), lignans, biogenic amines (tyramine, betaine), and mucilage.

Clinical Actions: Hepatoprotective, protects cell membranes generally (protective for kidney and pancreas in addition to liver), hepatic trophorestorative, demulcent (soothes, protects and restores mucous membranes), cholagogue (stimulates release & flow of bile), galactagogue (promotes lactation), antioxidant, anti-inflammatory

Energetics: Bitter, warm

Indications: Hepatitis, cholangiohepatitis, liver damage or disease, abnormal liver function, hepatic lipidosis, exposure to chemical pollutants, anesthetics or liver damaging drugs, toxic injury to liver (esp. aflatoxin), skin diseases involving liver dysfunction, dyspepsia, preventing gallstone formation, gallbladder problems, protection of pancreas during pancreatitis or drug damage, hyperlipidemia, adjunct to metronidazole tx for giardiasis – decrease adverse effects, increase lactation and protect dairy cows from ketonemia.

Contraindications: Relatively non-toxic, used as food. May decrease insulin requirements in diabetics. Side effects rare – mild GI signs, mild laxative, 2 cases of anaphylactic shock reported, rare increase in ALT. Allergy to Aster family.

Potential Drug/Herb Interactions: May reduce insulin requirements in some diabetic patients; Silymarin shown to protect against organ toxicity induced by cisplatin, acetaminophen, butyrophenones, halothane, phenothiazines, tacrine, and vincristine.

Dose:

Fluid extract (1:1)(60-80% ethanol): 1.0-2.0ml per 10 kg divided daily.

Glycetract (1:1): 1.0-2.0ml per 10kg divided daily.

## **Calendula** (*Calendula officinalis*)

Family: Asteraceae

Parts used: Flowers

Chemical Constituents: Triterpene saponins (2-10%), oleanolic acid (calendulosides) and flavonoids (3-O-glycosides of isorhamnetin and quercetin), including astragalin, hyperoside, isoquercitrin and rutin. Also essential oil, sesquiterpenes (eg: caryophyllene), triterpenes (eg: a- and b-amyrins, lupeol, and lupenone), immunostimulant polysaccharides.

- Specific triterpenoid: faradiol monoester – shown to have anti-inflammatory effects.

Clinical Actions: Antiseptic, lymphatic, hypolipidemic, anti-inflammatory, astringent, spasmolytic, vulnerary, cholagogue, emmenagogue

Energetics: Neutral, slightly cooling, dry

Indications: Mastitis salve, gingivitis, ulcers, erosions, eyewash, dermatitis, wound cleansing (tea)

Contraindications: Do not use with pregnancy - may cause abortion due to emmenagogue effect. Avoid with allergy to Asteraceae family.

Potential Drug/Herb Interactions: None known

Dose: Tincture (80-90% ethanol): 1:2-1:3 0.5-2ml per 10kg divided daily

## **References:**

Dar NJ, Hamid A, Ahmad M. Pharmacologic overview of *Withania somnifera*, the Indian Ginseng. *Cell. Mol. Life Sci.* (2015) 72:4445–4460

Hosseinzadeh H and Nassiri-Asl M. (2015). Pharmacological Effects of *Glycyrrhiza* spp. And Its Bioactive Constituents: Update and Review. *Phytotherapy Research.* 29, pp. 1868–1886.

Lindsey, Sherry. (2012) Texas A&M Dermatomyositis Studies website: <http://www.shalaine.com/dm/dm.html> accessed 10 December 2015

Maquart FX, Chastang F, Simeon A, Birembaut P, Gillery P, Wegrowski Y. Triterpenes from *Centella asiatica* stimulate extracellular matrix accumulation in rat experimental wounds. *Eur J Dermatol.* (1999) Jun;9(4):289-96.

Medleau L, Hnilica K. *Small Animal Dermatology*. 2nd ed. Missouri: Elsevier, 2006.

Nalbantsoy A, Nesil T, Yilmaz-Dilsiz O, Aksu G, Khan S, Bedir E. Evaluation of the immunomodulatory properties in mice and in vitro anti-inflammatory activity of cycloartane type saponins from *Astragalus* species. *Journal of Ethnopharmacology*. (2012) 139. 574– 581

Plumb, D. *Plumb's Veterinary Drug Handbook*. 8th ed. Wisconsin: PharmaVet, Inc., 2015

Ryu M, Kim HE, ChunM, et al. Astragali Radix elicits antiinflammation via activation of MKP-1, concomitant with attenuation of p38 and Erk. *J Ethnopharmacol*. (2008) 115(2):184–193

Shell, Linda <http://www.vin.com/Members/Associate/Associate.plx?from=GetDzInfo&DiseaseId=1191> accessed 10 December 2015

Shukla A, Rasik AM, Jain GK, Shankar R, Kulshrestha DK, Dhawan BN. In vitro and in vivo wound healing activity of asiaticoside isolated from *Centella asiatica*. *Journal of Ethnopharmacology* 65 (1999) 1–11

**Additional Materia Medica resources:**

Bone, Kerry. *A Clinical Guide to Blending Liquid Herbs*. Missouri: Elsevier, 2003.

Brinkhaus B, Lindner M, Schuppan D, Hahn EG. Chemical, pharmacological and clinical profile of the East Asian medical plant *Centella asiatica*. *Phytomedicine*. (2000) Oct;7(5):427-48.

College of Integrative Veterinary Therapies course notes: *Veterinary Western Herbal Medicine module 6*.

Fu J, Zenghui Wang Z, Huang L, Sihao Zheng S, Wang D, Chen S, Zhang H, Yang S. Review of the Botanical Characteristics, Phytochemistry, and Pharmacology of *Astragalus membranaceus* (Huangqi). *Phytother. Res*. (2014) 28: 1275–1283

National Medicines <https://naturalmedicines.therapeuticresearch.com>

Wynn S, and Fougere B. *Veterinary Herbal medicine*. Missouri: Mosby, 2007

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# CASE REPORT: FELINE

## Herbal treatment of Feline Diabetes

Kris August, DVM, Grad Diploma VWHM (CIVT), CHPV (Hospice and Palliative Care)

### Abstract:

Diabetes Mellitus is relatively common in older cats and can be challenging to treat in patients that are more fearful and difficult for owners and veterinarians to physically handle for blood glucose testing and insulin injections. These animals may be left untreated and/or euthanized due to poor quality of life. Chisai was one such cat. She allowed minimal handling without sedation, and sedation events had lasting adverse behavioral effects for her. Her owner traveled periodically as well, and for these reasons had chosen euthanasia instead of injectable insulin if Chisai could not be kept comfortable. Using Western herbal formulas and dietary changes, she lived 4 years comfortably with few clinical signs, and no discernible discomfort.

### Chisai – 10-year old spayed female domestic shorthair cat (DSH) cat, 11 lbs

### History:

Chisai presented on July 29, 2011 for a housecall examination and evaluation for herbal treatment of diabetes. She had a 1-year history of not doing well. Problems ranged from constipation and anal gland impactions to flea infestation and subsequent over-grooming along lateral sides and hind limbs.

Chisai was seen for polyuria and polydipsia at the previous veterinarian's office six months earlier on January 19, 2011. Bloodwork revealed a glucose level of 381 mg/dl (normal 70-120) and a diagnosis of type 2 diabetes mellitus was made. The owner did not wish to give insulin therapy, mainly due to frequent traveling and the difficulty of having pet sitters give injections, but also due to Chisai's personality and general struggle with handling. Oral hypoglycemic medication was also declined due to inability to administer pills. The previous veterinarian had tried diet change, but continued to use a dry form. Diets were chosen upon recommendations from the Science Diet helpline. Hill's DM diet was given initially and when no improvement occurred, this was switched to Hill's K/D dry, which was her current diet upon my initial examination. Neither of these dietary changes decreased the clinical signs of diabetes. Blood glucose continued to range between 321-381 mg/dl on rechecks over 6 months with the previous veterinarian. The cat would become extremely stressed on these visits and during blood draws, so some elevation of glucose is expected, though this level is still high. Signs of PU/PD continued, as well as a dry haircoat and bare skin areas from excessive grooming. She had lost 4 pounds (from 15lbs) since first being seen in January and did seem to be a bit more active according to her owner.

### 7/29/11 Physical exam:

My services were requested for herbal supportive treatment specifically, and for the convenience of housecall visits with an anxious cat. On physical exam, 7/29/11, Chisai weighed 11.14 pounds with a Body Condition Score (BCS) of 3.5/5, slightly overweight. Her coat was rough and dry with dandruff flakes and areas of non-pruritic alopecia along the hind limbs, her teeth and gums appeared healthy with a pale pink tongue, and she was described as mildly "heat-seeking" by her owner. Ectoparasites had been ruled out with prior treatment and the current dermatologic signs appeared to be due to excessive grooming, with a possible combination of factors due to her general poor health and anxiety.

