



**VOLUME 13, ISSUE 22**

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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](http://www.vbma.org). Examination is administered yearly by VBMA. Please visit [www.vbma.org](http://www.vbma.org) for location and date.

## BOARD OF DIRECTORS

**President:** Rona Sherebrin  
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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

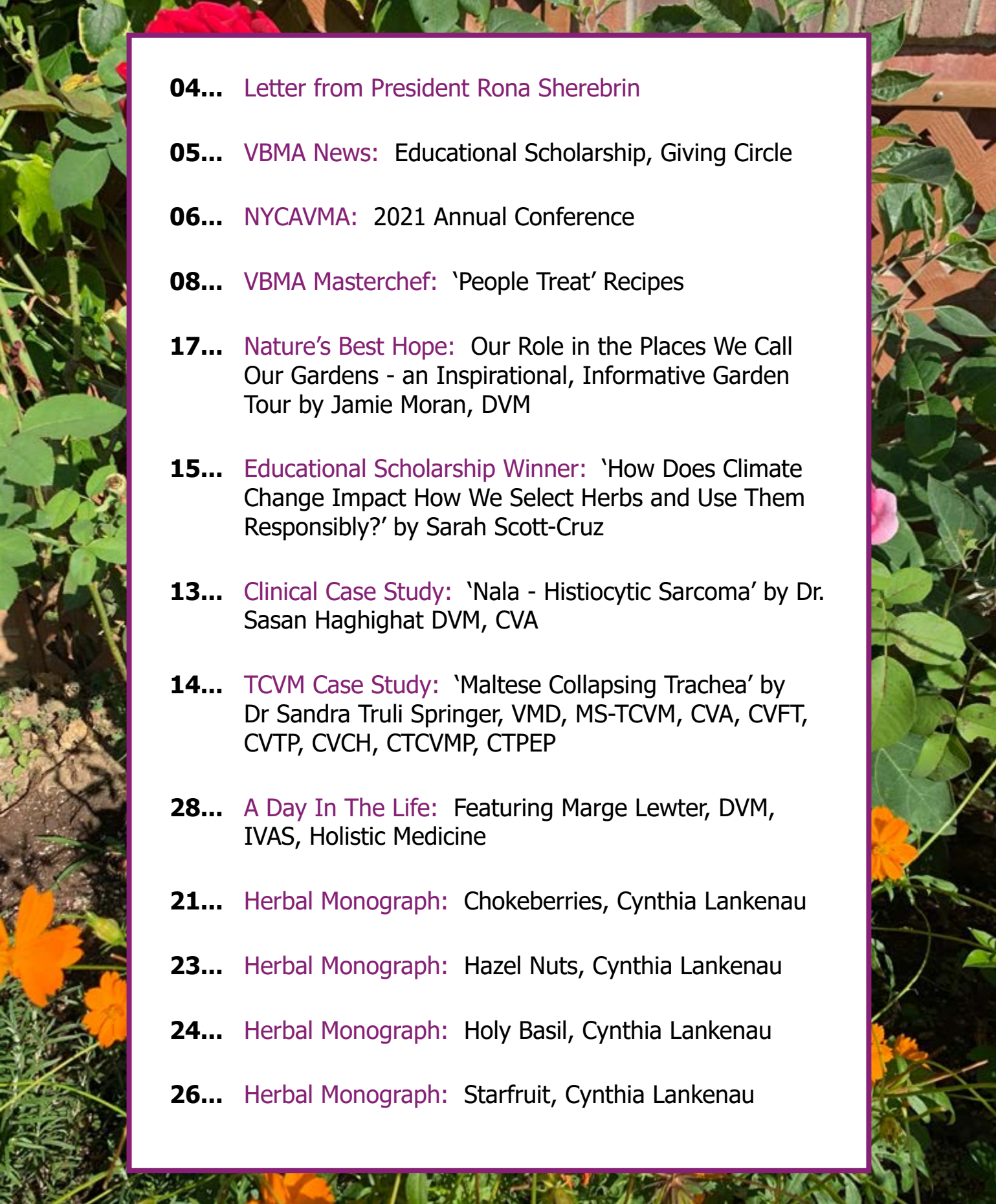
All feature articles will be reviewed by two independent peer reviewers. Reviewed articles will be returned to the author for modification if required.

### Referencing

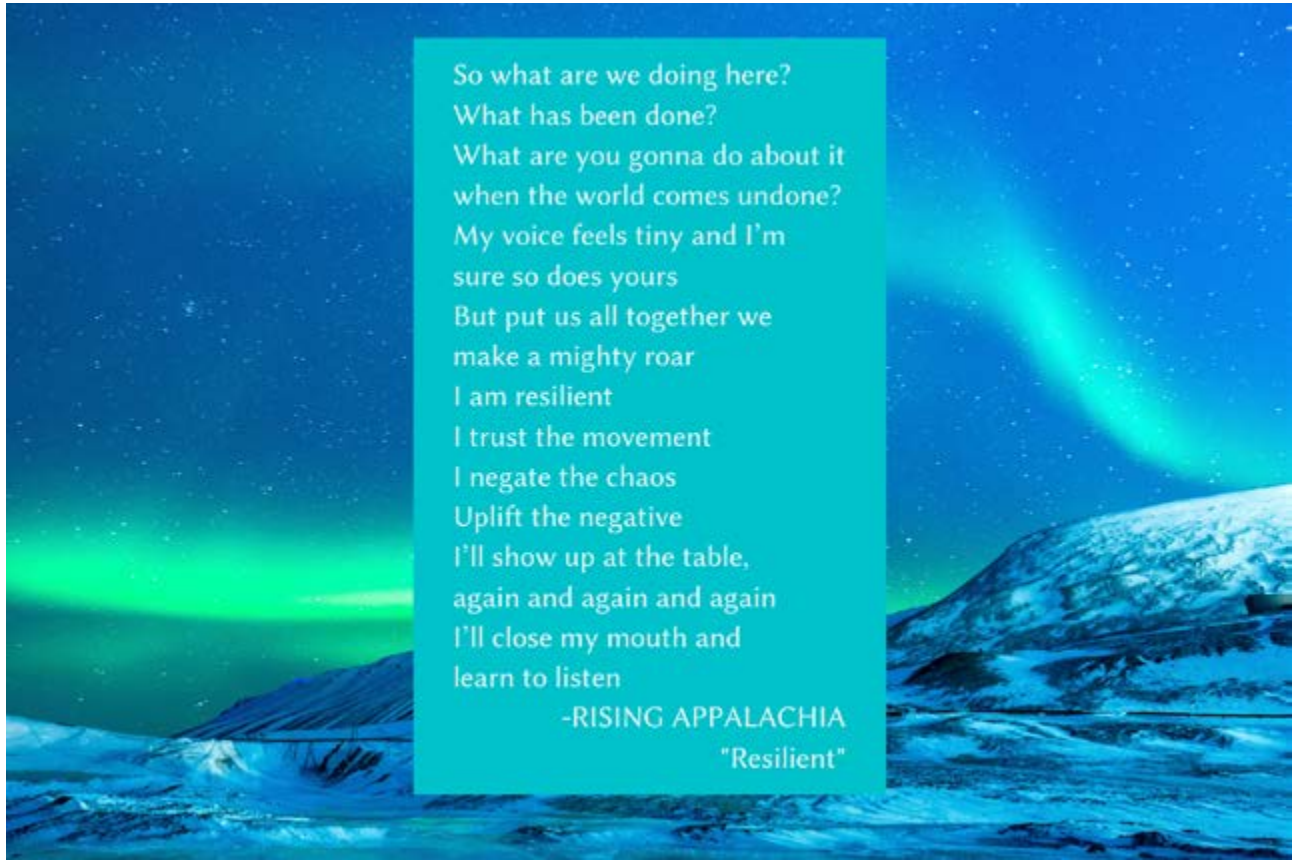
Textual citation methods should be employed. Requires the name of author and year of publication in brackets at the end of statements or paragraphs. The reference list should be arranged in alphabetical order. **JOURNALS:** Author's surname Author's initials. Year. Title of article. Journal name volume; 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)

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# A LETTER FROM PRESIDENT RONA SHEREBRIN



December 2020

I think that 2020 has thrown many of us out of our routines, our comfort zones and our expectations. We are all out in the ocean weathering the same storm, but some have yachts and some are drowning.

As the second wave of COVID-19 peaks in the northern hemisphere and hospital ICUs are filling again, the need for resilience is clear.

Switching gears to a virtual joint ACVBM-VBMA conference instead of meeting in person unfortunately was necessary, and accomplished with apparent ease. That smooth surface was due to a lot of behind the scenes work by Amy Keane, Jasmine Lyon and both boards.

It has been an example of the way we can rise to a challenge as an organization and learn new approaches to serve our membership, for all of us need to be supported by our communities, our colleagues close to home and far away. The conference was fantastic and the lectures were recorded and are still available for attendees until January 31st, 2021. For those who didn't attend, the lectures are available to purchase on the ACVBM website, [www.acvbm.org](http://www.acvbm.org).

We had an unprecedented number of student scholarship submissions this year, making it very difficult to choose the prizewinners. You'll be able to read the first prize winning essay in this journal, and I look forward to seeing these students thrive in their veterinary careers.

I'd like to welcome Marge Lewter to the VBMA Board. I have really appreciated her participation and contributions over the past few months since she stepped up to the post at the AGM.

As the holidays approach, and take a vastly different form this year for most of us, may your homes be filled with light, love and health, and may we all have resilience in 2021 and beyond.

Healthy regards,

Rona Sherebrin

## VBMA EDUCATIONAL SCHOLARSHIP

The Veterinary Botanical Medicine Association currently offers an annual educational scholarship opportunity, open ONLY to veterinary students, in order to promote herbal education. This year, we had more submissions than ever before, and are pleased to announce our winners, as follows:

**FIRST PRIZE, \$3000.00** - Sarah Scott-Cruz, North Carolina State University. Her essay can be found on page 15 as well as on our website, [HERE](#).

**RUNNER UP, \$1000.00** - Iftqar Hassan, Chattogram Veterinary and Animal Sciences University. His essay is available for you to read on our website, [HERE](#).

**RUNNER UP, \$1000.00** - Kristy Herman, Michigan State University College of Veterinary Medicine. Her essay is available for you to read on our website, [HERE](#).

## VBMA GIVING CIRCLE

The VBMA is 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. Membership in the VBMA allows veterinarians to connect with other like-minded individuals all around the globe in pursuit of this mission.

