SILVER JUBILEE SPECIAL:
AHG Celebrates 25 Years

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Shifting paradigms to
safeguard our future

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Welcome to our first ever online issue of the Journal of the American Herbalists Guild! 2014 marks the 25th anniversary of the founding of the Guild, so it is fitting that our journal should plant a flag on Planet Internet. For the first time, too, we are using this medium to bring this publication beyond our membership subscriber base to the public.

In preparing this issue, I wondered what exactly comes to mind when the average person hears the word “herbalist.” Nowhere near as commonplace as “doctor,” “dentist” or even “chiropractor,” the word “herbalist” – as in, “So long boss, I’m leaving work early for an appointment with my herbalist” – is sure to raise an eyebrow or two while conjuring a colorful image. What image is that?

About a year into practice here in the good old predictable, middle-of-the-road, not-too-out-there Midwest, I made plans to meet a friend at my clinic before our lunch date. She, a design student at the Art Institute of Chicago, walked in the door and said, “Since when did you start dressing like an herbalist?”

I couldn’t tell if she was paying me a compliment or not.

I suppose the word “herbalist” summons the image of an uncoiffed woman clad in flowing natural fibers with asymmetric hems, large earrings and tall, flat-soled boots. The male herbalist? He has long hair and a beard, almost certainly wears a hat of some sort, and cargo pants carrying a blade perhaps – for wildcrafting on the fly, of course. I’d estimate a 30 percent chance of dreads on either character.

In my own graduating class of herbalists here in Chicago, we had among us teachers, an architect, a carpenter, a homemaker, a bank vice president, a qi gong master, a chef, and myself, a journalist. Over the years together, we stood almost knee-deep in flooded ditches harvesting elderflowers, returned from plant ID hikes covered in plantain-caked mosquito bites, got sunburned while weeding specimen beds, and smeared with dirt from a hard-earned six-foot burdock root excavation.

As I’ve just illustrated, it’s true that most, if not all, herbalists are close to the earth; after all, that is where the plants are. Whether in suits or swashbuckler shirts, we carry the medicine back to our homes, friends and clients.

Perhaps I fit the “herbalist” bill to a tee the day I met my friend at the clinic, but I hope this issue of the Journal of the American Herbalists Guild will help the new reader see beyond the stereotype into a professional tribe of people whose image is every bit as diverse as the myriad styles and traditions of herbal medicine that they practice.

I’m proud to bring you the JAHG’s usual excellent content aimed at enhancing the
practice of the professional clinical herbalist, such as a fine case study on branch retinal vein occlusion by Candis Cantin Kiriajes, a discussion of the link between inflammation and depression in phytotherapy by Courtney Fischer, and Donna Koczaja’s monograph on the familiar spring herald, *Viola odorata*.

As it is our 25th anniversary, I’ve devoted much of this issue to the history of our Guild in particular and the burgeoning field of herbalism in general. Michael Tierra, who rounded up the bunch of maverick herbal pioneers who ultimately became our founders, shares his thoughts on the birth and the future of the Guild. A visit to a cemetery inspires AHG council member Richard Mandelbaum to uncover lessons for modern American herbalists from our profession’s 19th-century forebears. And last but never least, the inimitable Jonathan Treasure mines two millennia of the history of herbalism to shine a light on where we are headed in the first of a two-part series entitled “Herbalism 3.0.”

A common theme running through the pieces by Tierra, Treasure and Mandelbaum is the understanding that herbalists, by and large, are notoriously independent and anti-establishmentarian, content to operate on the fringe of society. If this is true, then the formation and endurance of the American Herbalists Guild is remarkable indeed.

What, exactly, does the Guild do? Here’s our mission statement:

*The American Herbalists Guild promotes clinical herbalism as a viable profession rooted in ethics, competency, diversity, and freedom of practice. The American Herbalists Guild supports access to herbal medicine for all and advocates excellence in herbal education.*

Who are we? We are writers, artists, doctors, lawyers, researchers, scientists, activists, musicians, counselors, basketweavers – you name it – who have somehow found our way to the path of botanical medicine and all the possibilities it has to offer. Those who attain membership in our Guild reach a certain high standard of education and clinical experience, and we support each other in honing our skills to advance what is really an ancient healing profession. Not only are we committed to the right use of plants to return health, balance, and wellness to the body, but we are also stewards of North America’s “rich botanical treasure,” as Michael Tierra says.

For members old and new, the Guild reaching its 25th birthday marks a milestone in terms of organizational stability, but it’s also a coming of age. The exciting part lies ahead, as we act decisively to bring herbalism as a viable profession into the mainstream of a country much more open to this medicine than it was when we were born in 1989. As we walk upon the trail blazed for us by our founders, we continue to lay the path not only for future generations of herbalists, but for all those who seek this kind of medicine. Happy anniversary, AHG. May our work, dreams and achievements over the next 25 years be as verdant as the plants that sustain us.
To date, the American Herbalists Guild has published 22 print issues of its Journal, focusing on all aspects of herbalism with an emphasis on the clinical and professional application of botanical medicines. Following are some favorites, arranged by volume and issue number, selected by members of our Editorial Committee.