With a water intake of approximately 2 full bowls (2 cups) daily, PU/PD was significant. Polydipsia in a cat is considered at water intake levels greater than 100 ml/kg/day. Chisai's water intake was approximately 500 ml/kg/day. Chisai was generally nervous and would only tolerate examination in small steps, though according to her owner she was more relaxed and friendly with visitors than in her younger years. Gentle attempts at drawing blood were unsuccessful and Chisai's owner declined having her taken into the clinic for further testing or treatment, even with the suggestions of sedation for handling. She no longer wanted to put her through that kind of stress as it took days to weeks for her to recover a somewhat more relaxed demeanor. Insulin therapy and oral Glipizide pills, though less ideal, were discussed and once again declined. Prognosis without insulin was given as poor and the owner was educated to watch for

clinical signs of decline caused by untreated diabetes such as inappetence, lethargy, and neurological signs including changes in gait, seizure, coma and death. The owner was prepared to euthanize rather than initiate insulin therapy. In light of these decisions, treatment options were limited to what Chisai would willingly take orally.

### **Pathogenesis and conventional treatment:**

Diabetes mellitus (DM) is relatively common in middle-aged and older cats, with obesity being a significant contributing factor along with diets high in carbohydrates, inactivity of indoor cats, and genetics. Chronic systemic inflammation, particularly involving the cytokine tumor necrosis factor-alpha (TNF- $\alpha$ ), has been shown to be a factor in insulin resistance (Little, 2012). Adult onset type 2 DM, the most common type of diabetes in cats, is due initially to insulin resistance in peripheral cells, leading to over activity and progressive damage to the pancreatic beta islet cells, decreasing production of insulin over time. Insulin is necessary to allow glucose to pass from the bloodstream into cells to be used by the body, if this cannot occur, glucose then accumulates in the bloodstream and is secreted by the kidneys once it overflows the renal threshold at a blood glucose of approximately 288 mg/ml. In cats, which are obligate carnivores adapted to a low carbohydrate/high protein diet, amino acid (protein) ingestion is a stimulus for insulin production instead of glucose, making dietary management important for diabetes treatment (Greco, 2014). Injectable insulin therapy is considered the treatment of choice for diabetic cats, though it is possible for some diabetic cats, when diagnosed early in the disease process, to go into remission with dietary changes alone or combined with short-term insulin therapy. The disease may or may not recur within a few years after remission.

### **Western herbal medicine approach:**

In Chisai's case, having clinical signs of diabetes for over six months, the possibility of achieving remission or full control of the diabetes without the use of insulin was poor. Treatment goals were based on slowing the disease process by reducing inflammation and supporting the organ systems. Herbs with anti-inflammatory actions, particularly against TNF- $\alpha$  had the potential to help on multiple levels. Specific goals were a reduction of blood glucose levels and prevention of insulin resistance, while improving overall health and immunity to avoid diabetic immunosuppression, improving gastrointestinal function to reduce constipation and anal gland impactions, supporting the dermatologic system to reduce inflammation and improve haircoat, supporting the cardiovascular system to reduce long term vascular damage of diabetes, in addition to supporting the nervous system and any anxiety that might affect healing, and general well-being. Along with herbal medications, dietary changes were a significant part of the therapeutic plan.

### **The following herbs were selected for Chisai's initial formula (see material medica for details):**

- **Gymnema (*Gymnema sylvestre*)** – Gymnema was chosen primarily for its hypoglycemic and pancreatic supportive actions that have been shown to be due to a combination of physically decreasing glucose absorption as well as stimulating insulin production along with the regeneration of pancreatic  $\beta$ -cells (Tiwari et al., 2014; Ahmed et al., 2010). In addition to these effects, gymnema has antioxidant and anti-inflammatory actions that have been shown to be neuroprotective in mice with induced diabetic neuropathy (Fatani et al., 2015).
- **Rehmannia (*Rehmannia glutinosa*)** – In addition to its hypoglycemic effects, rehmannia is considered to be an adaptogen, supporting the body's response to stress and illness. It has been found to be protective of liver and kidney function, has antioxidant and anti-inflammatory properties and is a mild laxative, which was needed with Chisai's tendency toward constipation. In diabetic mice, rehmannia decreased blood levels of TNF- $\alpha$ , IL-6 among other inflammatory indicators (Zhou et al., 2015), and has shown neuroprotective potential (Zhang et al., 2008; Liu et al., 2013). Rehmannia's use for inflammatory skin conditions was also considered to be a potential benefit with Chisai's dermatological signs.
- **Dandelion root (*Taraxacum officinale*)** – Dandelion was selected to support the function of Chisai's gastrointestinal system, liver and pancreas along with providing mild laxative properties. Having anti-inflammatory and antioxidant effects, dandelion has shown protective effects against pancreatitis, specifically by reducing interleukin (IL)-6 and TNF- $\alpha$  production (Seo et al., 2005). The constituent taraxasterol has recently been found to have protective effects against rheumatoid arthritis in mice by significantly reducing clinical signs as well as decreasing the inflammatory indicators TNF  $\alpha$ , IL 1 $\beta$ , IL 6 and nuclear factor  $\kappa$ B, along with significantly reducing nitric oxide, prostaglandin E2 and cyclooxygenase 2 (Cox-2) levels compared with a rheumatoid arthritis control group (Jiang et al., 2015).

- **Panax ginseng (*Panax ginseng*)** – Panax was chosen for its general adaptogenic support and specific indication for diabetes. It has hypoglycemic actions and is supportive of liver and pancreatic functions primarily through its antioxidant and anti-inflammatory effects (Gui et al., 2016; Kim et al., 2016; Yuan & Chung, 2010). The constituent protopanaxatriol ginsenoside Re was found to inhibit inflammation and colitis in mice by inhibiting the expression of TNF- $\alpha$  and IL-1 $\beta$  as well as COX-2 and iNOS, at least partially through inhibiting the activation of the inflammatory nuclear factor kappa B (NF- $\kappa$  B) pathway (Lee et al., 2012).
- **Milk Thistle (*S. marianum*)** – Milk thistle is well known for its protective effect on the liver, and has a similar action on pancreatic cells (Wang et al., 2012). It is also a strong antioxidant and has anti-inflammatory and demulcent (mucoprotective) properties. It added warmth to the formula and the glycerin extract form significantly improves palatability.

### Herbal Formula and dosage:

- 7 ml Gymnema (*G. sylvestre*) 1:1
- 7 ml Rehmannia (*R. glutinosa*) 1:2
- 3.5 ml Dandelion root (*T. officinale*) 1:2
- 3.5 ml Panax ginseng (*P. ginseng*) 1:2
- 7 ml Milk Thistle glyceextract (*S. marianum*) 1:1

1ml orally twice daily (28ml) The herbal formula was gradually introduced over 5 days, given in a small amount (~1Tbsp) chicken baby food and was easily accepted.

### Safety and potential herb-drug interactions:

All herbs used in this formula have a wide dose range for safety and the majority of them have been used as food. Although Chisai was not on insulin, a similar formula could be used in those cases keeping in mind the concern for hypoglycemia when treating diabetic animals with insulin and herbs together. As long as treatment remains consistent daily and care is taken when dosage adjustments are made this can be considered an advantage as the dosage of insulin may potentially be reduced.

### Additional treatment recommendations:

Chisai's owner was not prepared to commit to a homemade diet for many reasons, including a busy schedule and regular and extended traveling. It was then my priority to switch her to a moist diet, as diabetic cats are often shown to improve drastically with this one change, reducing the dietary carbohydrate levels inherent to dry kibble. Chisai was switched to a high protein/ low carbohydrate canned diet (Wellness brand) along with a fish oil supplement (Welactin 250 mg/day). Omega-3 fatty acids have been found to have anti-inflammatory and antioxidant benefits and to be useful in the treatment of diabetes as well as supporting general cell health, including ocular, renal, dermatologic, neurologic, cardiovascular, gastrointestinal and other organ systems (Bauer, 2011).

### 9/7/11- Follow-up:

Chisai was started on the dietary change first (gradual switch to Wellness canned), as the owner was traveling for a few weeks. This modification did begin to help, though the owner feels that significant change occurred after the addition of the herbal formula on August 17, 2011. A recheck on 9/7/11 revealed a significant reduction in water intake from 2 bowls, approximately 2 cups (500ml), of water a day to less than ¼ cup (60ml) per day, and an estimated reduction of at least half of the urine volume. Chisai was more active, jumping up and more playful. Another significant improvement was that her haircoat was no longer dry and flaky, and had regrowth of hair beginning in the areas of alopecia. Her weight had decreased to a healthy 10.6 pounds.

Ideally, further monitoring would include bloodwork and in-home glucose testing, however Chisai declined bloodwork. Without the use of insulin, the danger of hypoglycemia was not a concern. The follow-up plan included continuation of the dietary and herbal therapies, and monitoring of physical signs, weight and urine glucose.

**2/14/2012**

Urinalysis (the first and only sample the owner was able to obtain free-catch):

- Glucose – 2000mg/dl Specific Gravity – 1.046 (well concentrated which may have contributed to such a high glucose accumulation)
- Ketones negative, no wbc or rbc seen

Following this significantly elevated urine glucose, the herbal dose was increased from 1ml BID to 1.5 ml BID. A small amount of marshmallow root was added to the formula for palatability and gastrointestinal support.