This year more than ever, we have colleagues both near and far who are unable to afford VBMA membership. During our upcoming VBMA Membership dues renewal period, we'd like to ask you to please consider making a donation to the VBMA Giving Circle to help offset our subsidy costs. These funds will subsidize affordable membership for our colleagues in developing countries and in our own communities. Additional details will be included with your dues renewal instructions.

## VBMA 2020 ANNUAL CONFERENCE

The 2020 ACVBM/VBMA Annual Conference was held live online Saturday October 24th and Sunday October 25th 2020. All lectures have been recorded and made available for attendees post-conference through January 31st, 2021. If you missed the live conference, you can still purchase access to the conference site. Individual lecture recordings with notes are available to purchase as well. Expand your knowledge at your own pace!

### ALL LECTURES - \$300

Includes access to recordings, slides, notes and chat logs for all lectures, as well as the opportunity to interact with attendees via the conference site through 1/31/21

### MATERIA MEDICA FOR MANAGING CANCER - \$190.00

The Cyto-Toxic Herbs, presented by Chanchal Cabrera MSc, FNIMH, RH(AHG) - includes recordings of all three lectures as well as slides/notes.

### ALL OTHER INDIVIDUAL LECTURES - \$80.00

**CLICK HERE TO VIEW ALL PURCHASE OPTIONS.**

*Special thanks to the ACVBM for processing all conference orders.*

# NYCAVMA 2020 ANNUAL CONFERENCE

## Advanced Acupuncture With Linda Boggie

November 10th - 14th 2021 at Menla Mountain in Phoenicia NY, or participate from home via Zoom.

This seminar offers 20.5 hours NYS CE - IVAS CE pending.

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

### PRICING:

Attending in person: Members \$560, Non-members \$625

Attending via Zoom: \$560.00

### CANCELLATION POLICY:

50% refund through 5/31/21. NO REFUNDS effective 6/1/21.

### LODGING:

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

**REGISTRATION NOW OPEN AT [WWW.NYCAVMA.ORG](http://WWW.NYCAVMA.ORG)**



# VETERINARY HERBAL COURSE

## Veterinary Herbal Apprenticeship and Retreat

### A 5-part course in Western Veterinary Herbal Medicine

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

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

#### **VHAR SESSION ONE - Lowood Educational Center, Duck, North Carolina**

February 26-March 1, 2021

March 19-22, 2021

April 17-19, 2021

October 2-4, 2021

October 23-25, 2021

#### **VHAR SESSION TWO - Lowood Educational Center, Duck, North Carolina**

September 17-20, 2021

October 16-18, 2021

November 13-15, 2021

March 19-21, 2022

April 23-25, 2022

#### **Pricing:**

\$3,225.00 for all 5 Modules, Deposit Due: \$1000.00

Remainder due January 1st 2021 for Session One/August 1st 2021 for Session Two

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

**[CLICK HERE](#) to learn more, register and view other offerings!**

# VBMA MASTERCHEF

## Rose Elixir

Courtesy of Dr Jamie Moran.



Rose Elixir

I have made this for many years + always in nearly the same way but in Dr. Zinzino's class learned another way so I've included both - not sure yet which I prefer - experimentation is fun! Enjoy neat, or in tea (delicious!!) or in sparkling water cocktails!!

### Simpler's Method


Fill a large jar  $\frac{2}{3}$ - $\frac{3}{4}$  full with scented rose petals  
Pour to nearly top with brandy, the best you  
can find + afford  
Then add honey to your taste I generally  
use a cup in a  $\frac{1}{2}$  gallon jar. Stir daily -  
or insert to mix, for about 2 weeks then let sit  
to infuse for 1-2 months. Honestly, mine has  
infused for a long while before straining!!

Instead of using white petals they can  
be blended with the menstrum (brandy)  
before adding the honey. This is still a folk  
method but may yield a superior product.  
I'm not sure yet... we'll see! May  
your heart be light!

Jamie Moran

## Relaxing Tea

Courtesy of Dr Jamie Moran.



Relaxing Tea

- 1 part dried fragrant rose petals
- 1 part dried passionflower leaves ± fines
- 1 part dried lemon balm leaves
- 1 part dried Holy Basil leaves ± fines
- 1 part dried Milky Oat tops
- 1/3 - 1/2 pt dried lavender flowers

Mix all together + store in a glass Jar + use for tea. I don't crumble anything up until I'm ready to infuse.

Hope you like this, my friends love it!

all but the oats come from my little patch so you can too!

All my best, Jamie Moran

# VBMA MASTERCHEF

## Flower Jelly

Courtesy of Dr Jamie Moran.



### Flower Jelly

I have used lilac, violet + rose petals

Ingredients: 2 heaping cups of fresh petals - fully open, unsprayed!  
w/ roses avoid the white bits & center

makes ~ 4-5  
½ pt jars +  
lasts 1-2 years.

2 c boiling water  
¼ c. well strained clear lemon juice  
4 c sugar  
3 oz liquid Certo liquid pectin

- Wash the petals well + place in a heat resistant glass container [I use a 4 cup pyrex measuring cup] let steep for 30 min to 24 hours. Strain thru a fine sieve reserving the infused liquid. If you need to do the jelly later, refrigerate the infusion. (can steep overnight covered in fridge)
- Put your jars in boiling water bath + simmer to keep ready to fill
- Place infusion, sugar + lemon juice into a stainless steel saucepan bring to a full rolling boil that cannot be stirred down. add liquid pectin + continue to boil for 2 minutes skimming off the wonderful foam on the surface.
- Ladle quickly into the hot jars to within ~ ½" of the top making sure to clean the threads + the top well so you get a good seal, put on the lids + close (not 100% tight)
- Place in hot water canning bath + boil for 10 min, cool + check to make sure sealed. Any unsealed jelly can use right away.

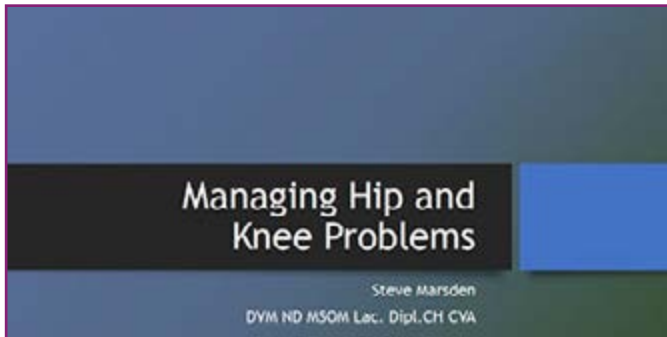
Jamie Moran

# VBMA WEBINAR RECORDINGS

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

View online or, coming in January 2021, download the recording. Q & A portion included, member price only \$70.

[CLICK HERE TO ORDER](#)



Webinar by Steve Marsden  
Recorded May 14th, 2020



Webinar by Robert Silver  
Recorded December 6th, 2017.



Webinar by Kendra Pope  
Recorded December 12th, 2019.



Webinar by Cynthia Lankenau  
Recorded February 26th, 2020



Webinar by Cynthia Lankenau  
Recorded February 28th, 2019



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

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1/2 page full color ad = \$150.00  
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- Reaches specific target market of 200+ VBMA Members.
- Made available for purchase online to non-VBMA Members.
- All previous Journal editions are accessible on our website.

# CASE CLINICAL STUDY: CANINE

## Nala - Histiocytic Sarcoma

Dr. Sasan Haghighat DVM, CVA - The Holistic Vet 987 Davis Drive, Newmarket, ON L3Y



Nala is a female 10 year old American bulldog that was presented to us with a walnut sized growth on her right, hind hock with a sudden onset (see above at left). The growth felt firm and warm under palpation. Due to Nala's age and sudden onset of appearance of growth, and location Nala was referred to 404 Veterinary Emergency and Referral Hospital for biopsy and further diagnosis. There Nala was diagnosed with histiocytic sarcoma with the possibility of hock joint involvement. While waiting for the biopsy results two additional growths appeared above and attached to the original growth. The result was further confirmed with an Immuno Histochemical Stain. Due to the aggressiveness of tumor and location it was recommended to do a full leg amputation followed by chemotherapy which is the standard of care with this kind of tumor.

Due to Nala's age and breed, as well as the poor prognosis Nala's guardian decided to decline the conventional treatment and more so focus on Nala's quality of life in pursuing alternative treatment. At the time of the diagnosis Nala was already on a raw food diet, which then we gradual modified it to a keto diet meaning lower carb and higher fat. We continued the keto diet for three months and after that every three weeks we introduced more carbs into Nala's diet to break the ketosis. Also, we started intermittent fasting. During the week Nala was getting about 1 gram of spirulina three times per day, and on the weekend Nala was fasting. When fasting she had only broth and activated charcoal (400 mg three times day). Also Nala was started on Modified Xiao Chai Hu Tang which comprises of 80% of the original formula from Natural Path and 20% whole fruit Russian olive.

Nala was seen here originally bi-weekly for biopuncture and autosanguis to down regulate inflammation and up regulate the immune system. She was also getting a weekly B12 injection and was put on a mixture of Immunine-VM from Alpha Vet Science with the main ingredients being Reishi mushroom, Astragalus, Echinacea, Ashwagandha, and Holy Basil.

Two months after the treatment the subsequent growths started to shrink. At the three month mark all three growths shrunk and were unrecognizable. We continued with treating Nala every 6 weeks for immune regulation for 3 more months. At the present moment, we see Nala every 2.5-3 months and are happy to report that Nala is doing great and the tumor is still in remission (see above at right).

# TCVM CASE STUDY: CANINE

## Dramatic Success Treating Maltese Collapsing Trachea with TCVM

Dr Sandra Truli Springer, VMD, MS-TCVM, CVA, CVFT, CVTP, CVCH, CTCVMP, CTPEP

My most dramatic success with a collapsing trachea patient was a 10 year old Maltese adopted from the local animal shelter who was 95% improved in one day with food therapy. "Monica" was a spayed female Maltese abandoned at a shelter when her owner passed away. She was scheduled for human euthanasia due to an unrelenting cough that interfered with her ability to eat and sleep.

The adopting family visits animal shelters specifically in search of severely ill Maltese to adopt. I was amazed and thrilled to see the baby changing station in their front hallway where they urinary catheterize their 12 year old Maltese 5 times daily to relieve her bladder. A tail-pull Injury left her mobile but the cauda equina made her unable to urinate on her own. Her custom-sewn frilly diaper covers matched the flowery harnesses. She was decked out in a cute, clean sartorial set. This family had the commitment and technical capability to provide excellent care for "hopeless" Maltese.

As I drove to the house call appointment, I reflected on what I knew and wondered why I had agreed to take the case. Monica was taken directly from the shelter to the intensive care unit at an excellent specialty hospital. The specialists worked on her for 2 weeks and had just recommended humane euthanasia. "Nothing more we can do," they said.