1:1 Herbal Pharmacokinetics: A Practitioner Update With Reference to St. John’s Wort (Hypericum perforatum) Herb-Drug Interactions (Treasure) PDF

2:2 Experience from the Front Lines: H.E.A.L.T.H at the Needle Exchange (Odierna) PDF

2:2 The Revision of Herbs of Commerce (McGuffin) PDF

2:2 Nvwoti: Cherokee Medicine and Ethnobotany (Winston) PDF

3:1 The Six Tissue States: the Energetics of Physiomedicalism (Wood) PDF

3:1 Galenic Humors in Clinical Practice (Hedley) PDF

3:1 Galen of Pergamon: A Sketch of an Original Eclectic and Integrative Practitioner, and His System of Medicine (Holmes) PDF

3:1 Nicholas Culpeper’s Herbal Therapeutics (Tobyn) PDF

3:1 Modern Phytotherapy: Integrating Scientific Data and Methodology with Traditional Herbal Practice (Bone) PDF

3:1 The Four Elements Theory in Clinical Practice (Stansbury) PDF

4:1 Case Studies of Herbal Protocols for Companion Animals (Ferguson) PDF

5:2 Why Herb Products Rather Than Single Compounds? (Brinker) PDF

6:1 Fibromyalgia (Khalsa) PDF

6:2 Viewpoints on a Common Weed: Lythrum salicaria (Eisenberg) PDF

6:2 Topical uses for Grindelia species (Brinker) PDF

7:1 Monograph of Scutellaria lateriflora (Metzman) PDF

7:1 Chronic Fatigue Syndrome: A Look at Physiological Processes and Therapeutics (Spelman) PDF

8:2 Insomnia (Romm) PDF

10:2 Herbal and Nutritional Treatment of Kidney Stones (Winston) PDF
“We know it is our time”

Karta Purkh Singh Khalsa
President, American Herbalists Guild

The American Herbalists Guild is in its 25th year, and this journal has grown to become the preeminent journal of clinical herbalism in America. As we celebrate our silver jubilee, I would like to extend a warm welcome to you, members and future members, to help our community grow and prosper over the next 25 years. In 1989, when that founding assembly of herbalists met in Santa Cruz, Calif., they were inspired by a vision of an organization dedicated to excellence in American herbalism and the establishment of herbal practice as a viable source of health care in every community. We, and future generations of herbalists, owe these visionaries a big debt of gratitude. Standing on the shoulders of giants, from past centuries to past decades, we have come a very long way toward the fulfillment of the vision of that original group of founders.

As the professional association for clinical herbalists in North America, AHG has a bright future and can serve as the strong voice advocating for herbalists and herbalism, including ancient traditions and modern insights. Your governing council has set a broad vision for a supporting a thriving field of herbalism far into times to come. We believe that herbalism is a cornerstone therapy for human health, and that our society will recognize these ideas as the years unfold. This first quarter-century is just a start, and, by joining AHG, or joining with us in partnership, you will play a special role in the future development of this profession. Your governing council has made a strong point to give a message of inclusion to all paths of herbalism, from personal use, through folk use, all the way to the most formalized clinical practice. We see a place for every facet of herbs in all our lives.

Thanks to the grace of my teachers, I have practiced clinical herbalism for 42 years. Over that time, I have seen this art and science rise from a back corner fascination for a few to a strong and vibrant discipline for the masses that has absorbed energy from anything that would feed it, including ancient traditions, foreign schools and modern scholarship. Now is the time for herbalism, writ large, to break through. When we can see herbalists appearing as guests on popular television shows, we know it is our time. I envision a time when herbalists will have a seat at the banquet table of health care services in America, and a time when we will be invited and, in fact, automatically
included, in a team approach to bringing people to health, and to looking after their lifelong well-being. I’d like to see trained herbalists working in neighborhood family practice clinics and hospitals. While the paths and strategies are many to reach these goals, I am sure that our united efforts will bring fruit in the end. Maybe the exploding needs of demanding baby boomers will force this change. I expect so, and I welcome it.

I also envision a time when families understand enough about herbalism so that they can effectively care for their children and relatives. After all, not getting sick in the first place is the best healing. While this folk tradition is alive and well in some places on planet Earth, it has largely slipped away in America. Besides that, modern Americans have a hard time distinguishing between the role of family and village herbalism and formal clinical training, a distinction that is still strong and well integrated in many global locales. I would like to see our associated professionals focus on bringing back family traditions and helping people sort them out and make them effective. My ultimate vision is that herbs and, more importantly, herbalism, will infuse every aspect of daily life.

I look forward to seeing you at our extensive schedule of celebrations, local and regional events, and, of course, the annual symposium in Georgia, which is shaping up to be our best annual conference yet. Also, I encourage you to join your local chapter, which is where all the action really happens. Your governing council and national office staff are all going above and beyond to serve you. Please reach out to all of them with your thanks, and also your comments or suggestions. I am looking forward to getting to know you personally over a steaming tea cup when we get reacquainted this fall.

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The American Herbalists Guild: Then, Now and Beyond

Michael Tierra, OMD, RH (AHG)

On the occasion of the 25th anniversary of the American Herbalists Guild, some may pause to ask how our organization came to be. As the person who catalyzed the creation of the Guild after several years of discussion with my fellow founders, my vision was for an association of professional clinical herbalists, which I thought necessary for several reasons:

First, because there were no established schools or training programs in herbal medicine at the time, I felt that we needed to be able to network and share our experience and knowledge with each other. Herbalists in the 1980s were a rare phenomenon; we were isolated and scattered in diverse parts of the country. The only opportunities to learn about each other were the Breitenbush, OR, herbal retreats started by Rosemary Gladstar of the California School of Herbalism. At Breitenbush, we would not only teach the public, but also learn from each other in one-on-one meetings, at mealtimes, or at classes and lectures. I envisioned an organization that would expand this experience, facilitating more educational sharing between herbalists from around the country or perhaps the world.