**Dose modification and increase:**

- 28 ml Gymnema (*G. sylvestre*) 1:1
- 28 ml Rehmannia (*R. glutinosa*) 1:2
- 14 ml Dandelion root (*T. officinale*) 1:2
- 14 ml Panax ginseng (*P. ginseng*) 1:2
- 28 ml Milk Thistle glyceextract (*S. marianum*) 1:1
- 8 ml Marshmallow glyceextract (*A. officinalis*) 1:5

1.5 ml orally twice daily. (120ml)

**4/2/2012** – Using Purina Glucotest urine “confetti sprinkles” in the litter for 5 days, the owner reported most urine measurements at 600mg/dl (the highest reading on the strips) and morning readings at 300mg/dl. Although clinical signs of diabetes appeared to be resolved, blood glucose levels remained above normal as indicated by spill-over into the urine. At this recheck she continued to do well, her weight was 10.5 pounds and her water intake measured at 10-20ml daily plus water content of the canned diet.

Over the next two years, Chisai’s weight remained stable between 10.5 and 10.6 pounds, and she was active and content. Formal and informal rechecks occurred regularly with delivery of herbal refills. She always came for a greeting at the door, but only allowed limited physical handling.

**6/11/14** – Chisai began to show increased signs of diabetic effects with an increase in water intake (though not to the degree seen initially) and the slow development of cataracts. Her activity level was slowly decreasing and she was also developing areas of alopecia again along her legs and abdomen. Her weight dropped slightly to 10.3 pounds. The herbal dose was increased from 1.5ml to 2ml twice daily and milky oat glyceextract was added to the formula for anti-anxiety/nervous support, along with 1ml of ginger glyceextract added to the 4 oz bottle for warmth and circulatory stimulation as well as anti-inflammatory action and gastrointestinal support.

The inevitable decline in the face of untreated diabetes along with quality of life considerations were discussed for continued monitoring and adaptations to improve what time Chisai had left. At this time, Chisai still seemed quite content and euthanasia was not a consideration.

**Dose modification and increase:**

- 28 ml Gymnema (*G. sylvestre*) 1:1
- 28 ml Rehmannia (*R. glutinosa*) 1:2
- 14 ml Dandelion root (*T. officinale*) 1:2
- 14 ml Panax ginseng (*P. ginseng*) 1:2
- 28 ml Milk Thistle glyceextract (*S. marianum*) 1:1
- 8 ml Marshmallow glyceextract (*A. officinalis*) 1:5
- 8 ml Oat glyceextract (*A. Sativa*) 1:2.5
- 1 ml Ginger root glyceextract (*Z. officinale*) 1:5

2 ml orally twice daily. (129 ml)

Following this dosage adjustment, dermatological signs improved and general clinical well-being and activity increased for some time although cataract formation continued.

**4/21/15** – Chisai was again experiencing a gradual decline, and we were unable to increase herb dose without rejection of food. Chisai began to show a periodic mild plantigrade stance, and occasional bouts of constipation that resolved with pumpkin added to diet as needed.

Gotu kola was added to support the neurological and circulatory systems and for its connective tissue benefits for potentially arthritic joints as well as skin support.

**Dose modification:**

- 26 ml *Gymnema (G. sylvestre)* 1:1
- 26 ml *Rehmannia (R. glutinosa)* 1:2
- 14 ml Dandelion root (*T. officinale*) 1:2
- 16 ml *Panax ginseng (P. ginseng)* 1:2
- 22 ml Milk Thistle glyceextract (*S. marianum*) 1:1
- 12 ml Marshmallow glyceextract (*A. officinalis*) 1:5
- 12 ml Gotu Kola (*C. asiatica*) 1:1
- 1 ml Ginger root glyceextract (*Z. officinale*) 1:5

1.5 ml orally twice daily. (128 ml)

Chisai showed continuing signs of decline over the last few months of her life. These included an increase in PU/PD, mild occasional plantigrade stance, decreasing appetite and activity. Her weight decreased to 9.3 lbs. Constipation became more of an issue again, but was managed well with Metamucil and canned pumpkin. Nearing the end, she showed no discernable signs of nausea, vomiting, respiratory distress or other physical discomfort or pain, and seemed content to spend most of her time sleeping comfortably in her bed. As she remained comfortable and her owner was home and able to care for her, euthanasia was reserved for emergency needs only. Chisai died at home on 8/26/2015.

**Discussion:**

The herbal selection for this case included multiple plants with specific indications in the treatment of diabetes, including hypoglycemic actions as well as support for organ functions including the pancreas, liver, immune and gastrointestinal systems. All herbs had anti-inflammatory and antioxidant activity contributing to general comfort in an aging cat with the potential to reduce systemic damage and clinical signs of chronic diabetes including neuropathy and immunosuppression. Studies have shown many herbs have anti-inflammatory action that reduces TNF- $\alpha$  and other cytokines through multiple modes of action, which may be of benefit in the diabetic patient due to the links with pancreatic inflammatory causes.

Chisai lived comfortably for another four years after the initial dietary changes and herbal treatment began. Although it was not an ideal treatment situation, initial clinical response to the dietary change and herbal therapy were dramatic and her owner was very pleased. Her owner felt that she was well controlled clinically and was committed to continuing the herbs, fish oil and canned diet. Chisai took all medications readily, which made it easy for a pet-sitter to give the herbs in food.

Although the clinical signs were significantly controlled, diabetes was not cured in this patient. As is indicated by the positive glucosuria, blood glucose levels remained above the renal threshold (288 mg/ml) for most if not all of her remaining life. What the disease progression might have been with dietary changes alone is unknown as every case of feline diabetes is unique. Without follow-up bloodwork, it is impossible to know if Chisai's ultimate decline was due to diabetic complications or another compounding medical condition. Overall, her comfort level and quality of life remained high and this, along with her relative longevity, appeared to be a significant benefit of the herbal therapy.

## **Materia Medica:**

### **Gymnema** (*G. sylvestre*)

Family: Apocynaceae (formerly Asclepiadaceae)

Parts used: Leaves, root

Chemical Constituents: triterpene saponins (gymnemic acids, gymnemasaponins, gymnemasides), the peptide gurmamarin, anthraquinones, flavones, resins, tannins, and others

Clinical actions: hypoglycemic, pancreatic trophorestorative, astringent, mildly diuretic, antioxidant, anti-inflammatory, neuroprotective (Wynn & Fougere, 2007; Tiwari et al., 2014; Fatani et al., 2015)

Energetics: Slightly cooling

Indications: Used in the treatment of diabetes: reduces glucose by decreasing taste and cravings of sugar in humans, but also decreases glucose absorption, supports pancreatic cells and increases insulin production (Tiwari et al., 2014; Ahmed et al., 2010).

Contraindications: None unless combined with hypoglycemic medications- see below.

Potential Drug/Herb Interactions: May decrease blood glucose, use caution with glucose lowering drugs such as insulin.

Dose: Dried: 50-500mg/kg daily, Liquid extract (1:1) 1.0-1.25 ml/10kg daily, give with meals.

### **Rehmannia** (*R. glutinosa*)

Family: Orobanchaceae (formerly Scrophulariaceae)

Parts used: Root (cured or raw)

Chemical Constituents: Bitter constituents (iridoids including catapol, ajugol, rehmanniosides), phenylethanoid glycosides (verbascoside, echinacoside), sugars, sterols, and others.

Clinical actions: Adaptogen, antioxidant, anti-inflammatory, hypoglycemic, hypolipidemic, mild laxative, bitter tonic, antipyretic, antibacterial, diuretic, hepatoprotective, renal protective, and potentially neuroprotective (Wynn & Fougere, 2007; Zhu et al., 2016; Zhang et al., 2008; Liu et al., 2013; Zhou et al., 2015).

Energetics: sweet, slightly warm (cooked form); sweet, cold, slightly bitter (raw)

Indications: In diabetes, used to decrease blood glucose and may also protect against neuropathy. Antioxidant and anti-inflammatory effects may be generally beneficial. Also used in the treatment of renal and hepatic disease, atopic dermatitis and other dry inflammatory skin diseases.

Contraindications: Can cause diarrhea, contraindicated with diarrhea and indigestion.

Potential Drug/Herb Interactions: None known

Dose:

Dried herb: 50 - 100 mg/kg divided daily if extracted and dried; triple or quadruple dose for unprocessed herb.

Decoction: 5-30 gm /cup water, give ¼-½ cup per 10kg divided daily.

Tincture (usually 25% - 35% ethanol) 1:2 – 1:3 1.0-2.0 mL per 10kg divided daily.

### **Dandelion** (*Taraxacum officinale*)

Family: Asteraceae

Parts used: Roots, leaves, flowers

Chemical Constituents: Sesquiterpene lactones (such as: taraxinic acids, triterpenes: beta-amyrin, taraxol and taraxerol); carotenoids, including lutein; inulin; saponins; fatty acids such as myristic acid; flavonoids, including apigenin, luteolins and chrysoeriol; minerals (up to 4.5% potassium); phenolic acids (chicoric and monocaffeoyltartaric acids); coumarins (cichoriin and aesculin); sitosterol, stigmasterol and taraxasterol; sugars; vitamin A; quercetin glycosides

Clinical Actions: Digestive/bitter tonic, liver tonic, alterative (improves overall tissue metabolism), choleric (stimulates bile production by hepatocytes), cholagogue (stimulates release & flow of bile), hepatorestorative, hepatoprotectant, diuretic, pancreatic stimulant, mild laxative, antihypertensive, anti-inflammatory (Wynn & Fougere, 2007; Jiang et al., 2015; Seo et al., 2005).