I was greeted by 4 boisterous Maltese when I entered the home. The 5 pound Maltese lay almost inert on a pillow on the sofa. She breathed rapidly and shallowly. She attempted to bark at me, but her tongue turned blue and she very nearly lost consciousness. As I examined her, I shielded her eyes with a blanket because she was overtaxing herself whilst trying to bite me. In a few hours in the home, she had accumulated every toy and started fights with each dog in turn. Her shen was very low in between outbursts and the toys were, indeed, piled under her pillow like Smaug's treasure.

She clearly showed she was a Wood personality even if it killed her! (Which is also a Woody trait). Her tongue was red, thin, and dry. Her nose was bone dry and crusted on the top edge. Her conjunctive were flame red. Her femoral pulses were fast, thin, and weaker on the left. She resented being lifted or touched around her rib cage. Her body condition was poor and she had severe periodontal disease.

I diagnosed Lung Yin Deficiency type collapsing trachea due to Metal unable to control Wood and Metal (Lung Channel) Qi Deficiency. I prescribed duck and pears and ordered Jing Tang Liver Happy and Lily Combination to be delivered to the home the next day. (I would also use "Minor Bupleurum" happily and treat this with Lung Qi and Yin Tonics.) This dog was 95% better from the food therapy before the herbals even arrived at the house the next day!

She breathed easily without distress and ate duck treats in the kitchen. I advised the family to separate her and some toys from the rest of the pack to help her transition to her new home. The Liver Happy formula was intended to address the root cause and to help her with the stress and Liver Qi Stagnation of re-homing. Even if the new home is loving and ideal, the change is stressful for many dogs. We had 2 more visits in the following 2 weeks in which she gained weight, interacted without attacking me and could coexist and not attack the other Maltese in her home.

Unfortunately, she lost her life when her owner stopped on a dog walk to chat with a neighbor and let her bark for 30 minutes while they talked. Her Qi ran down so low from that episode that I could not boost her back to life. So Wood drained the parent Element Water and the grandparent Metal and then drained her life away. We had a good 3 weeks before that happened. I was bereft.

This case taught me:

- 1.) Food therapy can be very powerful.
- 2.) 5-element theory can be an effective Rx.
- 3.) Client education is trickier than one might think.
- 4.) It is okay to attempt to help patients that are considered "hopeless."
- 5.) Treat the Liver when treating little yappy dog collapsing trachea.

## How does climate change impact how we select herbs and use them responsibly?

By Sarah Scott-Cruz

Herbal medicine is used in various cultures and countries. It is a form of medicine tied to the Earth and utilized by both humans, companion animals, and wildlife, as documented in zoopharmacognosy. In the human realm, many herbal remedies were and are passed down through generations. Climate change threatens the continuity of knowledge, as growing seasons and weather patterns change rapidly and alter the ability to grow medicinal plants. Anthropogenic activities imminently threaten certain medical plants, especially plants that are endemic to vulnerable regions. In many cultures traditional medicine knowledge has already been lost without systematic recording. With climate change, there is a greater sense of urgency to record the wealth of knowledge that lies within cultures.

Medicinal plants are often obtained from wild populations, which makes their exploitation and over-harvest a threat to species survival. When temperatures warm and other anthropogenic activities exert pressure on plants, our response matters. One strategy to mitigate over-harvest is to cultivate certain medicinal plants experiencing climate related stressors. This would allow continued use of the medicinal remedy while allowing the wild population the chance to adapt to new circumstances. This is not a feasible solution for all medicinal plants, as many require such precise growing environments that can only be accomplished in nature while others take many years to cultivate. Encouraging cultivation of medicinal plants can be coupled with research regarding the chemical composition of cultivated plants versus wild plants to ensure similar medicinal properties in the cultivated form. Programs that help institute cultivation techniques must provide a means to maintain the preexisting knowledge in the community. An article about "Plants in Peril" discusses how many international aid systems respond to climate change by trying to change local practices and encouraging the adoption of foreign practices. While initially this may seem good, these strategies "leave people with less knowledge of their own environments, less ability to deal with climate change and fewer future choices."<sup>1</sup> Maintaining historic knowledge while implementing new techniques is important for empowering people to handle future changes without dependence on foreign intervention.

Working with indigenous people to find medical remedies has changed over the last century. "National and indigenous rights on these resources have become acknowledged" by researchers.<sup>3</sup> The Convention on Biological Diversity (CBD) objectives are "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources."<sup>4</sup> This was opened for signatures in the early 1990s and by 1999 had been signed by 175 states, including the European Union. The United States of America still has not signed this agreement. Signing this agreement would be one action that could show commitment to responsible use of medical plants and commitment to recognizing indigenous rights.

Climate change has amorphous characteristics, varying geographically and temporally, and having an unbalanced burden on disadvantaged social groups. There are many accounts of plants migrating up mountainsides, seemingly to find the cooler habitat that they need. Plants are adapting to warmer temperatures; however, what will happen when those plants struggle to find their ideal temperature? Indigenous peoples and local inhabitants will likely be the individuals who notice changes first, whether it be observing the plants climbing a mountain or struggling to find the same quantity of plants year to year. For example, the snow lotus in the Eastern Himalayas, which is used in Tibetan medicine, is considered to be in danger from over harvest and climate change, according to local experts.<sup>2</sup> One way to ensure responsible use of medicinal plants is to listen to locals and follow up with regulations that support the sustainable harvest of medicinal plants.

As a privileged individual in this society, climate change makes it even more pertinent to research and understand the implications of the herbal remedies I select. If my use of an herbal remedy comes at the expense of an indigenous culture having access to their medicine, is it worth it? No. It is our collective responsibility to learn from other cultures and use that knowledge carefully. The United States of America has a tortuous history of knowledge appropriation and misuse. In the nineteenth century, "sixty percent of all medicines patented... were distributed bearing Indian images."<sup>5</sup> Americans were aware of Native American contributions to medicine. During the 20th century, America "repressed the image of Indian as healer."<sup>5</sup> Although I grew up near a Cherokee Indian reservation and have hiked countless times through the mountains that Cherokee Native Americans inhabited prior to the 1830 Indian Removal Act, I never learned about the people or the medical uses of the plants in my area. For example, I learned that the Dogwood flower was the state flower of NC; but, I never learned about its medicinal uses by Cherokee Indians until I researched it myself. Many medical advancements, including the basis of the Pharmacopeia of the United States, owes a huge debt to indigenous knowledge.<sup>3</sup> It is vital to recognize where our knowledge of medicinal plants comes from and give credit and compensa-

tion to indigenous peoples. While this will not directly mitigate the changing climate, it will not compound the negative effects that these cultures will have to face.

Climate change is a multifaceted problem. It has already begun to change how we live life and it will continue to stress plants and populations. An interdisciplinary approach that utilizes indigenous knowledge, medical professionals, plant scientists and ethnobotanists will be crucial to preserving knowledge and continuing to use medicines that have been around for centuries. Planning and managing impacts is preferable to reactive decision making after climate change has made a lasting impact. In the context of herbs, there is still time to plan and manage impacts as they unfold, instead of scrambling to preserve something as large scale changes are threatening it. Giving everyone a seat at the table and valuing their contributions, whether the knowledge comes from scientific research or years of experiential use, will expedite solutions to species loss and will foster responsible use of resources.

### Works Cited:

<sup>1</sup> Bauman, H., Smith, T., & Yearsley, C. (2019). Plants in Peril: Climate Crisis Threatens Medicinal and Aromatic Plants. *HerbalGram*,(124), 44-59.

<sup>2</sup> Cavaliere, C. (2009). The Effects of Climate Change on Medicinal and Aromatic Plants. *HerbalGram*,81, 44-57.

<sup>3</sup> Gurib-Fakim, A. (2006). Medicinal plants: Traditions of yesterday and drugs of tomorrow. *Molecular Aspects of Medicine*,27(1), 1-93. doi:10.1016/j.mam.2005.07.008

<sup>4</sup> Jenkins, P. T., Snape, W., & Fitzgerald, J. M. (n.d.). The United States and the Convention on Biological Diversity. Retrieved from [https://defenders.org/sites/default/files/publications/the\\_u.s.\\_and\\_the\\_convention\\_on\\_biological\\_diversity.pdf](https://defenders.org/sites/default/files/publications/the_u.s._and_the_convention_on_biological_diversity.pdf)

<sup>5</sup> Loewen, J. W. (2007). Lies my teacher told me: Everything your American history textbook got wrong. New York: New Press.

<sup>6</sup> Setzer, W. (2018). The Phytochemistry of Cherokee Aromatic Medicinal Plants. *Medicines*,5(4), 121. doi:10.3390/medicines5040121



### ABOUT OUR WINNER

My name is Sarah Scott-Cruz. I am currently a Second Year veterinary student at North Carolina State University. I am interested in pursuing a career in wildlife medicine. Although school has looked a little different this year, I am still learning so much and growing in my clinical skills. From pathology to pharmacology, second year encourages us to integrate our knowledge from first year and apply it to cases while continuing to build our foundational understanding of how disease processes work. When I am not studying, you will likely find me rock climbing outside with classmates, hiking with my dog, or caring for turtles presented to Turtle Rescue Team, a student run organization at the CVM. The attached photo shows Redwood, a turtle that was hit by a car. When Redwood arrived, the distal portion of her left hind limb was necrotic and maggot ridden. She also had a fractured carapace. I performed an amputation and shell repair on Redwood. Soon, she will be ready to leave our hospital and stay in the care of a rehabber as she heals. Redwood will ultimately be returned to the location where she was found, reuniting with her home habitat.

### HELP WANTED!

**Associate wanted for growing Holistic veterinary Consultants in Blacksburg VA. Here is your opportunity to mentor with an experienced veterinarian, practice in a low stress environment, and stay on the cutting edge of medicine. We are minutes away from a veterinary college and a 24 hour emergency clinic for referrals. Our specialty is what they do not offer: acupuncture, botanical medicines, in-depth nutrition counseling, nutraceuticals, conventional outpatient care, ozone therapy, hospice and palliative care. We provide health care with a holistic approach for dogs, cats, and farm animals. There is potential to build up the equine business and to add chiropractic care to the practice. Part time employment to start is available, with potential progression to full time. Contact Dr. Marge Lewter, [margelewter@gmail.com](mailto:margelewter@gmail.com) for inquiries and a visit to Blacksburg!**

# NATURE'S BEST HOPE

## Our Role in the Places We Call Our Gardens

An inspirational, informative garden tour by Jamie Moran, DVM.