Secondly, I could see that herbal medicine was about to enter the mainstream. Already a number of companies seeking to promote their products would put on short seminars and bestow bogus “Master Herbalist” degrees upon people who attended a mere weekend of classes. Naturopathic schools were popping up around the country offering very sketchy herbal training and “Doctor of Naturopathy” degrees. Those of us in the vanguard of the herbal renaissance already knew that there was much more to herbal medicine than these exploitive ventures were able to offer. Furthermore, herbalism becoming more visible meant that media and political concerns were often directed at “Master Herbalists” or members of the medical establishment who knew nothing or little about herbal medicine, clinical or otherwise. Needless to say, these so-called experts misrepresented what we were only beginning to realize herbal medicine was really about.

North America, boasting such rich botanical treasure, has its own history of herbal use ranging from Native American medicine to the Thomsonian, Eclectic and Physiomedicalist systems, all of which had fallen into near extinction due to the boom in industrial and technological medicine. I realized that if we even stood a chance of continuing and evolving herbalism into the later 20th and 21st centuries, we needed to establish minimum

A pioneer in the study of traditional Chinese and Ayurvedic medicine in the West, Michael Tierra, OMD, LAc, RH (AHG) is credited with bringing the hugely popular herb Echinacea back into common usage in the United States. His expertise comes from over 30 years of practice and study in North America, China, and India. Dr. Tierra is a founder of the American Herbalists Guild, and has written numerous books on health and herbal healing including The Way of Herbs (Pocket Books) and Planetary Herbology (Lotus Press). His East West School of Planetary Herbology correspondence course has trained professional herbalists since the early 1980s. Dr. Tierra lives in Ben Lomond, CA, and practices nearby at the East West Clinic in Santa Cruz at the northern end of Monterey Bay.
standards for the profession and position ourselves as possible spokespersons and representatives for wider acceptance.

Thirdly, I had traveled to parts of Britain, Australia and New Zealand, and found that herbalists in those countries had legal standing and long-established training programs. One Sue Evans, now a prominent and well-known Australian herbalist, asked me about herbalists in North America. Compared to her native country, herbalism in the United States was essentially an outlaw profession, so I replied, “There are no herbalists in North America” – certainly not in the sense she was inquiring. She plaintively responded, “Then who uses all those wonderful plants?”

It was at that moment that I was determined to begin the process of forming a North American herbalists association. I envisioned it along the lines of the National Institute of Medical Herbalists (NIMH) in the UK. They operated under the rule of Common Law dating back to Henry VIII (himself an herbalist) who declared the practice of herbalism available to any and everyone in perpetuity. The NIMH promoted high standards for training and herbal practice for its members only, but did not prohibit others from practicing herbal medicine.

The Birth of the Guild

Upon return to the United States, I fired off a few letters and telephone calls to some of my respected herbal friends calling for a meeting. The first to respond was David Hoffmann, a fellow of the NIMH who had practiced clinical herbalism in Wales and then at Findhorn in Scotland, regarded...
at the time as a New Age mecca. David’s participation inspired responsiveness among a group of North American herbalists who would eventually become the founders of the American Herbalists Guild. These were: David Winston, Christopher Hobbs, Cascade Anderson Geller, James and Mindy Green, Kathi Keville, Amanda McQuade Crawford, Dr. Paul Lee, Mara Levin, Roy Upton, Sara Katz, David Bunting, Grace Marroquin, Brigitte Mars, Jane Bothwell, Steven Foster, Mark Blumenthal, and my wife, Lesley Tierra.

We met on Feb. 18, 1989, at the home of Christopher Hobbs and Beth Baugh near Santa Cruz. We nominated David Hoffmann as the first president. Amanda McQuade Crawford served as secretary. Cascade Anderson Geller was the one to ultimately propose the name, “American Herbalists Guild.” I served as treasurer though I don’t ever remember any funds being collected!

When we each began our forays into herbal medicine (for most of us founders it is going on 40-plus years now), none of us had even the slightest notion that we could actually forge a respectable profession doing what we love, healing with the botanical gifts of nature. But only six years after founding the AHG, Congress passed the Dietary Supplement Health and Education Act, which protects the public’s right and access to dietary supplements, including herbs. Timing was on our side.

I’m sure each of us had our own personal agenda about what we wanted the organization to represent, but what we had in common was a commitment to education. Any organization we formed would allow herbalists from around the country to communicate their experiences, thus strengthening our skills through sharing. It then followed that most of us saw the AHG as an organization for and about clinical herbal medicine. Through the Guild’s symposia, online webinars and formation of nationwide chapters, I can see that the original mission of the Guild in respect to promoting education and standards for practice among its professional members has and continues to make significant contributions to our field.

Finally, we envisioned that it would welcome the different traditions and lineages of professional practitioners and students of herbal medicine. This inclusiveness was a big consideration, as each of us had our unique herbal niche, working with various herbal systems including Western herbal medicine, Ayurvedic, Chinese, folk and Native American. We wanted the organization to represent all forms of medical herbal practice. We sensed the potential problems that might occur if, for instance, a self-educated herbalist with a respected practice in rural Appalachia tried to apply for professional AHG membership. Having suffered enough paranoia and censure for our own individual herbal practice, the last thing any of us wanted to do was to prohibit anyone else’s right to do so. Therefore, we provided avenues by which such accomplished herbalists could become professional AHG members. Those policies are still in place.

The result today is that we have Ayurvedic herbal medicine associations, TCM herbal associations and various Western-styled herbal associations, but it is only the AHG that encompasses and freely allows for all three plus any other interesting form of ethnic or regional herbalism practiced in North America. Therefore, whether the AHG as a body realizes it or not, based on the diverse styles of herbalism practiced by its members, it stands at the fore in the contemporary evolution of a new global style of herbal medical practice.