Energetics: Bitter, cold, dry

Indications: Liver disease; gallstones; pancreatitis; diabetes; GI disease including signs of dyspepsia, loss of appetite, flatulence, intestinal bloating and constipation; oliguria; cystitis; edema; muscular rheumatism; chronic skin diseases

Contraindications: Bile duct obstruction and acute bile duct inflammation, intestinal obstruction.

Potential Drug/Herb Interactions:

- High mineral content may interfere with the absorption of quinolone antibiotics.

- Increase in potassium, diuresis and mild BP lowering effects should be taken into account with other medication use. (though potassium in dandelion leaves could also serve to replace potassium lost through diuresis)

Dose:

Root or whole plant: Tincture (25-70% ethanol): 1:2 – 1:3: 0.5-1.5 ml per 10kg divided daily.

Leaf: Tincture (25-70% ethanol): 1:2-1:3: 1.0-2.5ml per 10kg divided daily.

### **Panax ginseng** (*P. ginseng*)

Family: Araliaceae

Parts used: Root, berries gaining popularity for diabetes

Chemical Constituents: Triterpenoid saponins (ginsenosides), sterols, flavonoids, sesquiterpenes, vitamins, and others

Clinical actions: Adaptogenic, stimulant, tonic, antioxidant, anti-inflammatory, hypoglycemic, immune stimulant, hepatoprotective, cardioprotective, protective of the pancreas, anti-arrhythmic, increases adrenocorticotrophic hormone (ACTH) (Wynn & Fougere, 2007; Kim et al., 2016; Lee et al., 2012; Gui et al., 2016; Yuan & Chung, 2010).

Energetics: Sweet, slightly bitter, slightly warming

Indications: Short term benefits for stress or disease recovery; immune support; long-term use in geriatric patients and those with chronic illnesses particularly diabetes, liver disease, and cancer.

Contraindications: Avoid in hypertension due to potential contraindication

Potential Drug/Herb Interactions: Rare. Potential interaction with warfarin, also uncertain interference with metabolism of substances using the cytochrome P450(CYP)3A or P-gp metabolism pathways and having a narrow therapeutic range. (Ramanathan & Penzak, 2016)

Dose:

Dried herb: 25-75 mg/kg divided daily

Decoction: 5-30 gm /cup water, give ¼-½ cup per 10kg divided daily

Tincture (60% - 70% ethanol) 1:2 – 1:3 : 0.5-1.5 mL per 10kg divided daily

### **Milk Thistle** (*Silybum marianum*)

Family: Asteraceae

Parts used: Primarily fruit (often referred to as seeds), flower heads, leaves

Chemical Constituents: Silymarin -a flavonoid complex w/ 3 parts: silibinin, silidianin, and silichristine. Silibinin is thought to be the most active.

Also contains: sterols, fixed oil, flavonoids (apegenin, quercitin, kaempferol), lignans, biogenic amines (tyramine, betaine), and mucilage.

Clinical Actions: Hepatoprotective, protects cell membranes generally (protective for kidney and pancreas in addition to liver), hepatic trophorestorative, demulcent (soothes, protects and restores mucous membranes), cholagogue (stimulates release & flow of bile), galactagogue (promotes lactation), antioxidant, anti-inflammatory. (Wynn & Fougere, 2007; Wang et al., 2012).

Energetics: Bitter, warm

Indications: Hepatitis, cholangiohepatitis, liver damage or disease, abnormal liver function, hepatic lipidosis, exposure to chemical pollutants, anesthetics or liver damaging drugs, toxic injury to liver (esp. aflatoxin), skin diseases involving liver dysfunction, dyspepsia, preventing gallstone formation, gallbladder problems, protection of pancreas during pancreatitis or drug damage, hyperlipidemia, adjunct to metronidazole tx for giardiasis – decrease adverse effects, increase lactation and protect dairy cows from ketonemia.

Contraindications: Relatively non-toxic, used as food. May decrease insulin requirements in diabetics. Side effects rare – mild GI signs, mild laxative, 2 cases of anaphylactic shock reported, rare increase in ALT. Allergy to Aster family.

Potential Drug/Herb Interactions: May reduce insulin requirements in some diabetic patients; Silymarin shown to protect against organ toxicity induced by cisplatin, acetaminophen, butyrophenones, halothane, phenothiazines, tacrine, and vincristine.

Dose: Fluid extract (1:1)(60-80% ethanol): 1.0-2.0ml per 10 kg divided daily. Glycetract (1:1): 1.0-2.0ml per 10kg divided daily.

### **Marshmallow** (*Althaea officinalis*)

Family: Malvaceae

Parts used: Root, leaf

Chemical Constituents: Root: 5%-35% mucilage, asparagines, tannins

Leaf: mucilage, flavonoids, phenolic acids

Clinical Actions: Nutritive, demulcent (soothes, protects and restores mucous membranes), antitussive, vulnerary (aids in wound and skin healing, usually refers to external application or direct GI contact in this case), diuretic

Energetics: Sweet, bitter, cold

Indications: Gastroenteritis, gastric ulcer, stomatitis, diarrhea, urinary tract inflammation (cystitis, nephritis, urethritis), respiratory tract inflammation (laryngitis, bronchitis, cough)

Topically for open wounds, ruptured abscesses, ulcers

Contraindications: None known, except known allergy

Potential Drug/Herb Interactions:

- May interfere with the absorption of other medications given at the same time due to mucilage content.

- May lower blood glucose (anecdotal), use with caution in patients at risk for hypoglycemia

Dose: Tincture (usually 25-35% ethanol or glyceract) 1:2 – 1:3, 0.5-1.5ml per 10kg divided daily.

### **Oats** (*Avena sativa*)

Family: Poaceae

Parts used: bran, seeds, straw (dried stems)

Chemical Constituents:  $\beta$ -glucans, saponins, phenols, alkaloids, sterols, flavonoids, starch, proteins, vitamins and minerals, silica

Clinical actions: Straw - nervine, antidepressant, diaphoretic; grain (milky tops) – antidepressant, nervine, nutritive; bran – reduces cholesterol, antithrombotic

Energetics: Warm, sweet

Indications: General tonic (restores and strengthens, nutritive and normalizes physiologic function), nervine tonic (nourishes and strengthens the central nervous system), stimulant, antidepressant

Contraindications: None known

Potential Drug/Herb Interactions: None known

Dose: Infusion: 5-30 g/cup, give ½-4 cups divided daily. Tincture (75% glycerine and 25% ethanol) 1:2 or 1:3 0.5-1.5 mL/10 kg divided daily.

### **Ginger** (*Zingiber officinale*)

Family: Zingiberaceae

Parts used: Root (Rhizome)

Chemical Constituents: Oleoresins – a mixture of resins and volatile oils (gingerols & shogaols), sesquiterpenes (zingiberene, beta-Sesquiphellandrene & beta-Bisabolene), and others.

Clinical actions: Carminative (promotes proper intestinal function), antispasmodic, antiemetic, anti-inflammatory, antioxidant, circulatory stimulant, anti-microbial, anti-platelet.

Energetics: Hot, dry

Indications: Used to treat osteoarthritis, to improve circulation especially in geriatric and non-ambulatory animals, for nausea in chemotherapy patients, also as an adjunct in heartworm treatment

Contraindications: Avoid with anti-coagulant drugs, coagulation disorders, and gallstones.

Potential Drug/Herb Interactions: May decrease vomiting caused by cyclophosphamide. Potentially increases the absorption of oral drugs.

Dose:

Dried Herb –15-200 mg/kg divided daily.

Tincture (60-90% ethanol) - 1:2 or 1:3 0.25-0.5 mL/10 kg divided daily.

### **Gotu Kola** (*Centella asiatica*)

Family: Apiaceae

Parts used: Aerial (leaves and stems), sometimes whole plant

Chemical Constituents: Triterpenes (Asiatic acid and madecassic acid), and triterpene ester glycosides derived from

them (asiaticoside and madecassoside)

Clinical Actions: Adaptogen (increases the body's response to stress acting on the nervous, endocrine & immune systems, allowing it adapt as needed to illness), connective tissue regenerator, nerve tonic (nourishes and strengthens the central nervous system), mild diuretic, alterative (traditional term - improves overall tissue metabolism)

Energetics: Bitter, cold, slightly astringent

Indications:

Topical: wound healing & scar reduction— lick granulomas, equine granulomatous lesions, delayed healing, degloving injuries, feline leprosy ulcers, anal furunculosis. (humans- keloids, hypertrophic scars, burns, skin ulcers)

Internal: helicobacter pylori infection with ulceration of stomach, aspirin/NSAID induced gastritis; lymphoma and possibly other tumors in mice; improves circulation - cognitive enhancement, edema

Contraindications: None known. Low toxicity even at very high doses. Possible topical sensitization.

Potential Drug/Herb Interactions: May possibly increase sleeping time when given with phenobarbital.

Dose: Tincture (25%-40% ethanol): 1:2-1:3 0.5-1.5ml/ 10kg divided daily.