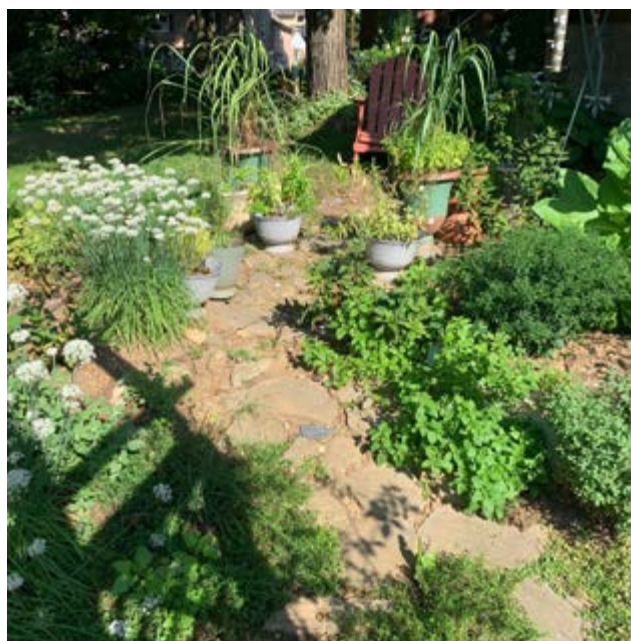
My dear friends, as I begin to write, I want to reflect on some new ideas which have recently suffused my thinking about my role in the place I lovingly call my garden. After reading Douglas W. Tallamy's must-read book *Nature's Best Hope*, I now realize that just having a plant rich, nearly grassless garden is not enough. I have chosen my green friends for a number of reasons, their scent, their ability to feed and heal, their astounding beauty or because someone I care about has given them to me or has grown and loved them in their gardens. As lovely as these reasons are, they are all centered around me and do not consider the husbandry of the insects, birds and mammals that need to live here as well. This land also belongs to them and to survive they need to have the native plants with which they evolved over many hundreds and thousands of years. Often it seems, even with a declining number of pollinators, that our gardens are filled with happy insects. Many of these are generalists who enjoy sampling pollen from non-native host plants or as in the rare case of the swallowtail butterfly [*Papilio polyxenes*] have adapted to non-native umbellifers like dill [*Anethum graveolens*] and parsley [*Petroselinum sativum*]. Sadly, some plants like the beautiful butterfly bush [*Buddleia davidii*] do not support insects for their whole life cycle, rendering them an ecological dead end. In my attempt to rectify this situation, the garden I will talk about is going to change, less grass, more natives, more food for wildlife and more hope for the future. I will indicate the natives [N] that already live here so we can see where we are so far! So...off on the tour!

Our garden wraps around our house and has a variety of light and growing conditions. A large red oak tree [*Quercus rubrum*] heavily shades the front and two large red maples [*Acer rubrum*] dapple the long berms of earth that I piled on top of the grass along the sides of our house. Our sunny backyard is flat but has raised rock or brick lined areas on each side near the house which has saved many Mediterranean herbs from death by drowning. I try to create raised beds for planting whenever possible as I think this serves most herbs well. In the shady areas I find that medicinal natives black cohosh [*Actea racemose*], violet [*Viola soraria*], Solomon's seal [*Polygonatum biflorum*] and its equally useful variegated form, grow nicely as does the invasive but wonderful Chinese herb Yu Xing Cao [*Houttuynia cordata*] or chameleon plant. One thing I have found useful is to place invasive plants in locations that they don't find optimal which for many plants is shade.

Living happily in partial shade /partial sun are blueberry bushes [*Vaccinium species*]N, balmony [*Chelone glabra*]N, elecampagne [*Inula helenium*], joe pye weed/ gravel root [*Eutrochium purpureum*] N, mountain mint [*Pycnanthemum tenuifolium*] N, lemon balm [*Melissa officinalis*], feverfew [*Tanacetum parthenium*], dandelion [*Taraxacum officinale*], horehound [*Mannubium vulgare*], plantain [*Plantago major*], ground ivy [*Glechoma hederacea*], comfrey [*Symphytum officinale*], motherwort [*Leonurus cardiaca*], anise hyssop [*Agastache foeniculum*]N, stinging nettle [*Urtica dioica*], boneset [*Eupatorium perfoliatum*]N, and goldenseal [*Hydrastis canadensis*]N.

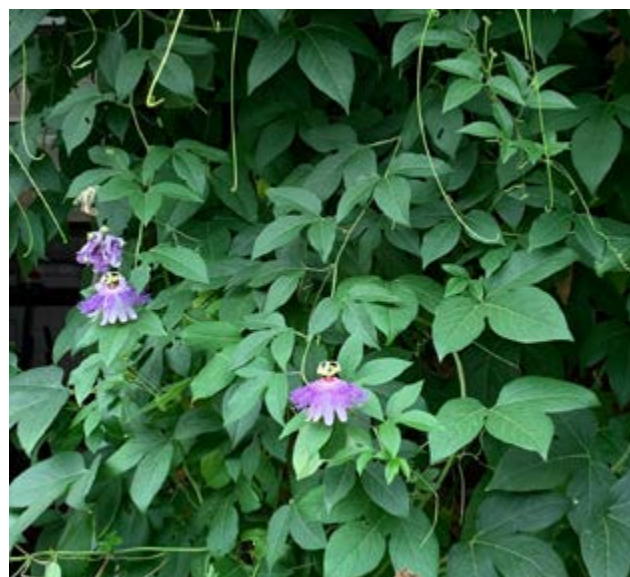


As I walk down to the sunny areas in the back of my garden, I find the plants that seem to enjoy a bit of elevation to encourage good drainage. Our garden soil was nearly all clay but over the years it has improved with the addition of compost and soil dumped from annual pots in the fall. These herbs include lavender [*Lavandula angustifolia*], rosemary [*Salvia rosmarinus*], hyssop [*Hyssop officinalis*], oregano [*Oregano species*], marjoram [*Oregano marjorana*], lemon thyme [*Thymus citriodorus*], santolina [*Santolina chamaecyparissus*], and clary sage [*Salvia sclarea*]. Other plants that seem to enjoy the raised edge feel and can also do well in some shade are catmint [*Nepeta species*], sage [*Salvia officinalis*], I love Bergarten sage, chives [*Allium schoenoprasum*] I love the curly ones, and lady's mantle [*Alchemilla mollis*]. I have been replacing grass with thyme [*Thymus vulgaris*] in pathway areas between rocks in the sunny part of my yard and so far this is working well to keep the weeds down and to provide a beautiful path. I'll have to watch out when they flower or I may be stepping on bees!



So now I come to the flat and full sun area of my yard where with some overlap of category live the planted, the potted, the reseeding, the spreading and the serendipitous. The first category are the plants that have for the most part stayed where I planted them. These include red raspberry and black raspberry [*Rubus species*] N, beebalm [*Monarda didyma*]N, I love a rose scented variety from Richter's herbs, marshmallow [*Althea officinalis*], yarrow [*Alchillea millefolium*], goldenrod [*Solidago odorata*]N, tarragon [*Artemisia dracuncululus*], meadowsweet [*Filipendula ulmaria*], lovage [*Levisticum officinale*], various parsleys, various basil [*Osimum basilicum*], calendula [*Calendula officinalis*], skullcap [*Scutellaria lateriflora*]N, New England aster [*Symphotrichum novae-angliae*]N, wild geranium [*Geranium maculatum*]N, French sorrel [*Rumex scutatus*] the favorite of neighborhood children, garlic [*Allium sativum*] and last but not least my scented roses [*Rosa species*]. I especially love these varieties: Frederick Mistral, Henry Nevard, Celsiana, Zephyrine Drouhin, la Reine de Violette, Mr. Lincoln and the rugosas. Frederick and Henri are still blooming now and Zepherine too had a few flowers as did Mr. Lincoln!!! The few plants that I always grow in pots so I can bring them in over the winter include lemongrass [*Cymbopogon citratus*], lemon verbena [*Lippia citriodorus*] and sweet

bay laurel [*Laurus nobilis*]. Holy basil usually pops in where she can and I always bring some of this special herb in to bless our home. I used to bring my rosemary in for winter as well but the varieties such as Arp and Hill Hardy tend to overwinter pretty well as they are near the southern face of our brick house. After Christmas I cut the boughs from our and neighbors holiday trees and partly cover the rosemary and lavender. This seems to pull them through most winters. The next category of plants reseed at will in the garden and not necessarily only in the sun. These intrepid folks are German chamomile [*Matricaria recutita*] which is currently going strong despite a frost, holy basil or Tulsi [*Osimum tenuiflorum*], valerian [*Valeriana officinalis*] one of the sweetest flowering herbs, bronze fennel [*Foeniculum vulgare purpureum*], purple coneflower [*Echinacea purpurea*]N, coriander [*Coriandrum sativum*], dill [*Anethum graveolens*], blue vervain [*Verbena hastata*] N, St. John's wort [*Hypericum perforatum*], sweet annie [*Artemisia annua*] or Qing hao, chervil [*Anthriscus cerefolium*] Martha Stewart's favorite, and chickweed [*Stellaria media*]. The plants that spread by roots primarily are the mints of course, spearmint [*Mentha spicata*], peppermint [*Mentha piperita*], nettles and the beautiful but aggressive passionflower [*Passiflora incarnata*] which currently has climbed nearly 3 stories and has covered our bathroom window! The last group of herbs that live in the back sunny part of my yard are those I called the serendipitous because they came on their own without me planning anything. These are evening primrose [*Oenothera biennis*]N and pokeweed [*Phytolacca americana*]N.



The group of herbs which I lovingly grow in my garden do not attempt to use medicinally include some very beautiful and fragrant plants. These are wild Ginger [*Asarum canadensis*], pennyroyal [*Mentha pulegium*], mayapple [*Podophyllum peltatum*], lily of the valley [*Convallaria majalis*], bleeding heart [*Dicentra spectabilis*], foxglove [*Digitalis purpurea*], tansy [*Tanacetum vulgare*], the beautiful and deadly monkshood [*Aconitum species*], and perhaps my favorite, moonflower [*Datura wrightii*]. Until my eyes were opened by Douglas Tallamy, I tried to eliminate white snakeroot from my garden [*Ageratina altissima*] but this native plant though toxic to us, is food for some insects so it stays.