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To License or Not to License: AHG and the Changing Face of Herbalism
Since the AHG’s inception, clinical herbal medicine has indeed become a respected, though in itself, not yet recognized legal or licensed profession in North America.
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Acceptance of the benefits of herbal medicine is now wide throughout the mainstream and our beloved plants have made significant inroads into orthodox medical professions. Regulatory agencies seem to have backed off busting herbalists for “practicing medicine without a license,” though I fear to even mention that so as not to wake a sleeping dragon. Clinical herbalists are being trained as much as possible to practice within the scope of the law, which has become a semantic game of optimizing wellness and not purporting to treat specifically named diseases.

Furthermore, other licensed professions such as naturopathy and acupuncture train their practitioners in clinical herbal medicine. It seems that Ayurvedic herbalism is on the cusp of gaining legal status in many states.

Herbalists, perhaps by nature, tend to have a healthy suspicion of organizations. Because of this, early notions of a national herbalist organization among my peers at Breitenbush languished. At the time, we were so used to working as individuals that the idea of organizing did not catch on. The anti-establishment stance of Western herbalists continues to be expressed by those who shun or resist any move to make it a licensed medical profession. Ironically, in the past this found most outspoken resistance with one of the original founders of the AHG, the late great Cascade Anderson Geller, and many others who were her friends and students.

It remains an open question, however, how much credibility North American herbalists, the ones in charge of “all those wonderful plants” as Sue Evans put it, will attain without conforming to acceptable education and practice standards. Professional membership to the AHG can be attained only through a strict process of peer review. This gives some credibility to some herbalists in this country, but without legal standing, it is difficult to determine how much.

While the Guild is respected among a small percentage of herbalists, it falls short of being recognized as the premier herbal organization in the broader medical community and public’s perception. This is clearly because of our reluctance to pursue legal standing, accreditation, licensure or whatever is possible. I fear that continuing in this non-committal stance regarding these matters threatens that our Guild may fall into obsolescence – becoming a quaint organization where a relatively small number of loyal herbal aficionados assemble to “smell the posies.”

It is not that the AHG seeks to create a super-class of elite members nationwide, but the public should know that professional AHG membership is, at this moment in time, the highest level of professional recognition to which a candidate, after long years of dedication and study, can aspire. Such an achievement has, to my way of thinking, value and meaning in and of itself. This is not necessarily to say that an AHG registered herbalist is better than anyone else, but that we meet the high standards of training and practice we have set for ourselves – a subtle but important distinction I think.

While I would never want to see anyone barred from the free use and practice of herbal medicine and self care, I also know, from decades of clinical experience, that there is an entire other level of responsibility when it comes to maintaining a clinical practice. I believe that this requires a high level of training. Licensing does not guarantee the best practitioner or doctor, but it does make a serious attempt to represent the necessary education and supervised practice one needs to assume such a responsibility. There is a big difference between professional practice and lay herbal practice, and because they both contribute to each other, they can and should always coexist side by side. So, I’m an advocate of clinical herbalism as a licensed profession,
while seeking to assure the God-given right of all to employ and practice herbal medicine among their immediate family and friends.

**Challenges for the Next Generation and Beyond**

The AHG is poised to rise to challenges looming on the horizon. Protecting our access to herbs is a big one, especially in light of trends in the European Union to restrict access of herbs to registered herbal practitioners or medical doctors. Defending our right to herbs also means being able to maintain access to important botanicals after they have been dangerously abused, such as *Ephedra sinica* (*ephedra, ma huang*) for upper respiratory complaints or prepared *Aconiti carmichaeli* (*aconite, fu zi*) for pain or heart failure. These are commonplace in the TCM tradition, but many Western herbalists have used them as well. Other herbs such as *Piper methysticum* (*kava kava*) have suffered similar condemnation. Clinical herbalists should be able to stand strong and clearly identify the right from wrong use of herbs, which is ultimately how they need to be regulated.

An emphasis on development of assessment skills is another necessity for the newer generation of Western herbalists, who are so enamored with plants and the spirit of plants. This passion is a good starting point, but a true herbalist must also know how to use a system of sophisticated assessment – be it TCM, Ayurveda, Western, or some other – in order to use herbs appropriately and effectively.

Any organization is only as strong as its membership, and the AHG must strive to actively strengthen its professional ranks, clearly demonstrating what it has to offer to attract and maintain the interest of this segment of its members. As for student members, the most obvious difference we have today as opposed to when the original founders struck out on the herbal path, is the growing number of people who express an interest in herbalism as a full-time, paid profession, and not as a hobby. In my opinion, the profession they aspire to must have value and meaning in the medical community at large, and this, coupled with education, is the greatest service the AHG could offer to budding herbalists.

**Fulfilling Goals and Shaping Our Legacy**

How have we, as an organization, impacted the world of herbalism in North America? The very presence of the AHG and its peer review process has played a major role and will continue to exert influence in advancing herbal education. Following better formal herbal education, standards of practice have improved considerably. AHG-led networking between herbalists and the many chapters throughout the country, webinars, classes and books by AHG professional herbalists who publicly sport their “RH (AHG)” (Registered Herbalist) credential, have all contributed to a higher level of visibility of herbalism in general and credibility of our organization in particular, though as I mentioned earlier, there is still much more that can be done toward achieving this goal.

Whatever the AHG is to become, it should always be remembered that it was founded by maverick revolutionaries, who for the most part have somehow grown to forge lasting friendships of respect for each other’s similarities and differences.

To be clear, I am not speaking for any other founders or for the AHG; I am only responding to the invitation to contribute my thoughts about our organization as the one who first lit the spark. Now at the midpoint of my 70s, my love and interest in herbal medicine, a system of healing that connects us all to nature and each other, has not dwindled in the slightest. I am happy with the direction of the AHG and feel deep gratitude to present and past presidents and board members who have taken it upon themselves to move the AHG forward and to preserve its purpose and goals for future generations of herbalists.
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AHG founders on...