## References:

- Ahmed AB, Rao AS, Rao MV. (2010) In vitro callus and in vivo leaf extract of *Gymnema sylvestre* stimulate  $\beta$ -cells regeneration and anti-diabetic activity in Wistar rats. *Phytomedicine*. 17(13), pp. 1033-9.
- Bauer, JE. (2011). Therapeutic use of fish oils in companion animals. *JAVMA*, 239 (11) pp. 1441-1451.
- Brinkhaus B, Lindner M, Schuppan D, Hahn EG. Chemical, pharmacological and clinical profile of the East Asian medical plant *Centella asiatica*. *Phytomedicine*. (2000) Oct;7(5):427-48.
- Fatani AJ, Al-Rejaie SS, Abuohashish HM, Al-Assaf A, Parmar MY, Ola MS, Ahmed MM. (2015) Neuroprotective effects of *Gymnema sylvestre* on streptozotocin-induced diabetic neuropathy in rats. *Experimental and Therapeutic Medicine*. 9(5), pp. 1670-1678.
- Greco, D. (2014). Feline Diabetes. World Small Animal Veterinary Association World Congress Proceedings. Asbury Park, NJ, USA.
- Gui Q, Xu Z, Xu K, and Yang Y. (2016). The Efficacy of Ginseng-Related Therapies in Type 2 Diabetes Mellitus: An Updated Systematic Review and Meta-analysis. *Medicine*, 95(6), 2584.
- Jiang S, Ping L, Sun F, Wang X, and Sun Z. (2016) Protective effect of taraxasterol against rheumatoid arthritis by the modulation of inflammatory responses in mice. *Experimental and Therapeutic Medicine*, 12 pp. 4035-4040.
- Kim M-W, Lee E-J, Cheon J-M, Nam K-J, Oh T-H, Kim K-S. (2016). Antioxidant and hepatoprotective effects of fermented red ginseng against high fat diet-induced hyperlipidemia in rats. *Laboratory Animal research*. 32(4), pp. 217-223.
- Lee I-A, Hyam SR, Jang SE, Han MJ, and Kim D-H. (2012). Ginsenoside Re Ameliorates Inflammation by Inhibiting the Binding of Lipopolysaccharide to TLR4 on Macrophages. *Journal of Agricultural and Food Chemistry*. 60, pp. 9595–9602.
- Little, S. (2012). *The Cat: Clinical Medicine and Management*. Missouri: Saunders, pp. 547-571.
- Liu J, Feng L, Zhang M, Ma D, Wang S, Gu J, Fu Q, Qu R, Ma S. (2013) Neuroprotective effect of Liuwei Dihuang decoction on cognition deficits of diabetic encephalopathy in streptozotocin induced diabetic rat. *Journal of Ethnopharmacology*. 150 (1), pp. 371–381
- Ramanathan MR, and Penzak SR. (2016) Pharmacokinetic Drug Interactions with *Panax ginseng*. *European Journal of*

Seo S-W, Koo H-N, An H-J, Kwon K-B, Lim B-C, Seo E-A, Ryu D-G, Moon G, Kim H-Y, Kim H-M, and Hong S-H. (2005) Taraxacum officinale protects against cholecystokinin-induced acute pancreatitis in rats. World Journal of Gastroenterology, 11(4), pp. 597-599.

Tiwari P, Mishra BN, and Sangwan NS. (2014) Phytochemical and Pharmacological Properties of Gymnema sylvestre: An Important Medicinal Plant. BioMed Research International Volume 2014, Article ID 830285, 18 pages. <http://dx.doi.org/10.1155/2014/830285>

Wang Q, Liu M, Liu W-W, Hao W-B, Tashiro S, Satoshi Onodera S and Ikejima T. (2012). In vivo recovery effect of silibinin treatment on streptozotocin-induced diabetic mice is associated with the modulations of sirt-1 expression and autophagy in pancreatic b-cell. Journal of Asian Natural Products Research. 14(5), pp. 413–423.

Wynn S, and Fougere B. (2007). Veterinary Herbal medicine. Missouri: Mosby.

Yuan HD, Chung SH. (2010). Protective effects of fermented ginseng on streptozotocin-induced pancreatic beta-cell damage through inhibition of NF-kappaB. International Journal of Molecular Medicine, 25(1), pp. 53–58.

Zhang X, Zhang A, Jiang B, Bao Y, Wang J, An L. (2008). Further pharmacological evidence of the neuroprotective effect of catalpol from Rehmannia glutinosa. Phytomedicine.15 (6–7), pp. 484–490.

Zhou J, Xu G, Yan J, Li K, Bai Z, Cheng W, Huang K. (2015). Rehmannia glutinosa (Gaertn.) DC. Polysaccharide ameliorates hyperglycemia, hyperlipemia and vascular inflammation in streptozotocin-induced diabetic mice. Journal of Ethnopharmacology. 164(22), pp. 229–238.

Zhu H, Wang Y, Liu Z, Wang J, Wan D, Feng S, Yang X, and Wang T. (2016) Antidiabetic and antioxidant effects of catalpol extracted from Rehmannia glutinosa (Di Huang) on rat diabetes induced by streptozotocin and high-fat, high-sugar feed. Chinese Medicine 11:25. DOI 10.1186/s13020-016-0096-7

#### **Additional Materia Medica resources:**

1. Wynn S, and Fougere B. Veterinary Herbal medicine. Missouri: Mosby, 2007
2. Bone, Kerry. A Clinical Guide to Blending Liquid Herbs. Missouri: Elsevier, 2003.
3. National Medicines <https://naturalmedicines.therapeuticresearch.com>
4. College of Integrative Veterinary Therapies course notes: Veterinary Western Herbal Medicine.

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# HERBAL MONOGRAPH: LIVER WORT



Photo courtesy [University of Michigan](http://University of Michigan)

**COMMON NAME:** Liver Wort

**LATIN NAME:** *Hepatica americana*

**OTHER NAMES:** Liver Leaf

<b>Common Name: Liver Wort</b>	<b><i>Hepatica americana</i>, Liver Wort, Liver Leaf, <i>H. acutiloba</i></b>
<b>Family</b>	Ranunculaceae
<b>Part Used</b>	Fresh leaves-tinctured
<b>Active constituents</b>	Tannin, mucilage, gum, sugar, small amounts of a bland oleoresin.
<b>Actions</b>	Tonic, diuretic, astringent, demulcent, deobstruent
<b>Indications</b>	Irritation of mucous membranes, especially of the air passages; cough, when there is tickling, itching or scraping sensation in the fauces; bronchitis, with purulent or bloody expectoration; excessive secretion of mucus; A mild mucilaginous astringent, It has been used in infusions, taken freely in fevers, hepatic complaints, bleeding from the lungs, coughs. But in not indicated in severe cases
<b>Cautions</b>	None found
<b>Contraindications</b>	None found
<b>Herb Drug Interactions</b>	None found
<b>Dosage (use animal doses where available, otherwise human doses can be included here but specify):</b>	Human: Fluid extract, 5-60 drops; Decoction of two ounces in a quart of water, reduced to a pint, may be drank freely. It is usually combined with other pectoral tonics in the form of syrup. The infusion may be taken ad libitum.

**Notes:** Hepaticas are among the first flowers to bloom in the spring. Sharp-lobed Hepatica and Round-lobed Hepatica have gone through a couple of name changes, at one time *Hepatica acutiloba* and *H. americana* respectively, and more recently considered different varieties of the same species, *Hepatica nobilis* var. *acuta* and var. *obtusa* respectively. Now they are different species again, in the Anemone genus, and closely related to the European species *Anemone hepatica*. The easiest way to differentiate Sharp-lobed from Round-lobed is—you guessed it—the round or pointed tips on leaves. The flowers are much the same and, while the tips of the bracts on Sharp-lobed may be more pointed than on Round-lobed, this can be subtle so is not necessarily a reliable distinction. Their ranges overlap significantly and may be found in the same habitat at the same time of year, though Round-lobed Hepatica may be found on drier sites in more acidic soils.

The common name of liverleaf is in reference to the supposed liver-like leaf shape and perhaps also in reference to the liver-like color of the overwintering brown leaves. The round-lobed part of the common name is in reference to leaf shape and distinguishes this plant from the similar Missouri native liverleaf with more pointed leaf lobes called *Hepatica acutiloba*.

**Scudder:** the Hepatica exerts a slightly stimulant and tonic influence upon the stomach and small intestines, relieving irritation and promoting functional activity. Thus it may be employed in atonic conditions of these and associate viscera with advantage t exerts an influence upon all mucous surfaces, Probably its best action is upon the bronchial mucous membrane, when enfeebled from irritation or inflammation, attended with profuse secretion. In these cases it may

sometimes be given with great benefit.

**Culpepper:** It is a singular good herb for all diseases of the liver, both to cool and cleanse it, and is serviceable in yellow jaundice. It is a singular remedy to stay the spreading of tetter, ringworms, and other fretting and running sores

**Cook:** This little plant has enjoyed almost a fabulous reputation, in some sections, for the treatment of coughs, phthisis, spitting of blood, liver complaints, etc. It is a mild article, slightly tonic and astringent, with a fair demulcent property and is of some use in the maladies named.

Native Americans used a tea from the roots and/or leaves for vertigo, convulsions (particularly for children) dysentery, amenorrhea, coughs, and as an astringent; an infusion as an emetic for abdominal pains; used for swollen breasts; used as a gastro-intestinal aid for poor digestion; and for abdominal pain; infusion used as a laxative; infusion used for labor pains, for the liver; plant used as a blood purifier; compound decoction of plants taken for still muscles; decoction of roots given to children with summer complaint; infusion of whole plant taken by forest runners with shortness of breath; infusion of root taken and used as a wash for twisted mouth or crossed eyes; Decoction of root taken for convulsions; poultice applied to inflammations and bruises; compound decoction of root used for dysentery; infusion of root and leaves taken for vertigo. They also prepared a dye from it.