Lest you read this and think that I can grow anything ha ha think again, my list of lost loves is long and my list of incompatible relationships is painful also. A word to the wise there are some amazing plants that need special planning. These include elderberry [*Sambucus canadensis*], which loves to take over, chaste tree [*Vitex agnus-castus*], gorgeous but large and spreading, and many of the Artemisia's who are just too big i.e. wormwood [*Artemisia absinthium*] or too invasive as in the case of mugwort [*Artemisia vulgaris*]. As I previously mentioned, passionflower can be very invasive putting even mint to shame. Dr. David Winston has alerted us to the fact that the pyrrolizidine alkaloids in comfrey can affect levels of these compounds in plants within a 20' radius thereby necessitating the careful planting of neighbors we plan to ingest! Additionally, I have the usual cadre of annoying insects who make me a little bit crazy. I always seem to be plagued by the four-lined bug and pesky white flies while roses are famously plagued by a host of critters who try my soul. My goal now though is to find out if the insects dining in my garden are important in the food web and if so to make them welcome. I have a lot to learn about who is who in my little patch.

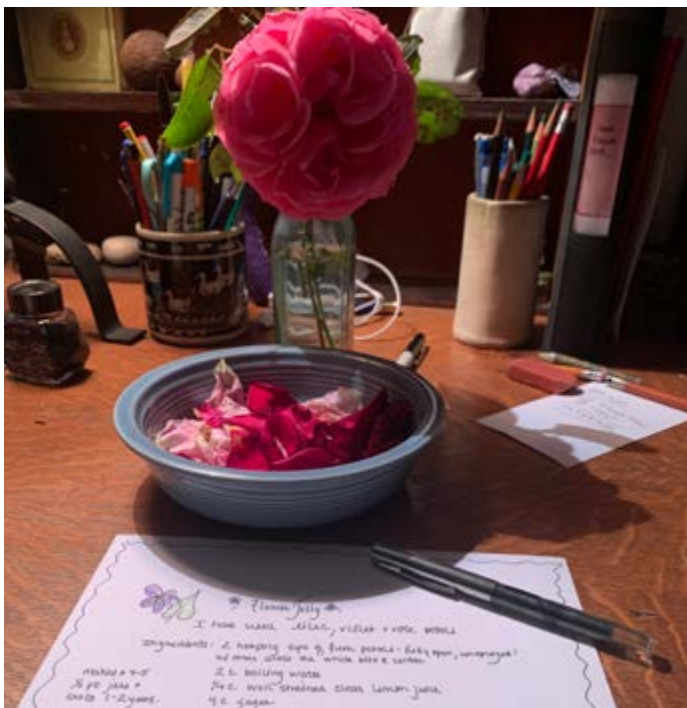


So, I have introduced you to most of the herbs in my garden and now I will talk about what I do with them. I try to do as much as time and sanity allow but there are many more medicinal uses to which I could put the plants I grow. Like most herbalists I want to try everything I read about but for the sake of sanity and my family I do draw a few murky lines! First I try to dry as many herbs as I can. I use a folding laundry drying rack into which I slide clean window screens. The herbs I place on these usually dry fairly quickly in our airy bedroom or attic. This works well for lemon balm, holy basil, chamomile flowers, nettle, passionflower, lavender flowers, oregano, marjoram, rose petals, catnip, yarrow, goldenrod, motherwort, sage and tarragon. Before I obtained a food warming tray, I used a seed starting mat to make calendula and St. John's wort infused olive oils and I found that if I placed calendula flower on the mat they dried well. I have been putting little desiccant packs in the herbs as I put them in jars as suggested by my teacher David Winston. Additionally, I have been guilty of not labeling, a capital offence, but it has been easier since I bought rolls of pretty green painter's tape and keep them where I work. It makes quick easy labels and saves a lot of "I'll never forget what this is" products from winding up in the compost. I have organized a caddy for all or the things I need when making products and a book to record what I did and when. Labeling without procrastination has been hard but I am trying! I have made many tinctures using the simpler's method but now in general purchase most of the ones I use and when I begin again I plan to use the more accurate methods as outlined by Dr. Winston and others. I do make Four Thieves Vinegar, Fire Cider and a few elixirs especially a rose elixir which is very nice! I like to make elecampagne, rose, tulsi, or lavender infused honey which is delicious



and easy. There are so many fun combinations to try. Another sweet thing to do is to make jelly with violet, lilac or rose petals. They are full of sugar but such a nice treat for a special breakfast or tea with scones or biscuits. I have as I previously mentioned made some infused oils but a special quest has been to make a decent lilac scented oil. I have come close and briefly this requires laying fresh flowers in heated oil and letting them infuse until they lose their color and repeating this process called enfleurage over and over until the oil is sufficiently scented. As you might have suspected. I adore lilacs! Lastly and probably my favorite thing to do is to distill plant material in one of my two stills. The copper still is much larger and a little bit more of a production to set up than the glass still but once you get the hang of it it's really pretty easy to do and for your trouble you get hydrosol and sometime some essential oil. You can buy a glass still kit that is easy to set up and has everything you need to get started. The hydrosol or the distillate is the primary product of my distillations as it takes so much plant material to produce a small amount of essential oil. In the beginning I focused on the E.O. but now I treasure the hydrosols. They are great to use instead of water in face cream and in herbal skin recipes or as simple facial mists. The plants I usually distill are lavender, lemon balm, holy basil, clary sage, rose geranium and sometimes others like white pine and catnip. As do we all, I run out of time not thyme!! The glass still though needs less babysitting so it could be running while you do something else as long as you check in and maintain the ice bath temperature. I have included a few of my favorite tried and true recipes for this issue's VBMA Masterchef which I hope you will like and if anyone has questions for me please do not hesitate to ask.

In closing, I just want to urge all of you, and I suspect that I am preaching to the choir, to investigate the many ways to enrich our landscapes. I have mentioned only the herbs in my garden but there are many more flowers and shrubs who I love but may rethink in light of my new goal. I think that there is a way to have it all, to grow our favorite friends and to feed the local insects, birds and mammals. There are plants like the oaks and goldenrod who excel in this arena so plant selection is so critical if we want to make big changes. I am planning to add more goldenrod, witch hazel [*Hamamelis virginiana*], and butterfly weed [*Asclepias tuberosa*] which is late to emerge and easy to pull out forgetting it's there! If you have not yet discovered him, I would highly recommend the work of Douglas W. Tallamy for he has really opened my eyes and my heart to the need to think beyond myself as I caretake my corner of the green world. Thank you for allowing me to share my journey with you!



# HERBAL MONOGRAPH: CHOKEBERRIES



Photo courtesy University of Delaware

**COMMON NAME:** Chokeberries  
**LATIN NAME:** *Aronia arbutifolia*  
**OTHER NAMES:** Aronia Berries

|   |   |
|---|---|
| <b>Common Name:</b><br>Chokeberries   | <b>Aronia berries, Chokeberries, Aronia arbutifolia (L.) Pers.; Aronia melanocarpa (Michx.) Elliott; Aronia prunifolia (Marshall) Rehder</b>  |
| <b>Family</b>   | Rosaceae  |
| <b>Part Used</b>  | Berry   |
| <b>Active constituents</b>  | One of the highest concentrations of polyphenolic compounds, such as phenolics, flavonoids, procyanidins, and monomeric anthocyanins.   |
| <b>Actions:</b>   | Astringent, anti-oxidant, anti-inflammatory; anti-neoplastic, antimutagenic; vasorelaxant and antithrombotic properties; immunomodulatory; hepatoprotective, gastroprotective.; bacteriostatic, antiviral |
| <b>Indications</b>  | Infusion of berry used for colds; cardiovascular disease, skin inflammatory disorders, anxiety disorders; potential use to augment chemotherapy; potential use in the treatment of metabolic syndrome     |
| <b>Cautions</b>   | None  |
| <b>Contraindications</b>  | None  |
| <b>Herb Drug Interactions</b>   | None found  |
| <b>Dosage (use animal doses where available, otherwise human doses can be included here but specify):</b> | Used as a fruit drink and food.   |

**Notes:**

Energetics: astringent

Aronia is a genus of deciduous shrubs, the chokeberries, native to eastern North America and most commonly found in wet woods and swamps.

Chokeberries are cultivated as ornamental plants and as food products. The sour berries can be eaten raw off the bush, but are more frequently processed. They can be found in wine, jam, syrup, juice, soft spreads, tea, salsa, chili starters, extracts, beer, ice cream, gummies and tinctures. The name "chokeberry" comes from the astringency of the fruits, which create a sensation making one's mouth pucker.

*Aronia melanocarpa*, native to eastern North America, has become popular in Eastern Europe and Russia. *Aronia melanocarpa* fruits are one of the richest plant sources of phenolic substances, mainly anthocyanins--glycosides of cyanidin. Anthocyanins are water soluble pigments accounting for the dark blue and even black color of the fruits. Administered orally they can be absorbed as intact glycosides. *Aronia melanocarpa* fruit juice and anthocyanins derived from the fruits have been studied intensively for the last 15 years. Most of the effects of *Aronia melanocarpa* anthocyanins are due to their high antioxidative activity. Our investigations have demonstrated a remarkable hepatoprotective, a very

good gastroprotective and a pronounced anti-inflammatory effect of *Aronia melanocarpa* fruit juice in rats as well as a bacteriostatic activity in vitro against *Staphylococcus aureus* and *Escherichia coli* and an antiviral activity against type A influenza virus. Research of other authors has demonstrated that *Aronia melanocarpa* anthocyanins can normalize the carbohydrate metabolism in diabetic patients and in streptozotocin-diabetic rats, have an in vitro antimutagenic activity and exhibit a distinct immunomodulatory activity in human lymphocyte cultures and in patients with breast cancer, suppress the growth of human HT-29 colon cancer cells, inhibit the N-nitrosamine formation in rats and decrease the toxicity and cumulation of cadmium in liver and kidneys. Currently, there are no data in literature about any unwanted and toxic effects of *Aronia melanocarpa* fruits, juice and extracts.