Our name:
We started tossing around names at Breitenbush.
We (wanted) a name that was more earthy and cooperative, and stronger than association or organization, so well suited for herbs. Anyway, Bob Brucia and I already had established the American Herb Association. Cascade (Anderson Geller) first mentioned the name “Guild.” It seemed appropriate since it represents people coming together to share with each other and to sustain and protect the ancient art of herbalism. — Kathi Keville

Our logo:
The snake was an ancient symbol for healing practitioners vis-à-vis the rod of Aesculapius. Ginkgo and echinacea were immediately recognizable and iconic as popularly used herbs. The mortar and pestle is a representation of the medicine and medicine maker. — Roy Upton

I had proposed an image of the Green Man from Medieval Europe. I think this was rejected because it was too male. — David Hoffmann

I suggested the bee as part of our logo to point to interspecies interdependence and improving the environment as we used plant material. — Amanda McQuade Crawford

Shifts in the world of herbalism since 1989:
The landscape of herbalism has shifted from one solely grounded in the cottage industry to mainstream, large-scale use of medicinal plants. In fellow organizations and individuals around the world (Canada, Britain, Australia, New Zealand, Africa, South America, Asia) there is a common theme of resisting corporate co-opting of our wisdom solely for profit and centralization of power. Now there is a sense of balancing quality of information, best practice, and products with retaining the spirit of empowering the people, even teaching clients/patients how to make their own medicine if they choose. — Amanda McQuade Crawford

Greater awareness of herbs and herbalism,
but still a poor understanding of herbal medicine. — David Winston

As my mother said in the early ’80s, practicing herbalism was “snake oil” then (the Southern perspective!) but by the 2000s it was seen as a viable alternative to Western medicine. Today herbalism is widely received and respected in mainstream America. Many doctors even promote it on national TV and the Internet. These are huge strides forward, especially from the ’60s and ’70s when people were arrested for practicing herbalism! Today there are an amazing amount of schools, including naturopathic colleges, and students aspire to use herbs all the way from for their families and communities to manufacturing and selling products to practicing professionally. In short, herbalism has grown like comfrey in the world garden – popping up all over the place! — Lesley Tierra

The most crucial service the Guild can provide for its members:
Mutual support, and be more of a voice for herbal medicine culturally. — David Hoffmann

To develop a formal model for high quality education in clinical western herbal medicine and to develop a formal model that can lead to legal practice. — Roy Upton
A voice for herbal medicine and increasing awareness that clinical herbalists exist and our medicine is effective. — David Winston

To maintain and increase high education and practicing standards for herbal medicine that ideally lead to its legal recognition and practice. One of the original purposes several of us saw for the Guild was to establish our own professional standards and practices in the event that the government would intervene and try to set them for us. We would have already done this work so it could be adapted and keep herbalism acceptable and even potentially legal instead of shut down. — Lesley Tierra

Defining ‘professional herbalism’ in North America:
To be a professional today still means different roles depending on one’s sociopolitical, philosophical, and spiritual tenets. I applaud the rebel in her garden who studies with others she seeks out. For me, I walk in wild places and work in my garden to learn from my teachers, the plants. But I also walk in corridors of academia and industry, where I speak the language of science yet have a subversive streak: once accepted by the suits I am one of many ambassadors for a revolution of consciousness in those spheres. New herbalists today are free to choose or be drawn to the roles and venues that heal them in return for the service they provide. — Amanda McQuade Crawford

Making herbalism one’s profession is very broad; (it could be) medicine-making, industry, teaching, writing, acting as a health care consultant in a clinic or retail setting, growing herbs, wildcrafting, etc. Developments in the industry have opened up lots of opportunities for entry to medium-paying jobs, and a rare high paying job, unless one is successful at their own business. As for practicing herbal medicine as a clinician, there remains no avenue in any state as a Western herbalist without some other authority granted to practice medicine, such as naturopathy, TCM, or as an MD and in some states, chiropractor. No advancements that allow for the clinical practice of herbal medicine as a direct entry Western medical herbalist have been made. — Roy Upton

Raison d’être:
I was still fresh from the UK and was influenced by the experience of the National Institute (of Medical Herbalists) in the UK and that being part of a professional organization greatly facilitated social acceptance of herbalism and patient confidence and openness. Additionally the organizational and educational support greatly aided medical and herbal competency… My primary motivation was to help future patients find competent practitioners that they could be ensured would know what they were doing. — David Hoffmann

Basically to represent and create a forum for practicing Western medical herbalists as there were already organizations for herbalists in general (American Herb Association); industry (American Herbal Products Association), growers (Herb Growers and Marketers Association), etc. There was no organization specifically dedicated or focused on practice of Western herbal medicine. Collectively, that was the basis of why an organization like AHG was considered important. — Roy Upton

Herbal support for the birth of the Guild:
By the end of the first day, the whole group was drained and stuck. Nothing too bad, but the usual group process grind. On Sunday morning Paul Lee came with a brown paper bag full of freshly picked leaves. He passed the bag around and suggested that we each chew a couple. The leaves came from his incredible garden and were Catha edulis (khat). This facilitated group clarity and focus, and the guild was born by the end of the day. — David Hoffmann
Back to The Future—Herbalism 3.0
Part 1: Foundations
Jonathan Treasure

In the opening of a commencement speech titled *This Is Water* delivered a few years before his untimely death, David Foster Wallace describes a cameo in which two young fish meet an older fish swimming the other way. As they pass, the older fish nods at them and says “Morning boys! How’s the water?” The two young fish swim on by, and a few minutes later one turns to the other and says, “Huh? What is ‘water’?” (Foster Wallace 2009). The point of the parable is not so much that we need wise old fish to tell us about the nature of water, but simply that it is often the most obvious and fundamental everyday realities that we find most difficult to talk about.