The Canadian Pharmacy Journal in 1868 listed *Hepatica triloba* amongst Canadian medicinal plants, and in 1883 reported large quantities being shipped to the U.S. for use in patent medicines, especially for the kidneys. *H. triloba* was the old binomial for *H. americana*, but it is possible they are referring to *H. acutiloba*. Other animal: The plant depends on bees and flies for pollination.



# HERBAL MONOGRAPH: CACTUS



Photo courtesy Wikipedia

**COMMON NAME:** Cactus

**LATIN NAME:** *Cactus grandiflorus*

**OTHER NAMES:** Night Blooming Cereus

<b>Common Name: Cactus</b>	<b><i>Cactus grandiflorus</i>; Night Blooming Cereus, <i>Selenicereus gandiflorus</i></b>
<b>Family</b>	Cactaceae
<b>Part Used</b>	Green stem
<b>Active constituents</b>	Flavonoids, rutin; isoquinoline alkaloids, amines
<b>Actions</b>	Tonic, sedative and diuretic; Therapeutic classes: stimulates the autonomic Nervous system; cardiac tonic, thryoactive; tobacco addiction
<b>Indications</b>	Heart palpitations and irregularities, band-like sensation around the throat, heart, uterus and other body parts; congestive headaches, irregular feeble action of the heart, uneasy sensations, weight, oppression, band-like sensations, in the region of the heart. Palpitation, fibrillation, mitral valve irregularities, progressive valvular inefficiency, regurgitation; shortness of breath on slight exertion, sighing, air hunger, cardiac weakness and irregularity accompanied by coldness of extremities, numbness of the left arm; periodic attacks of suffocation, fainting, cold sweats; worse a night, hyperthyroidism; fear of impending danger; endocarditis, pericarditis and myocarditis; anemia, atonic heart, angina, hypotension, aneurysm, arteritis, cerebrovascular disease including incipient CVA; Pulmonary hemorrhage from tuberculosis; indigestion; cystitis; prostatic diseases, congested kidneys from edema of cardiac origin, rheumatism; thyrotoxicosis, depression, fatigue, headache, panic attacks
<b>Cautions</b>	With cactus, the action of the heart is always impaired, never increased; generally regarded as safe.
<b>Contraindications</b>	Contraindicated in mitral stenosis; avoid in hypertension
<b>Overdose</b>	In very large doses, it causes gastric irritation, confusion of the mind, hallucinations and slight delirium
<b>Herb Drug Interactions</b>	None noted, but as the heart will improve function, if on cardiac medicine, drug dosage might need to be decreased
<b>Dosage (use animal doses where available, otherwise human doses can be included here but specify):</b>	Human: tincture 1-10 drops Extractum Cacti Fluidum, Fluid Extract of Cactus. Dose, from one to twenty minims. Tinctura Cacti, Tincture of Cactus. Dose, from five to thirty minims.

**Notes:**

Origin: Greater Antilles (Cuba, Cayman Islands, Puerto Rico, Jamaica & Haiti), Mexico, Guatemala, Belize, Honduras, Nicaragua, and a few other locations in South and Central America. Climbing on trees and on rocks at 700 metre altitude. Extremely variable, especially in Jamaica, stems with slightly wavy to strongly knobby margins occurs in the same plant.

**Tissue State:** atrophy

**Tissue condition:** regulated functional activity of the heart, the pulse and increases the blood pressure, influence is through the vasomotor center and vagus nerve; it slowly increases contractile power of the myocardium. When the circulation becomes congested and the patient sighs it is suggestive of air hunger and the requirement is for Cactus. Dyspnea, a sense of weight or oppression of the chest; endocarditis and pericarditis and in feeble heart action following pneumonia; calms a rapid and feeble pulse; cardiac irregularities and gastric irritability; cardiac disorders with nervousness, panic or apprehension of danger or death.

**Matt Wood:** Cactus was introduced by Dr. Rubini, a homeopath, and later adopted by eclectics and botanical physicians. It still occupies a niche in homeopathy, herbal medicine, and European phytotherapy today. Cactus is particularly called for in cases where there is heart trouble against a background of sympathetic excess, nervous weakness, neurasthenia, or asthenia. The cases in which valvular changes of the heart are most, likely to occur are the best suited cases.

**Fyfe:** The range of usefulness of cactus is extensive. It is clearly demonstrated that cactus exerts a most decided influence over the cardiac plexus of the sympathetic, and that its effects are not only extended to the most minute distribution of the nerves but to every capillary in the body as well. They also agree that it stimulates the vasomotor centers the sympathetic ganglia of the spinal cord and the Muscles of the heart. Cactus is a remedy of positive therapeutic action, and its results are usually so plainly manifested that it is impossible for one to overlook them. It seldom, if ever, disturbs the stomach, but if given in overdoses it will produce toxic effects, causing irritant diarrhea, neuralgia, spasms of the heart, and sometimes carditis and pericarditis. In medicinal doses it may be continued as long as may be deemed necessary, as it has no cumulative effect. In the treatment of the aged cactus fills an important place, will keep their old, weary hearts in a condition to supply their tissues with life-sustaining blood, cactus will accomplish it. In impaired action of the heart, whether functional or organic, cactus is a most efficient remedy. Cactus will not close dilated openings, or overcome valvular deficiency, but it will do much toward sustaining and bringing about a better action of the permanently diseased heart. If fatty degeneration of the heart, it acts equally well, but in mitral stenosis it is said to be contraindicated. In endocarditis, pericarditis and myocarditis much benefit is derived from the use of cactus, and in angina pectoris it may well constitute a part of the treatment. It is an absolutely needed remedy in cardiac weakness and threatened heart failure due to exhaustion from over-exertion. In neurasthenia of old age, and in nervous exhaustion, the judicious administration of cactus will produce results pleasing alike to patient and doctor. It also constitutes a medicament well adapted to the treatment of the 'tobacco heart: of cigarette fiends and the inveterate smoker. Cactus is especially adapted to the treatment of nervous women who are afflicted with cerebral congestion, heavy pain and weight in the head, numbness of the arms and legs, inability to lie on the left side, and menstrual troubles. In many cases of pneumonia and other fevers it is often a remedy of the utmost importance.

**Scudder:** Cactus is a specific in heart disease, in that it gives strength and regularity to the innervation of the organ. Its influence is permanent, in that it influences the waste and nutrition of the heart, increasing its strength. It exerts no influence upon the inflammatory process, and hence is not a remedy for inflammatory disease. Feeling of weight and pressure at the precordia, difficult breathing, fear of impending danger, etc., are at once removed. Such irregularity of action, whether violent, feeble or irregular, as is dependent upon the innervation, is readily controlled. Thus, in the majority of cases of functional heart disease, it gives prompt relief, and, if continued, will effect a cure. In those cases in which there is another lesion acting as a cause, as in some gastric, enteric or uterine lesions, these must receive attention, and be removed to make the cure radical. In structural heart disease, the first use of remedies is to relieve the distressing sensation in the region of the heart, and the unnatural fear of danger which attends them. As these spring from disordered innervation, in the majority of cases, the cactus gives prompt relief. As we have seen above, its continuance favors normal waste and nutrition, as well as regular action. Hence, its continued use is followed by the removal of adventitious tissue, and an increase in the strength of its contractile fibre. This it proves curative in many cases of structural heart disease. In its influence upon the nervous system, it more nearly resembles pulsatilla; giving relief in that condition known as nervousness. But further than this, it give regularity of cerebral function, and permanently improves nutrition of the nervous centers.

**Bloyer:** The nutrition of the heart-muscle is permanently increased, and it has greater contractile powers, and the rhythm is strengthened and regulated. The indications calling for cactus as a remedy are, feeble, irregular, quick, nervous, irritable pulse; oppression in the chest as if in an iron grip; unpleasant pain, heart stitches, palpitations, mental depression, hypochondria. For the palpitations and disturbances due to stomach distension and other reflex troubles,

cactus is NOT the remedy. But for the weak heart of the typhoid fever patient, when he is convalescing, or before or after; for the back heart of the chronic indulger in strong drink; the toper; in the exhausted heart muscle of the worn out dyspeptic; in the fond but frail heart of the too frequent worshiper at the throne of Venus; in sexual exhaustion; in the palpitation and disturbances of exophthalmic goiter; in aortic regurgitation due to weak heart tissue, cactus is the remedy par excellence. Cactus is the remedy from long continuance heart failure is threatened.

**Menzies-Trull:** enhanced activity with Leonurus or Avena; angina with cimicifuga; used alone or with Hydrastis, Lycopus, Capsicum, Convallaria or Leonurus

**Ellingwood:** Specific Medicine Cactus Grandiflorus is prepared from the green stem of the true species. The dose is from one-third of a minim to five minims. This is a reliable preparation. Although the medicinal effects may be obtained from two minims, larger doses may be given, no toxic effects having been observed. The dose of cactus, usually prescribed in the past, has been small, generally not to exceed five minims. A foreign writer has made some observations in aortic lesions, with faulty compensation. He believes that cactus is distinctly specific for these lesions, but he advises it in much larger doses. He gives half a dram if necessary three times a day. The patients treated in this manner had great dyspnea, arrhythmia, with edema of the extremities and ascites. He demonstrated the recession of the cardiac dilatation in these cases.