**Potawatomi tribe:** used Chokeberries as a cold remedy with an infusion of berries.

**Recent research:** clinical applications where Aronia extracts may be used for prevention and adjuvant treatment of cardiovascular diseases via increases in endothelial NO synthesis and related improvements in vascular functions. Given the dose-response effect of Aronia extract in vitro and metabolism of polyphenols that occurs in humans, dose-response studies would be necessary to define the optimal daily amount to be consumed; exerts anti-inflammatory activities by inhibiting expression of pro-inflammatory mediators in vitro and in vivo possibly through suppression of ROS-MAPK-NF- $\kappa$ B signaling pathways. Therefore, AC may be developed as a therapeutic agent to treat various inflammatory skin diseases, MAO-A/MAO-B inhibitions by the phenolic compounds of AJ might be the possible in vivo mechanisms for such behavioral actions.; improved memory impairment by inhibiting AChE and increasing BDNF and p-CREB expression, and cyanidin-3-O-galactoside may be responsible for the effect of *A. melanocarpa* berries extract.; osetoprotective; a promising natural agent for protection against the toxic action of cadmium in women chronically exposed to this metal; chemotherapy (at least with gemcitabine) might be usefully augmented with the use of micronutrients such as chokeberry extract; *A. melanocarpa* may be regarded as a promising new source of bioactive antioxidant natural compounds for breast cancer patients; inhibited HeLa human cervical tumor cell proliferation and increased generation of reactive oxygen species after 48 h of treatment, suggesting that they could be responsible for the antiproliferative activity; that AMJ has chemotherapeutic properties against acute lymphoblastic leukemia by selectively targeting lymphoblast-derived tumor cells; berry extracts inhibited the CS-related body weight loss, cytogenetical damage, liver degeneration, pulmonary emphysema and lung adenomas; useful as an antioxidant in patients with breast cancer; management of arterial hypertension; aronia juice has an inhibitory effect on dipeptidyl peptidase (DPP IV) activity, DPP IV activity in diabetic mice is inhibited by aronia juice, that the GIP level in the upper region of the small intestine is reduced by inhibition of  $\alpha$ -glucosidase activity and that weights of adipose tissues are reduced by aronia juice; chokeberry fruit derivatives may act as a promising supplementary therapeutic option in the prevention and treatment of disorders occurring in metabolic syndrome, as well as their complications; valuable adjunct to the dietary treatment of patients with diabetes mellitus.



# HERBAL MONOGRAPH: HAZEL NUTS



Photo courtesy Wikipedia

**COMMON NAME:** Hazel Nuts  
**LATIN NAME:** *Corylus avellana*  
**OTHER NAMES:** Calltainn (Gaelic)

|   |  |
|---|--|
| <b>Common Name: Hazel Nuts</b>  | <b>Corylus avellana, Hazel tree; Gaelic: calltainn</b>   |
| <b>Family</b>   | Betulaceae   |
| <b>Part Used</b>  | Nut  |
| <b>Active constituents</b>  | Rich in protein, carbohydrates and unsaturated fat. They also contain significant amounts of manganese, copper, vitamin E, thiamine, and magnesium |
| <b>Actions:</b>   | Tonic, slight astringent, nutritive tonic, food, slight expectorant  |
| <b>Indications</b>  | Cough, nutritive food, diarrhea; milk from the green nut used as a nutritive for sick infants  |
| <b>Cautions</b>   | None   |
| <b>Contraindications</b>  | None   |
| <b>Herb Drug Interactions</b>   | None   |
| <b>Dosage (use animal doses where available, otherwise human doses can be included here but specify):</b> | As needed.   |

**Notes:** Common hazel is typically a shrub reaching 3–8 m tall, but can reach 15 m. The leaves are deciduous, rounded, 6–12 cm long and across, softly hairy on both surfaces, and with a double-serrate margin. The flowers are produced very early in spring, before the leaves, and are monoecious with single-sex wind-pollinated catkins. Male catkins are pale yellow and 5–12 cm long, while female catkins are very small and largely concealed in the buds with only the bright red 1–3 mm long styles visible. The fruit is a nut, produced in clusters of one to five together, each nut held in a short leafy involucre ("husk") which encloses about three quarters of the nut. The nut is roughly spherical to oval, 15–20 mm long and 12–20 mm broad (larger, up to 25 mm long, in some cultivated selections), yellow-brown with a pale scar at the base. The nut falls out of the involucre when ripe, about 7–8 months after pollination

**Culpeper:** They are under the dominion of Mercury. The pared kernels made into an elctuary, or the milk drawn from the kernels with mead or honeyed water, is very good to help an old cough, and being parched and a little pepper put to them and drunk, digesteth the distillations of rheum from the head. The dried husks and shells to the weight of two drachms, taken in red wine, stayeth lasks and women's courses, and so doth the red skin that covers the kernels, which is more effectual.

**Hopman:** Lore: Hazel rods are cut on Midsummer's day to be used for dowsing and water witching, and to find veins of gold, coal, lead and lost or hidden objects. The source of wisdom, inspiration and knowledge is said to have come from hazel nuts that fell from nine magical nazels in to well known as the Well of Segais.

# HERBAL MONOGRAPH: HOLY BASIL



Photo courtesy Wikipedia

**COMMON NAME:** Holy Basil  
**LATIN NAME:** *Ocimum sanctum*

**OTHER NAMES:** Lakshmi/Krishna Tulsi, Surasa Vrinda

|   |   |
|---|---|
| <b>Common Name: Holy Basil</b>  | <b>Holy Basil, Ocimum sanctum, Tulsi; two varieties: Green leaved or Lakshmi Tulsi and purpled leaved Krishna Tulsi, Surasa, vrinda: Sweet Basil, Ocimum basilicum, has similar effects.</b>  |
| <b>Family</b>   | Lamiaceae   |
| <b>Part Used</b>  | Leaves, flowers, or whole plant; mature flower head contains the most complete representation of the properties.  |
| <b>Active constituents</b>  | Essential oils, eugenol, eugenal, carvacrol, inalool, caryophyllene; fatty acids: Steraric, myristic, palmitic, oleic, linoleic and linolenic acids; triterpenes and sterols; Flavonoids and polyphenols.   |
| <b>Actions:</b>   | Rasayana Adaptogenic tonic to the ANS and cardiovascular system, Adapato-gen, hepatoprotective, anticarcinogenic, radioprotective, neuroprotective, anti-oxidant, demulcent, diaphoretic, expectorant, insecticide, antihelmintic, deodorizer. Laxative, stimulant, anti-inflammatory, cardio-tonic, blood purifier, indigestion, stomachic; antimicrobia   |
| <b>Indications</b>  | Stagnate depression, headache, sinus congestion anxiety, tension, exhaustion, insomnia, irritability, migraines, neuralgias, meningeal toxins; bronchitis, asthma, cough, cold, fever, encephalitis, indigestion; aphthous ulcers, nausea, flatulent colic, flatulence, constipation, diarrhea; impotence/sexual dysfunction; heavy metal toxicity; Topical: ringworm, eczema, hives; antiseptic on wounds, ulcers, leprosy, staph skin infections. cataracts; cardiac tonic, periodontal aid |
| <b>Cautions/Contraindications</b>   | None found; except Culpeper-basil will grow 'scorpions of the mind'; Basil is considered safe as an edible food/  |
| <b>Safety Profile</b>   | Holy basil can be safely consumed in moderation; it has been a popular beverage for thousands of years in India.  |
| <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: leaf infusion: 4-12 ml; decoction: 28-56 ml; seed powder: 1.5-2 g; extract: 5:1 100-300 mg tid; tea: 2-4 cups a day  |

**Notes:** grows wild in India and other tropical areas up to elevations of 2000 meters. It is shrub like and grows to 2-3 feet tall and resembles common basil.

Ayurvedic properties: Pungent; (Katu); bitter (tikta); light and dry; pacifies Kapha and vata  
 Tissue condition: depression, torpor:

Relaxes smooth muscle spasm and allays tension through the gastro intestinal tract as it relieve irritable intestinal conditions; also enhances the production of breast milk.

**Sodhi:** Ethnoveterinary usage: All parts are used in veterinary medicine to treat glossitis, ulcer, maggots in wound, anthrax pneumonia, indigestion, tympanitis, colic, constipation, stoppage of urination, liver flukes, loss of appetite, stomach pain, dog bite, cold and cough, cannabis poisoning, opacity of cornea, swelling of lungs, tachycardia, sprains, and sore eyes. The leaves are used to treat bleeding, coughs and colds, eye diseases, udder infections, and wound healing.

Traditionally Holy basil is planted at the center of the home. The primary reason was that the plant repels insects. Also, its pleasant smell and stress adaptogenic properties benefit the entire household. Many Hindi sanits wear beads made of Tulsi because of its stress-relieving effects; the plant's oil is absorbed through the skin from the beads around the neck. The essential oil of Tulsi has anti-bacterial, anti-viral, anti-fungal, and anti-parasitic properties. It is a traditional remedy for fever, flu, and body aches as a tea infusion. The fresh leaves also may be crushed, made into a paste and eaten with honey. The leaves can also be smoked to treat various lung conditions, including asthma. It is an excellent herb to take when there is an allergic response. As an immune modulator, it can be used for any condition in which the immune system is weak. It lowers blood sugar and can be used to treat dysglycemia, including diabetes.

**Yance:** Tulsi means "the incomparable one, which is the reality of this majestic, sacred herb. Therapeutic activities include decrease incidence of gastric ulcer, increases endurance, lowers the stress-induced released of adrenal hormones and normalizes cortisol. Enhances endocrine system, reduces oxidative stress; protects the liver, promotes eye health, normalizes blood pressure; nourishes the cardiovascular system, balances blood sugar and insulin metabolism, anticancer and antioxidative; anti-inflammatory; reduces COX-2 expression; supports drug withdrawal; elevates mood and spirit; nourishes the vital spirit, promotes cheerfulness, helps with processing grief and fear.

**Wood (on Basils in general including Sweet Basil):** The Pungent volatile oils help basil open the skin and lungs, relax the digestive tract, and purge the blood of heat and toxins. It detoxifies through the skin by diaphoresis and removes mucus from the lungs, so it is serviceable in colds, flus, and acute respiratory conditions. It stimulates the appetite and digestion removing stagnant food and flatulence. It also penetrates to the deeper regions of the organism to detoxify the blood, liver, portal circulation, spleen and intestines. "Basil appears to dissolve and liberate for excretion toxic lipophilic compounds which are stored in body fat deposits. It especially neutralizes past damage to the body from recreational marijuana use. It can also be beneficial for removing heavy metals. It helps with neurological disorganization when the nervous system is incapable of self-correction, and as they suffer from a lack of musculoligamentous tone. It is a detoxifier for removing medical and chemical drugs that sequester themselves in fat cells. Nervine effects are paradoxical. It first stimulates then relaxes the brain and nervous system. It works on both sides of the sympathetic and parasympathetic sides of the autonomic nervous system; an adaptogenic tonic for the autonomic NS. It can be cooling or heating.

**Culpeper:** Being applied to the place bitten by venomous beast, or stung by a wasp or hornet, it speedily draws the poison to it. It expelleth both birth and after birth; and as it helps the deficiency of Venus in one kind, so it spoils all her actions in another. (So he cautions use in pregnancy.)