For western herbalists today, the convenient historic default of not discussing “the water” is no longer viable. We are confronting challenges that are visibly eroding the viability of our default modus operandi and identity, and the sell-by date has long passed. It is quite arguable that herbal medicine has arrived at something of a historic bifurcation point with an increasingly forced choice between two alternative trajectories for the 21st century. The first involves discussing the “water” – and requires letting go of its 20th century paradigm to meet the challenges of the 21st. The second is the real threat of possible extinction via a combination of sequestration by mainstream biomedicine coupled with fragmentation into various marginalized subcultural cliques and consequential factions - a process visibly underway.

The choice of appropriate tools for self-understanding in a field as inherently multidisciplinarian and heterogeneous as herbalism is not clearly mandated by the specific concerns of its internal content. Nor are herbalists themselves particularly prone to philosophizing about their practice. My personal preference is to draw from the toolbox of the history and philosophy of science. Until recently, “history” in herbal medicine was nearly synonymous with “tradition” in sensu of traditional knowledge. Platiitudes of the genre “combining ancient wisdom with modern science” pervade the marketplace for herbal products, but behind the clichés herbalists have always had a strong sense of the importance of historic continuities in their discipline. Emphasis on the ongoing authority of centuries-old herbals contrasts starkly with the infantile amnesia that typifies modern biomedicine.

Despite this, authoritative historical surveys of western herbalism, with a few exceptions such as Barbara Griggs (Griggs 1981) have been noticeable mostly by their absence. However, several recently published
works together make a cogent argument for the emergence of a scholarly approach to the history of herbal medicine by authors clearly literate in both herbalism and history (Tobyn 2011; Francia 2014). My own approach to history is both more pragmatic, philosophical and frankly politicized. Marx famously pointed out that when history repeats itself, the first time is as a tragedy, the second is a farce. Historical self-analysis here is animated above all by the need to learn from and avoid the mistakes of the past. The ulterior motive is not representation but intervention. The study of history conducted as scholastic documentation of how things were done in the past is conservative rather than critical if its implicit program is “to stand athwart history yelling ‘Stop.’”

Like historians, philosophers of science have different motivations and concerns. Here again my preference is hybrid, drawing primarily from the historicism of Kuhn and the anarchy of Feyerabend, but without dispensing altogether with the necessity for internalist analyses of the epistemic content of the science of herbalism itself. This last point is important because adoption of purely sociological or historical approaches to understanding science may be laudable insofar as they emphasize values and ethics as well as cultural relativity and multiperspectivism, but tend to fail in their ability to evaluate internal scientific content; however here I shall rely heavily upon the now “classical” approach to scientific revolutions developed by Thomas Kuhn. Although familiar to many, a brief review of the main points from The Structure of Scientific Revolutions (Kuhn 1962) follows.

**Kuhn’s Scientific Revolutions 101** For philosopher of science Thomas Kuhn, a scientific revolution is not simply a shift in the way science views the world, or how and why it performs what experiments. The major scientific revolutions such as heliocentrism, germ theory or general relativity show how new paradigms are associated with profound changes in how we conceive, construct and create our world and thus are world-changing views rather than changing world-views.

In brief, Kuhn posited that historically, science progresses non-linearly with extended periods that he called “normal science” that were interrupted by periodic crises or revolutions. In the initial period of “prescience,” emerging observations and experimental data lead cumulatively to the development of a core disciplinary matrix or “paradigm” which characterizes the period of normal science (business as usual). Over time, anomalous findings may presage the end of business as usual; should those anomalous findings accumulate they can become increasingly “incommensurable” with the existing paradigm. In this case a period of crisis or “revolution” ensues, and eventually a new paradigm emerges.

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**Fig 1.** Graphic representation of Kuhnian science

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new paradigm

paradigm

anomalies > incommensurability

normal science

revolutionary science

normal science

Fig 1. Graphic representation of Kuhnian science
compatible with the findings that triggered the crisis, and another settled period of normal science follows this “paradigm shift.” This process is represented in a telegraphic manner (see Figure 1).

With this framework we can now parse the history of western herbalism in terms of Kuhnian paradigms. Doing so involves an inevitable degree of simplification that may risk offending the historicist sensibilities of those more comfortable discussing trees than forests, but our premise is that the forest is ablaze, and maintaining decorum is never a top priority when wildfire fighting. Controversially, my timeline scaling is logarithmic rather than linear, resulting in an unkindly compression of two millennia of herbal medicine into a single chapter. This log scale is also intentionally suggestive of an increasingly urgent need for herbal medicine to recognize the impending Kuhnian crisis, because of the globally accelerated speeds of social, technical and medical developments. For my purposes here, this temporal condensation means Herbalism 1.0 begins with Greco-Roman medicine around the first century CE.

**Herbalism 1.0—The Herbal**

*Dioscorides* is generally regarded as author of the first definitive herbal—an authoritative original knowledge base of botanical remedies, pharmacy and therapeutics (although he included mineral and animal remedies). His *De Materia Medica* is the archetypal expression of Herbalism 1.0 (hereafter H 1.0) and of the herbal as a description of the materia medica by the expert practitioner-author. In terms of medical theory, Dioscorides...
was more on the empiricist side of the rationalist-empiricist divide that has been identified as a primary animating dialectic of western medical history from the Hippocratic corpus onward, whilst his second-century successor Galen more famously expounded and expanded humoralism — an unreconstructed rationalist in vitalist clothing. However, from the epistemic point of view of herbal medicine, and also of our Kuhnian schema, the medical metaphysics of individual expert-authors are of less significance than the herbal as a scholastic description of their individual expertise and experience with materia medica.