**Physiological Action** - This remedy increases the musculo-motor energy of the heart, elevates arterial tension, increasing the height and force of the pulse wave. This is accomplished by increased heart action, stimulation of the vasomotor center, and stimulation of the spinal-motor centers, increasing their activity and improving the general nerve tone. It is the heart tonic par excellence, as it produces stimulation from actually increased nerve tone, through improved nutrition of the entire nervous and muscular structure of the heart. It produces no irritation of the heart muscles like strophanthus, or gastric irritation or cumulation like digitalis. Cactus exercises a direct influence over the sympathetic nervous system, regulating its action, restoring, normal action, whatever the perversion. It acts directly upon the cardiac plexus, regulating the functional activity of the heart. Investigations have proven that it increases the contractile power and energy of the heart muscle, through the intercardiac ganglia and accelerator nerves. It certainly improves the nutrition of the heart, as we have noticed the entire removal of progressive valvular murmurs after its continued use.

**Specific Symptomatology** - An irregular pulse, feebleness of the heart's action, dyspnea, weight, oppression in the chest, violence of the heart's action, depending upon atonicity or enervation, and a sensation of a constriction or band around the heart or around the chest, are the direct indications for its use in heart troubles.

**Therapy** - This agent is prescribed where the heart muscle is enfeebled, where there is progressive valvular inefficiency, with irregular or intermittent pulse. It is valuable in mitral or aortic regurgitation from whatever cause. It is an exceedingly useful agent in functional irregularity of the heart, however evidenced, if due to gastric irritation, as the agent in doses of from one to three minims, soothes gastric irritability and imparts tone and improved function, in wide contrast to digitalis, which irritates the stomach. The action of cactus with nux vomica and hydrastis in the treatment of functional palpitation, depending upon an atonic condition of the stomach, must be emphasized. If extreme acidity be present, they may be combined with an alkaline agent or with neutralizing cordial (glyconda). A number of our physicians recognize this influence, and my own experience confirms its value. Those who have used all the heart remedies unite in the belief that for breadth of action, for specific directness, for reliability and smoothness and general trustworthiness, cactus takes preference over all the rest. Its influence is admirable where indicated and it is invaluable in many cases. Other remedies in some cases will do as much in single lines, but none will do more, and none will exercise all of its desirable influences. The writer has given it in valvular troubles, in weak and irregular conditions, depending upon muscular enervation, and in aortic regurgitation, and has seen cures accomplished that had been thought impossible. It permanently strengthens the muscular action of the heart. The author's experience with this remedy caused him to come to the conclusion a few years ago that cactus had a special sedative influence where indicated. He was convinced of the fact ultimately and now finds excellent authority for his conclusion. Rubini, of Naples, claims that it is almost the counterpart of aconite in its action, differing in that it increases the strength and tone of the nerve centers instead of paralyzing them, as large doses of the latter agent does. Given a condition in which there is a rapid and feeble pulse, weak heart, weak and exhausted nervous system, cactus in small doses, frequently repeated, is a true sedative. Cactus as a powerful nerve tonic can be relied upon when there is any irregularity of the heart, demanding such a remedy in conjunction with general nervous weakness. It is especially indicated where

there is mental depression with despondency and forebodings. It is combined with *avena*, *nux* or *cimicifuga* as I have often suggested with superb results. The above named combination will act as a tonic in a surpassing number of cases of nervous weakness without regard to the specific indications. It improves the nutrition of the brain by improving the circulation in that organ. In this it is of advantage in some cases of neurasthenia, especially in those in which there is a sensation of a band or cord around the body or chest or head, a symptom often spoken of in nervous exhaustion, and in forms of paralysis. Where feebleness is the cause of nervous excitement, *cactus* exercises a nerve sedative influence. In oppressive headache in the top of the head, causing nervousness, common to ladies at the menopause, resulting from irritation in the pelvic organs, or congestion, or menorrhagia with excessive losses of blood, it is of benefit. Where there is increased arterial tension, and exaltation of nerve force and excess of strength in the cardiac action, *cactus* is contraindicated. This is true in prescribing it for heart disease and palpitation. We have had several cases of palpitation, depending on exaltation of nerve energy, increased by *cactus*, and decreased by *gelsemium*, *cimicifuga* or the bromides. It may be given with excellent results combined with *avena sativa* in impotence accompanied with general nervous exhaustion, or in combination with *avena sativa* and *saw palmetto* in the feebleness and impotency of approaching age, or in the prostration following habits of dissipation, when it will accomplish most excellent results. It is given in endocarditis and in pericarditis following exhausting diseases as sequelae, with the most gratifying results. In a marked case of endocarditis following measles, with purple and bloated countenance, distressing dyspnea, and a pulse so rapid, feeble and fluttering that it could not be counted, the dyspnea was overcome, the heart beats reduced to 120, and regular, and every condition improved in the most satisfactory manner in twenty-four hours, incredible as it may seem, by the use of one drop of the fluid extract of *cactus* every hour. It is useful in valvular incompetency due to muscular weakness, in the feeble heart action following pneumonia, typhoid and other severe and prostrating diseases. In the feeble heart of exophthalmic goitre, it will do all that is expected of *strophanthus*.

**Dr. Lydia Ross**, of Massachusetts, in the *Eclectic Review*, reports extensively concerning the action of *cactus* in the disorders of women. She claims it to be specific in that form of oppressive headache, occurring upon the top of the head, not uncommon at the menopause, resulting also from uterine malposition, or congestion. It is especially valuable in the hot flashes which are so disagreeable during the climacteric. Small doses of the remedy are advisable at that time, and their influence is often a surprise in controlling this otherwise intractable condition. *Helleborus niger* is an excellent remedy for this condition and they may sometimes be given in conjunction or in alternation. The melancholia, nervousness, irritability of temper, hypersensitiveness, neuralgia, vague fears and fancies, present during the menopause, are all influenced favorably by *cactus*. Its direct influence in strengthening the nervous system, and in toning the heart and circulatory organs, underlies its influence upon these conditions. Other conditions common to women, relieved by this remedy, are cerebral congestion, with weight and pain in the occiput, or in the vertex, numbness of the limbs, cough at the supra sternal notch, pain behind the sternum, fear of death, general plethora and congestion. Irregularities of the menses, consisting of a flow too early, too dark and thick, too abundant—a flow which ceases upon lying down, with an inability to lie upon the left side, demand its use. In cardiac weakness of a less chronic or more acute character than those conditions affecting the aorta, the agent will be found serviceable, as in the threatened heart failure, due to violent over-exercise, as the bicycle heart, a condition not as common as it was when this work was written. It is of great value, as we have previously stated, in the tobacco heart of the cigarette fiend or inveterate smoker. Here it is especially useful. We know of no remedy that will take its place. In the treatment of heart weakness, common to masturbators, and in the feeble heart of the aged, where there are no great organic changes, the remedy is especially advised. The specific point present in nearly all of these cases indicating the remedy is a vise-like band around the organ affected. It may be the chest, or the stomach, or the heart, bladder, uterus or vagina, or it may be around the body. There is likely in the severe cases to be suffocation, faintness, cold perspiration and great fear of impending danger. If with the above symptoms, there be epistaxis, hematemesis, or hemorrhage from any organ or part, the agent is demanded.

**Dr. Lyman Watkins** confirms most of the statements made by **Dr. Lydia Ross** in its use in hysterical conditions, and as a remedy to relieve the functional disturbances which the heart exhibits, from menstrual disorders. He believes it to be a most valuable remedy in the rapid and feeble heartbeat of anemia and chlorosis, greatly facilitating the influence of other indicated remedies. He reports a case of a gentleman of thirty who was suffering from cardiac irregularity of a mild type, accompanied with a persistent and almost excruciating pain in the deep muscles of the back, over the region of the kidneys. Morphine and opium had been given persistently, for this severe pain. *Cactus* given for the heart symptoms relieved the pain permanently, in a very short time.

**Dr. Coffin**, of Indianapolis, uses this remedy to overcome subnormal temperature. He believes that it will prove a satisfactory remedy. I have used it in a few cases with good results, but unless given in large doses it will have to be given in conjunction with strychnine, nux vomica, or ignatia.

**Dr. Felter** reported in the Gleaner in 1907 a case of Raynaud's disease where six drops of specific cactus was given as a nerve sedative with curative results on the real disorder. He was greatly impressed by the action of the agent. It may be combined with cimicifuga or gelsemium for nervousness, with pulsatilla for hysteria, and may be given with an alkaline remedy in very feeble old ladies who suffer from vertigo and general heart feebleness.

One doctor reports an increase of temperature from ten drops of cactus three times a day. Where there is a nervous hyperesthesia with excitable heart action cactus will aggravate the symptoms, I believe, whatever they may be. Cactus in the treatment of heart trouble where there is epilepsy as previously referred to, was fully enlarged on by a writer in the Eclectic Medical Journal for April, 1912. While the remedy is not always used alone in the treatment of epilepsy, it was cured. The doctor believes it to be a very important auxiliary.

Cactus has been advised in the treatment of car sickness and in sea sickness. It might be combined with advantage with gelsemium or the bromides. It has also been given in the treatment of morphine habit, but the case reported by **Dr. Cox** took cactin tablets. Its action in this line should be observed.