**Recent research:** Improves the NK cell activity; activity against *Propionibacterium acnes*; improves macrophage function and reduces oxidative stress; significant dose-dependent anti-asthmatic activity; anti-tumor mechanism in non-small cell lung carcinoma; improves myocardial function; reduces; shows significant free radical scavenging activity; marked analgesic activity; significant inhibition of antigen-induced histamine; significantly improved generalized anxiety disorder; activity against *Neisseria gonorrhoeae*; improves wound healing; anti-genotoxic effect; anti-psychotic effect; anti-dementia activity; anti-ulcer activity; anti-cataract activity; beneficial effects of *O. sanctum* on various biochemical parameters in young overweight/obese subjects; antileishmanial and immunomodulatory activities; could enhance the production performance and immune status of birds by augmenting the T-cell mediated immune response and thereby protects them from disease without decreasing growth traits as a possible substitution to conventional antimicrobials. thus its may give nerve protection and help the production of acetylcholine; anti-amnesic and neuroprotective activities of *O. basilicum* which may be attributed to the presence of phenolic and flavonoid compounds. This can be developed as an effective anti-amnesic drug.

# HERBAL MONOGRAPH: STARFRUIT



Photo courtesy Wikipedia

**COMMON NAME:** Starfruit  
**LATIN NAME:** *Averrhoa carambola*  
**OTHER NAMES:** Five Fingers

|   |   |
|---|---|
| <b>Common Name: Starfruit</b>   | <b>Averrhoa carambola, Five Fingers, Star Fruit, Carambola</b>  |
| <b>Family</b>   | Oxalideceae   |
| <b>Part Used</b>  | Fruit, root, leaves, seeds, flowers   |
| <b>Active constituents</b>  | Fruits-Iron, Potassium, Vit C; some oxalic acid; Seed- rich in fatty acids; saponins, flavonoids, alkaloids and tannins   |
| <b>Actions:</b>   | Antiscorbutic, vermifugal; A. carambola leaves exhibited higher antihyperlipidemic and antioxidant potentials; anti-inflammatory, anti-ulcer  |
| <b>Indications</b>  | Scurvy prevention; root-antidoting effect from poisons; flowers- parasites; Leaves-fever, sore throat, cough, asthma, chronic headache, and skin inflammations; roots have hepatic lipidosis, insulin resistance Crushed leaves-topical poultice for chicken pox, ringworm, and scabies; Fruit is a food source |
| <b>Cautions</b>   | Oxalic acid present in Fruit. Patients with already diagnosed CKD or undiagnosed kidney conditions could also be at risk if eating large amount of the fruit.   |
| <b>Contraindications</b>  | Pre-existing renal disease-for fruit  |
| <b>Herb Drug Interactions</b>   | None reported   |
| <b>Dosage (use animal doses where available, otherwise human doses can be included here but specify):</b> | Fruit has oxalic acid- Unless renal impairment, used fruit is used as a food. Leaves, roots, seed-no toxicity.  |

**Notes:** An ornamental tree of India and Indonesia, now found throughout the tropics. Wood is insect resistant, straight, close grained, moderately hard with a fine even texture and used for furniture-making in India. Fruit makes a delicious jelly, preserves, candy and puree. Also used in salads and desserts.

**Recent Research:** revealed that ACF exhibited a potent hepatic steatosis relieving effect partly by inhibiting the signal transduction of hepatic lipogenesis. antioxidant capacity; effective anti-ulcerative colitis activity; potential benefits for the treatment of HFD-induced obesity and insulin resistance, and its effects may be associated with improvements in lipid metabolism and inhibition of the expression of TLR4 in adipose tissues; protected Min6 cells against PA-induced dysfunction by attenuating the inflammatory response and apoptosis, and its mechanism of this protection was associated with inhibiting the TLR4-MyD88-NF-κB signaling pathway.

Studies reported that Star-fruits contain proanthocyanins which serves as an antioxidant besides Vitamin C and Gallic acid. The main purpose of antioxidants is to scavenge ROS such as peroxides. Usually, fatty acids are susceptible to oxidative damage by peroxides and hyperperoxides. Consumption of Star-fruits is helpful in removing toxins from the body and aids the immune system in guarding against cancer, ROS damage and lipoperoxidation.

### **A source of water insoluble fibres**

Usually, when consuming Star-fruit juice, often the fibre's residual parts of fruits are excluded from the beverage. In spite of this, Star-fruit contains approximately 60% of cellulose, 27% of hemicelluloses and 13% of pectin. It indicates that star-fruit is indeed rich in insoluble fibres fractions (IFF). The insoluble fibres have the ability to retain water more than cellulose; thus called as 'water insoluble fibre fractions' or WIFF. WIFFs actually aids in smooth movement of the bowels and has the capability of lowering blood glucose by slowing down the absorption of carbohydrate in our body. In addition, the fibres also facilitate in lowering the total cholesterol level in the body by promoting hypoglycaemic effect. Consuming the fruit-juice together with the fibres (called as smoothie) does help in removing lipids through the excrement, and thus lowering the risks of cardiovascular diseases. It has also been reported that Star-fruit extracts do have selective anti-brain-tumour activity.

### **Anti-inflammatory and anti-microbial property**

Research findings of Cabrini et al indicate that antiinflammatory activity of Star-fruit extracts help in lowering the skin inflammatory condition. Researchers induced a skin inflammatory condition akin to eczema using croton-oil on a mice model. When ethanolic extracts of Star-fruit plant leaves were applied on the skin, it resulted in reduced inflammation and gradually reduced eczema in the mice. In addition to this, the extracts in various concentrations were found to inhibit the growth of *Staphylococcus aureus* (MBC of 15.62mg/ml) and *Klebsiella* spp. (MBC of 125mg/ml). Extracts were also effective against *Escherichia coli*, *Pseudomonas aeruginosa* and *Bacillus cereus*.

### **Anti-ulcer property**

Traditionally, star-fruits are used to relieve stomach discomfort or any ulcer-like disorders. The research findings of Cabrini et al demonstrated that extracts of Star-fruit plant leaves have anti-ulcerogenic properties. The extracts contain terpenoids (diterpenes and triterpenes), flavonoids and mucilage, which are known to have the anti-ulcer activity. The mucilage provides a lining to the gastro-intestinal mucosa, thus helping to avoid damages due to gastritis.

### **Toxicological effects**

Star-fruits do possess many magnificent properties. However, this fruit also poses threat to health as it exudes toxic effects in high uremic patients or patients with chronic renal disease due to its high oxalate content. Patients with renal disease are unable to secrete toxic substances out of their body efficiently; as a result of it, they are affected adversely by the oxalates. The first toxicological effect was demonstrated on mice model by Muir and Lam. Variable dosages of the fruit extracts were prepared and injected into the mice through intra-peritoneal injection, and fruit extracts exceeding 8g/kg provoked convulsions and death in the mice. Further analysis of the test reports showed that Star-fruit juice with oxalate content was responsible for the death of rats. Chronic renal failure patients had high mortality rate after consuming the Star-fruits. It was noted that these patients had symptoms of hiccups, mental confusions or disturbance in consciousness and vomiting before succumbing to death. Reports also suggest that uraemic patients experienced nephrotoxic and neurotoxic effects when they consumed Star-fruit. Most of the patients were able to recover after immediate hemodialysis, which spanned for weeks but some experienced total renal failure, causing death. Even though star-fruits have many documented nutritional and medicinal benefits; but, due to the oxalate and caramboxin content in the fruits, it is considered toxic to patients experiencing renal problems.

### **Perspective**

Indisputably, fruits are very important in our daily diet for various health benefits. However, some fruits may contain high amounts of unique secondary metabolites, which are hazardous to our health. Star-fruit plants are cultivated commercially in tropical countries for their fruits. This fruit have several medicinal properties; hence, it is used medicinally for many years in Ayurvedic treatments. Star-fruits contain various antioxidants which are considered medicinally important and beneficial for the health. However, the negative part of this fruit is that it produces oxalic acid and caramboxin, which are toxic to uremic patients. It can cause death if consumed in sufficient quantities by those experiencing renal failure. Thus, more public awareness about oxalate poisoning on uremic patients should be promoted. It will help to avoid adverse side effect of star-fruits in high uremic patients. It is very important that the public is well educated on the benefits as well as the hazardous effects of the star-fruits.

# A DAY IN THE LIFE

**Featuring Marge Lewter, DVM**  
Holistic Veterinarian



Today is Indian summer on my farm. I let the hens out, check on the horses and wish I could be outside all day. Oh, that's right, I will be outside because we are in the middle of the pandemic. This is part of my protocol: to see patients and clients outside, to require masks, to wash hands and surfaces often. These are interesting times.

Fortunately, my office has a covered patio area which becomes my outdoor exam room. There are five offices in our small ground level business complex. The neighbors now can satisfy their curiosity about what we do in a "Holistic" practice. There are no moons and stars hanging from the ceiling, and there are no magic wands, as much as I'd like that.

My first patient is Mack, who belongs to a prominent administrator of the Osteopathic college in town. We are doing a dexamethasone suppression test today. That sounds conventional and it is. I combine conventional and alternative diagnostics and treatments to strive for best patient care and quality of life. That's what holistic means to me. Mack is early, as usual, and calmly allows the blood test. He will be back twice more today.

Next comes Marguerite, who has at least three senior cats who are so very lucky to have found her. Today she is bringing one cat and a new puppy. We sit outside and decide to do the puppy first. We discuss the risk factors for leptospirosis vaccination. At one time, I stopped using this vaccine due to reputation of causing allergic reactions and serovars covering all the possibilities. Then I saw a death from Lepto diagnosed by the vet college in a dog who lived in a fenced yard in town which I thought has low risk. A client who attended dog shows lost a dog, again at the vet college, and discovered that 3 of 4 of her other dogs at home were asymptotically infected. These days, I vaccinate most dogs unless they are carried around in their owner's arms most of the time.

Marguerite has requested another acupuncture for her cat, Susie, who suffers from chronic vomiting. She has had elevated liver enzymes and glucose levels as well as needing transdermal methimazole to keep her thyroid levels in balance. The cat does not eat well and vomits daily around 5 am. Interestingly, her animal communicator says there is pain in the left jaw. Interestingly, today is the first day I have seen evidence of an ear infection in the left ear. Huh. Well, a swab shows bacterial cocci on cytology, so we take a culture and sensitivity and send it to the lab. Meanwhile Susie gets her usual acupuncture to support the liver and help with her spleen qi deficiency. Maybe her nausea all this time is from the ear infection? She goes home with *Cocculus 30 c* homeopathic which does wonders for inner ear problems.