In a way, we can say: The Herbal is The Paradigm. Historic expert-author herbals express a specific conception of the nature of an herbal remedy, of what knowledge of an herb is, and implicitly characterize the nature of the herb. Herbals present the materia medica in terms of the virtues or capacities of each herb. This means that herbal remedies are the kind of things that have the capacity or tendency to behave in different ways depending on who is using them, how, and in what context. Importantly, an herb is not defined by what it does, but by what (an expert author-practitioner says) it has the power to do. Knowledge of an herb is knowledge of its capacities or virtues, not of its actions. The picture of any herb is painted differently by different herbals and the virtues of an herb can be compiled as a collective aggregate of all its descriptors. The natures of herbs in this sense correspond to their Aristotelian natures, and the accounts of materia medica in herbals owe as much to classical scholasticism as to empiricism.

It is unclear to what extent the authorial content of the landmark historic herbals of H1.0 is truly primary and original as opposed to derivative, or even plagiaristic. In a later example such as Maud Grieve's *A Modern Herbal* published in 1931, the compilation process is explicit, the sources either acknowledged or at least known; however, in the primary historic herbals (Dioscorides, Gerard et al) this is not necessarily so and is a proper subject for the new wave of herbal historians. However, the existence or extent of “copycat” descriptions in H1.0 herbals does not undermine the basic features we are focusing on in this argument.

I will argue later that a return to the concept of natures is an essential platform for understanding herbs in any Herbalism 3.0. Although the virtues described in H1.0 herbals correspond to natures, Aristotelian natures were always connected to essences. Essences are intrinsically unknowable; indeed the primary achievement of the Scientific Revolution was to banish natures (as unknowable essences) from modern scientific knowledge and methodology as an explanation of the behavior of things, and replace them by empirically measurable or otherwise knowable indices of what behaviors things exhibit.

In parentheses, from the perspective on history that motivates this text, 17th-century English herbalist Nicholas Culpeper and 16th-century physician/occultist Paracelsus are interesting standouts in the pantheon of H1.0 authors. Each in their own way was uniquely anti-establishment, and each of them eschewed humoralism with its replacement of essences by the rationalist cataloging of energetic qualities, suggesting instead that esoteric methodologies were more appropriate. For Culpeper this was astrology and for Paracelsus alchemy. In the context of their radicalism this could be interpreted as a prescient rejection of the inherent conservatism of humoral rationalism albeit replacing it with esoteric placeholders of alchemy and astrology as a means of “getting at” essences; in other words acknowledging the shortcomings of humoralism but recognizing the need to make the invisible visible. Rendering the essences knowable via motifs of “as above so below” and alchemical transformation/transcendence has implications for today.
and the “making visible” of the capacities or natures of plant medicines and this will be explored in part two of this text in more detail. A less consequential aside is the double irony involved when western herbalists claim historic continuity with humoralism as a vitalist credential against charges that their system is “inferior” to traditional Asian medical systems due to its lack of comparable energetics of materia medica (or therapeutics).

**Herbalism 2.0—The Monograph**

The period of crisis in herbal medicine that marked the end of H1.0 spanned the last decades of the 19th century to the first few of the 20th. This transformative time in botanical history was driven by a complex interplay of external socio-political forces that precipitated a Kuhnian crisis period by stressing the already present internal contradictions of the H1.0 paradigm: its inbuilt inability to repurpose expertise in materia medica in ways that clearly demarcated both conflicts and compatibilities with the rapidly developing ecosystem of mainstream medicine. The decisive shift was the absolute imperative for herbal medicine to reframe its legitimacy in terms of a medical landscape increasingly dominated by the emerging and bullish pharmaceutical industry in cahoots with a newly confident medical profession whose reductionist thinking underpinned its aggressively expanding socio-economic and clinical hegemony.*

Only Thurston, in his 1900 *Philosophy of Physiomedicalism*, critically encapsulated the entire dynamics of the historical juncture, and laid the theoretical foundations to meet and transcend its challenges. Still, this was too little too late, and Thurston’s text became perhaps the most unread epitaph in herbal history (Thurston 1900). The primary feature of H2.0 became the elimination of the author-expert as subject and object of herbal knowledge. The herbal was replaced by the monograph; Eminence Based Medicine was replaced by Evidence Based Medicine.

If the monograph first emerged in response to political assaults, it also remained, through successive iterations, the primary go-to means of deflecting or neutralizing legal-regulatory initiatives intended to minimize the credibility and availability of herbal medicines. Internally, botanical monographs vary in emphasis from the analytical and quality-oriented through phytopharmacological to the more therapeutic, but in essence the monographic description of an herb is based on *measurables*, i.e. objective scientific data. Compared to the epistemic model of H1.0, the defining features of medicinal herbs in H2.0 no longer reside in their capacities, nature or their power to do, but in what they do. Virtues were replaced by actions. (The occasionally arcane terminology of herbal “actions” may have its provenance in a less reductionist past, but this is more etymological than substantive.) The primary scaffolding within which the monograph frames herb actions is in the final analysis based upon reductionist biomedical considerations, while even those disciplines with experiential origins such as pharmacognosy gradually became veneers on mainstream analytical chemistry and pharmacology. Meanwhile, features such as safety, toxicology and standardization absent from H1.0 (except rarely in the discussion of potentially poisonous herbs) became obligatory standard elements of every monographic account of an herbal medicine.