**Dr. Carey**, of Ohio, gives cactus with strophanthus in combination in cases where the circulation from heart fault is very imperfect, three or four drops of each.



# ADVERTORIAL - CAS OPTIONS



## CAS Options Provides More Alternatives in Prevention and Treatment of Disease.

Herbs, nutraceuticals, and fungi that support many of the body functions are called Biological Response Modifiers (BRM) of which the "power mushrooms" Reishi, Maitake, Shiitake and Turkey Tail are the most important because they can accomplish the following:

- Activate the Immune System (Wei Qi)
- Improve Organ Functions: Heart, Kidney, Spleen, Adrenal Gland and especially the Liver
- Decrease the effects of Stress (adaptogenic)
- Improve Stamina (Qi tonic)
- Activate the bone marrow to produce more red blood cells (Tonify Blood)
- Regulate glucose levels and fat metabolism
- Decrease DNA damage to cells and tissues and support repair and regeneration
- Support Hormone balance (Yin Tonic)
- Decrease Inflammation and pain in the body
- Anti-Cancer properties

A recent study at the School of Veterinary Medicine at the University of Pennsylvania demonstrated that one poly-saccharo-peptide of the Turkey Tail mushroom decreased metastasis and improved life expectancy in dogs suffering with hemangiosarcoma.

Other studies indicate that Reishi, Maitake and Shiitake contain polysaccharides, beta-glucans, lysozymes, sterols, ergosterol, and triterpenes, which have immuno-activating properties against the invasion of viruses, pathogenic bacteria, molds and cancer.

*Mushroom polysaccharides prevent oncogenesis, show direct antitumor activity against various tumors (especially sarcomas), improve immune system function, and prevent tumor metastasis.*

MMs are very nutritional too providing vitamins, minerals, amino acids and compounds which assist the functions of the liver, kidneys and heart tissues.

What about combining MMs with Antioxidants? The addition of antioxidants could also help prevent cancer and improve liver function.

Antioxidants can block and reverse DNA cell and tissue damage thus decreasing abnormal cells and mutations, as well as decrease the side effects of chemicals and drugs, and improve rehabilitation through regeneration.

One of the most important antioxidants in cancer therapy is the thiol N-acetyl-L-cysteine (NAC), a precursor to the reduced glutathione, has cancer chemo-preventative properties attributable to its nucleophilicity (free radical scavenging), and antioxidant activity, and a variety of other mechanism.

In addition to its chemo-preventive action, NAC has a strong antiangiogenic potential that could be exploited for preventing cancer progression as well as used in cancer adjuvant therapy.

By combining NAC with green tea extract, Vitamin C, A, selenium, vitamin E to the Reishi, Maitake, Shiitake and Turkey tail mushrooms, **CAS Options** provides therapeutic support and functional intervention on many levels: prevents DNA damage and regulates mutated cells, activates the immune system against cancer, improves regeneration and rehabilitation, decreases oxidative stress, and improves organ and liver functions...**all in one tablet or chewable!**

For the practitioner, MMs alone could potentially provide more options for the prevention and treatment of cancer. They can be easily integrated into standard conventional cancer chemotherapy and/or radiation therapy with improved results, and less side effects. Studies show that MMs operate synergistically with antibiotics and chemotherapy and if radiation treatments are advised, they reduce side effects by activating the bone marrow.

**CAS Options** offers the veterinarian **more alternatives** in preventing and treating cancer as well as improving the health of aging pets, those with liver disease and other chronic degenerative diseases.

**For more information regarding CAS Options visit [www.vetclassics.com](http://www.vetclassics.com) or call 1-888-628-8783**

REFERENCES AVAILABLE UPON REQUEST



DR. IHOR BASKO - IDENTIFYING TOXIC MUSHROOMS FROM MEDICINAL MUSHROOMS IS A LIFELONG STUDY

# 2019 VBMA ECOTOUR - SCOTLAND



## June 29th through July 6th 2019, [Aigas Field Center](#), Scotland

Join us for what will certainly be a one-of-a-kind experience - a week exploring the Scottish Highlands! From June 29th through July 6th 2019 we'll be staying at the Aigas Field Center, Scotland's foremost center for nature study and wild-life holidays. Our itinerary (subject to change) appears below. This is an all-inclusive EcoTour in regard to lodging, food and activities, with the exceptions being your airfare and car rental. Note that airport pickup and drop-off is provided for you as part of the package. **LIMITED TO 25 ATTENDEES, [CLICK HERE TO SIGN UP NOW!](#)**

### PRICING:

**VBMA Members:** \$2300.00 per person, **Non-Members:** \$2350.00 per person

### PAYMENT SCHEDULE:

**VBMA Members:** \$750.00 deposit, \$750.00 due 11/30/2018, \$800.00 due 2/1/2019

**Non-Members:** \$775.00 deposit, \$775.00 due 11/30/2018, \$800.00 due 2/1/2019

**REFUNDS:** Full refund less \$20 for VBMA administrative fees through 1/31/19, 50% refund from 2/1/19 through 3/31/19, NO refunds will be issued after 3/31/19

### ITINERARY:

#### **Saturday 6/29/19** - Arrival

Arrival at the House of Aigas, home of Sir John and Lady Lister-Kaye and award-winning field centre, in time for afternoon tea. The rest of the afternoon will be spent familiarising ourselves with the Aigas gardens and grounds, and settling into our accommodation before dinner in the Baronial hall of the house.

#### **Sunday 6/30/19** - Glen Strathfarrar & Aigas

This morning we head to Glen Strathfarrar, a remnant of Scotland's ancient Caledonian pine forest to look for golden eagle, dipper and migrants such as wheatear and cuckoos that have returned from the south. As well as a suite of wildflowers, including bog asphodel, northern marsh orchid, heath-spotted orchid, dwarf cornel and starry saxifrage. After a buffet lunch we will spend the afternoon walking round the Aigas estate to learn about the European beaver, our Scottish wildcat breeding project and to familiarize everybody with the loch, grounds and nature trails.

#### **Monday 7/1/19** - Black Isle

After breakfast our destination is the Black Isle, a diverse mix of pebble shores and cliffs, agricultural land intermixed

with areas of native woodland, forestry and old hedgerows, where we will look for common and rare species of wildflowers; this is a nature lovers paradise. We will visit coastal mud flats where we hope to see the many wading birds that make this habitat their home. Stroll through woodlands to listen for recently arrived warblers and explore the farmland which abound with skylark, yellowhammer and the reintroduced red kite. We will join up with EcoVentures for an exhilarating two hour boat trip in search of the resident population of bottlenose dolphins.

**Tuesday 7/2/19** - Strathconon

Today we will head for Strathconon, a vast strath with a high population of red deer and resident golden eagles. We also hope to find red kites, goosander, dipper, tufted duck, Slavonian grebes and roe deer along the way.

**Wednesday 7/3/19** - Aigas and River Beaully

We will spend the morning at Aigas, further exploring the grounds on foot, walking around the Aigas Loch and native pinewoods, home to our twinflower translocation project, and participating in some workshops such as owl pellet dissection and foraging. After a buffet lunch we will head out for a walk along the River Beaully where we might spot kingfishers, sand martens, ospreys and peregrine falcons.

**Thursday 7/4/19** - The West Coast

Our longest day of the week, today we head west to the mountainous and dramatic shores of the west coast of the Highlands. Here we hope to observe the world's fourth largest eagle and Britain's rarest breeding raptor; the white-tailed sea eagle. During the day we may see red and black-throated divers, gannet, black guillemot, twite, a variety of waders and, if we're very lucky, otters exploiting the vast shoreline, as well as spectacular scenery, beaches, sea lochs and mountains.

**Friday 7/5/19** - Glen Affric and Glen Cannich

The morning will be spent wandering through the ancient Caledonian pine forest of Glen Affric where we will have a packed lunch looking out over Loch Beinn a'Mheadhoin. Following Glen Affric, we will head to Glen Cannich, another nearby glen, before heading back to Aigas for afternoon tea.

**FOOD:**

**From the Aigas website:** *Cordon Bleu trained Lucy Lister-Kaye runs the catering at Aigas. The estate is organic; we eat much of our own produce – beef and venison – and we buy ingredients locally whenever we can. Dinner is a 3-course set menu, breakfast is hot porridge and a help-yourself buffet of lots of cereals, toast and fruit. Every day fresh rolls and baguettes are made up for your packed lunch and guests are offered a selection of many other ingredients to take with them each day. Thermos tea and coffee are carried on all expeditions. Special dietary needs are not a problem at Aigas. We prepare special meals all the time. Just let us know your needs on booking.*



## **We hope you enjoyed Volume 11, Issue #17 of the Journal of Veterinary Botanical Medicine!**

Our Journal content is provided entirely on a volunteer basis, and we'd be remiss if we didn't take a moment to thank all of our generous contributors. They take time out of their very busy schedules to write articles, take photos, dig up case reports, recipes and so much more in order to share their knowledge with all of our readers. So, a hearty THANK YOU to all our contributors!

**If you'd like to contribute material (case reports, articles, book reports...anything related to herbal veterinary medicine) for the next journal, simply email our [Communications Coordinator](#), Amy Keane.**



*Image: Honeybee on Dandelion, by Cynthia Lankenau*



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