Ah, thankfully my next patient is a year-old German Shepherd for a wellness checkup. I try to retain the young healthy patients, for a full day of complicated cases gets mindboggling. Fortunately, she's doing great. We review diet choices and tick control and vaccination needs. She is followed by another cat with an ear infection. This kitty has also had a bacterial infection of both ears and has had cleanings with betadyne, and treatment with ozone gas. We have finally gotten the infection cleared up but her ears still bother her. They are pink and inflamed, but the canals look perfectly clean. At this point we discuss the possible root cause which could be allergies. She will try some of the canned food we carry that has approved ingredients: no legumes, no dyes or artificial preservatives, and a very very low carb content. Do the math on dry matter basis, subtracting the ingredients on the label (usually protein, fat and fiber) from 100 to get the percent of carbohydrates. I don't love math, but pet food labels do not include carbs so the real numbers are hidden. Tip: there is a website where people buy everything that starts with a "C" which lists ingredients of most pet foods, so you can easily look this up during the appointment.

My stomach is growling now, but there is one more patient to see before lunch which I usually do not get anyway. The client calls from the parking lot and they are invited to sit in the outdoor patio. They moved from out of state and were referred by a colleague to see me. The appointment was made for laser treatment, but as a holistic vet I have an hour-long exam and visit to get the history. By the way, Junior has a history of ITP, possible Diabetes insipidus, hypothyroidism, and urinary tract infections. He drags his hind feet and has a diagnosis of lumbosacral instability. This one probably needs a two-hour visit. During the exam, I palpate the bladder and it is huge and the urine is strong. We do a urinalysis and it is full of bacterial rods. We seem to have a great number of UTI's in dogs with poor bladder function. As requested, Junior gets his laser treatment, but there is much more to do for him. He gets an antibiotic for the UTI and is referred for an ultrasound due to the recurrent UTI's. Later he is found to have pyelonephritis. Poor fellow. Return weekly for rechecks on this one who has so many problems to address.

Now, it's the long-awaited lunch break but it's also time for a telemedicine appointment with a new client for her dog diagnosed with liver cancer. We see so much liver cancer in dogs. Does anybody wonder why this is? My theory is aflatoxins in corn-based diets, but I may be wrong. But... you can never go wrong by improving the diet. In addition, changing the diet after cancer is advanced is a case of closing the barn door after the horse is out. Telemedicine consults have become a very helpful addition for new clients. We can get acquainted, discuss history and diet, and they are more willing to wait for the in-person appointment. It reduces contact time when they do come in, and the fee is taken off their initial appointment.

As soon as that's over, it's time for afternoon appointments to begin, and Mrs. Fisher is outside walking back and forth with her old golden retriever Candy. Her dog was initially seen for one mass, a large lipoma in the groin, but other ones were found on the exam. As kind of an afterthought, she agreed to have the others aspirated and sure enough, not the same kind of answer. Even I could see the neoplastic mast cells on the slide. How hard is it to tell an elderly person that their elderly companion has cancer? We have all had to do it. After decades in the business, I have learned to say we can help them live with cancer and live longer with holistic care. The way that some conventional vets tell people bluntly that they have x months to live without treatment will traumatize a client and send them running to a holistic vet for more compassionate care. This patient went to a conventional vet for an ultrasound and came back to me, vowing never to go back. We were able to cause the visible tumor to regress with intralesional steroid injections and started rectal ozone treatments to address the splenic involvement. After the conventional vet, Mrs. Fisher was terrified that the spleen was going to rupture, and we assured her that we could give herbs which would reduce the chance of internal bleeding.

How can we be better veterinarians? I have found that hope is a powerful tool that is under-utilized. I tell them that I have seen miracles happen. I rarely make promises, but I can say with confidence that animals live longer and better under my care. We can offer affordable alternatives to prevent financial euthanasia. We can have compassion and take time to understand the owner's limitations, and the owner's desires. The best question I have found is 'How can I help?'. Clients will tell you their greatest fears and their requests, giving you a plan to move forward. Previous experiences will color all of our decisions and recognizing that can help us become better vets. Every patient is a teacher and they have lessons for us. Be grateful.

Did I say lunch? I left off just after lunch on a typical September Tuesday in part one. Tuesday is my long day at the office. Of course, there was no lunch, that's just a figure of speech. I once had a vet student who said she would never take a job where she did not get a lunch break. I said, "good luck with that" and she later informed me that she had secured a job at Banfield, and they do in fact, get a lunch break!

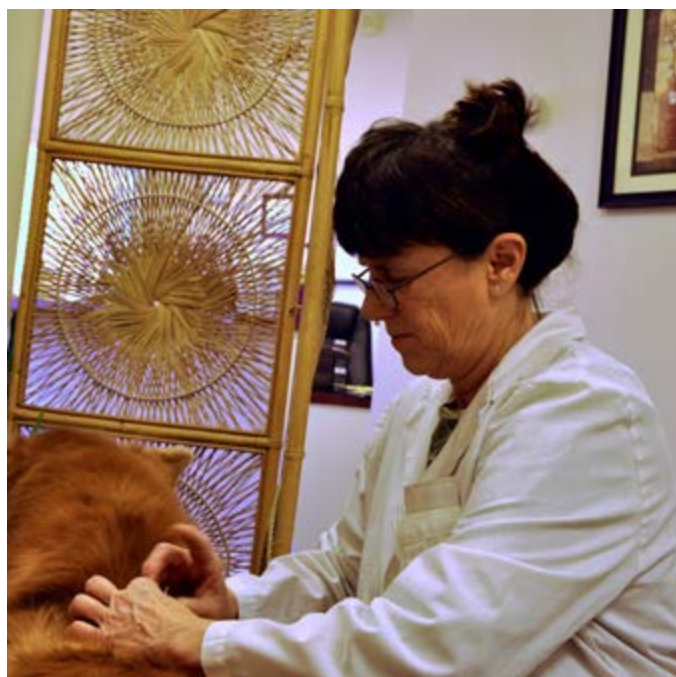
The afternoon hours brought more interesting and challenging cases to my door. Lilly was a standard Poodle who suffers from chronic GI issues. Thinking Addison's? Well that can be elusive and I believe she is one of those on the continuum-not end stage, diagnosable by lab test yet. Her owner says she won't eat and looks at him like she's saying "please help me". A month later, I find out that he himself was recently diagnosed with very serious health problems, so it's no wonder the dog is worried. Lilly looks perfectly healthy every time I see her, but so does her owner. Today we are sending in a CBC, chem panel and thyroid check. She has recently started thyroid supplements, and has also had a sudden elevation in liver enzymes. Today's blood test shows that the milk thistle and the ozonated Saline SQ fluids have improved the liver values and her thyroid levels have improved. The owner requests more fluids and we comply since her electrolytes have been all over the map.

The hour is up and here comes Charles for his laser and "B-12" shots. Charles suffers from caudal thoracic and hip pain. I have found that being an acupuncturist has helped my palpation skills immensely. Palpating the pulse and acupuncture points, looking for heat and cold spots has made my ability to pinpoint painful areas so much more accurate. Not having radiology in my practice, I depend in what my patients "tell" me. Charles gets Laser on a regular basis. Think you can't afford a laser? There are rentals available so check these out. The B-12 shots are- you guessed it, acupuncture with b12. He takes these very well and it reduces the time he needs to stand still. A recent AAVA lecture on aquapuncture by a human acupuncturist made this seem like the best thing since sliced bread... yet we vets have been doing it forever. My tip for you is to try Insulin syringes and those tiny needles. Sometimes I even use these to draw blood on cats- they hardly react to the needle.

My next clients are waiting, sitting on the patio where the masked husband is holding his little Yorkie so close in his arms that I can hardly find the dog. He is silent as the wife explains their journey at various specialists. A diagnosis of recurrent hepatocellular carcinoma after two liver surgeries and congestive heart failure has been made. This poor little 4 pound dog has been through so many procedures, biopsies, CT scans and ICU events, that I cannot believe she is still alive. Here is one where I had to ask, "how can I help?" The owner said she would not eat. We discussed diet and possible supplements, and I get the idea that the husband was not ready to let go, but the wife had accepted the grave reality. I took the little guy in and he was so weak he could not stand, eyes were half closed, and the abdomen was distended by the hepatic tumor. I prayed he would not die in my hands. I injected a few acupuncture points with vitamin B12 and gave some ozonated saline SQ, expecting that this patient was suffering from hepatoencephalopathy. Speaking directly to the husband this time, I explained the gravity of the situation as the wife nodded in agreement. He asked, me to do anything I could for his little buddy. I dispensed lactulose to combat the ammonemia, turmeric with coconut to give for the cancer, Senior Support including milk thistle and hawthorn for the heart and liver, hemp oil for pain, and some canned yummy cat food. Eating one bite of cat food would be better than nothing, I decided. As he clutched his baby, the husband looked like he was going to cry. Even the holistic vet told him it was grave. When we called for a progress report, we learned that his little Yorkie passed away that same night.

It seems the cases just got more heartbreaking as the day went on! The next one was a seven year-old Golden retriever that I had seen as a puppy and they had moved away. Yes, only seven years old. Now he has been diagnosed with disseminated hemangiosarcoma found in the liver, lungs, spleen and kidney. These clients had done everything right through this dog's life with feeding whole foods and minimizing vaccines and chemical exposure. He is one of the absolutely sweetest Golden retrievers I have ever met and for his IV treatments, he sits up like a squirrel and puts his paw in your hand. I could hardly believe the diagnosis. He was already on a popular Trametes mushroom supplement when he came. He has transitioned to a ketogenic diet, an additional Chinese herbal, turmeric, full spectrum hemp oil, and is getting bi-weekly major autohemotherapy with ozone. He is holding his own and is such an angel. I truly believe that animals are special angels that have lessons for us and everyone they encounter. My cancer patients have taught me the most. They constantly remind me that living well with cancer is possible and that, as veterinarians, we can only walk with them in their journey.

Much of what I do is to offer options and a multimodal approach to medicine. If your cat won't take pills, how about a homeopathic medicine in water? If your dog won't hold still for an IV injection, how about rectally administered ozone? If your cat freaks out at the vets, perhaps a Bemer session, some fresh catnip and Rescue Remedy would settle her down before the acupuncture treatment. There is a world of creative solutions. I want to guide my well-educated clients on the path to providing the best care possible for their animal companions through improved nutrition, support of the immune system, and the additional modalities we offer through a holistic approach. I am guessing that my colleagues experience the same challenges and rewards that I do. Some days are emotionally draining and some are physically demanding. Just this week, I was palpating cows on a sunny winter day and I thought, "I do kinda miss this, where I just need my trusty arm and a good cattle chute." An hour of working cows is good for the soul!



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*Image: Board Member Jamie Moran's Garden, 2020*



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