**Both Sides of the Pond**

Historically, there was something of a divergence between developments on different sides of the Atlantic, here covered briefly only to illustrate cultural variations on our theme. In the US, the closure of the last Eclectic Medical School in 1934 marked the definitive end of a two decade-plus debacle following the publication of

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*See Mandelbaum in this issue, p. 28. – Ed.*
the Flexner Report, during which North American herbal medicine was effectively destroyed. Transplanted to England, and dogged by initial internecine rivalries, the herbal profession survived, albeit by a slender thread, even as it was eliminated in the US.

Despite finding some refuge in the nascent naturopathy movement, herbalism did not really resurface in America until reigned by the counter-cultural movement of the ’60s. Then, in classic pioneer tradition, a handful of entrepreneurial individuals (aka hippies) began making and selling herbal extracts and giving classes on how to use them. Herbal education in the US still largely follows an apprenticeship model. There are dozens of schools and courses, but no generally accepted core curriculum or educational standards, often with ad hoc scientific and minimal if any real medical training (excluding the handful of official naturopathic schools whose mixed menu curricula feature botanicals – amongst other things). This created something of a vacuum in terms of any substantive underlying philosophical and medical underpinnings of herbalism per se which results in some culturally unique curiosities. There is, for example, a tendency in North American herbalism for individuals to feel they have to “invent” herbal “systems” of their own. Notable examples include the late William Le Sassier’s Triune System, and southwestern herbalist Michael Moore’s Clinical Energetics, and arguably could also include Michael Tierra’s Planetary Herbalism, or more recently Donnie Yance’s Eclectic Triphasic Medical System (ETMS).

The same vacuum underscored the translation and publication of the Complete Commission E monographs by the popular herb advocate group The American Botanical Council in 1998, which represented a high water mark of what could be called “monograph madness” (Blumenthal et al 1998). That importing these irrelevant regulatory documents from Germany could possibly be justified by suggesting they constituted a definitive model for the future foundation of US scientific herbal medicine, speaks volumes about the persistent subterranean aftershocks that followed the seismic destruction of H1.0 in the US.

In England, on the other hand, political pressures, always more muted (or perhaps just deceptively genteel), nonetheless impacted developments in the monograph “ecosystem.” The rather short British Herbal Pharmacopoeia (BHP) therapeutic monographs that the Scientific Committee of the British Herbal Medicine Association (BHMA) started publishing in 1971 were largely a response to Parliament’s Medicines Act of 1968, and the herbs included were described with the predictable focus on safety, quality and efficacy. However, the short therapeutic sections of the early BHP monographs were insightful commentaries based on shared educational and clinical experience of the herb amongst UK professional practitioners rather than lists of scientific studies. The earlier BHP is a quite refreshing read today compared to the encyclopedic compilations of citations that pass for more recent monograph collections (BHMA 1983).

Internationally, regulatory imperatives increasingly supervened and came to dominate the herbal landscape toward the end of the 20th century, especially in the EU. The response, once again as political reflex, was the weighty European Scientific Cooperative on Phytotherapy (ESCOP) monograph series, a formidable compilation intended to create a pan-European scientific rationale for herbal medicines that remains a showpiece and archetype of the strengths and limits of monographic herbal explication and of the gulf between a scientific and more tradition-oriented phytotherapy (ESCOP 2003). In retrospect, European phytotherapy straddled the divide as best it could, with emeriti such as Rudolf Fritz Weiss attempting the increasingly difficult task
of riding two horses simultaneously. Weiss should be singled out as an authoritative advocate for a theoretically coherent and unified (not integrative) concept of phytotherapy. Born in the 19th century, by 1985 already retired, he added a warning chapter to the sixth edition of his seminal Lehrbuch der Phytotherapie in which he painted a clairvoyant but detailed picture of the dangers of importing reductionist biomedical thinking into the phytotherapy that he had represented with nuance, deftness and refinement for so long. Weiss’ essay, together with much of Thurston’s 1900 Philosophy of Physiomedicalism, are arguably the most prescient and articulate theoretical contributions to the herbal literature (Weiss 1988, Thurston, 1900).

**Straw Man Dates Aunt Sally**

Returning to our theme of the epistemic basis of the different paradigms, it was inevitable that the imperatives of the scientific monograph to reduce knowledge of the complexity of herbal therapeutics to pharmacologic actions and prescriber indications, while ignoring even the existence of underlying theoretical and philosophical assumptions involved, would sooner or later bite back. In various publications and other forms of herbal discourse, the initial uneasy tension between clinical expertise and scientific approaches increasingly became framed as an adversarial conflict between “traditional knowledge” and reductionist biomedical science.

The actual definition of traditional knowledge (TK) approaches is likely to set the fur flying in debates among herbalists; in the interests of brevity, here I will list some of its generic features. TK tends to advocate and adhere to a “whole plant” approach which is associated with several related core beliefs and principles of practice. Hence, TK pharmacy involves the use of whole herb, full spectrum extracts from fresh or dried herb material, usually as aqueous or hydroethanolic extracts. This is related to the belief that phytopharmacology is characterized by synergy between the multiple constituents of a plant, which in turn implies that isolated and concentrated “active principles” are not “true medicines” but in reality ersatz pharmaceutical drugs. Whole plant ideology is often accompanied by a more “earth-centered” or naturalistic worldview in which separation from nature and from folk knowledge of natural remedies is seen as the inevitable by-product of the defects in advanced technological culture. The ”whole plant” view tends be associated with espousal of “wholism” in general (for example as in the “whole person”) as a credential. Further, it often places unnecessarily high (or politically correct) value on indigenous or ethnobotanical information, “folk” traditions, and indeed shamanistic and spiritual approaches in which the plants are described as “teachers”; the “vitalist” epithet is often a short-hand descriptor identifying one or more of these proclivities.

Typically, the more strongly these positions are held, the more sharply are they opposed. In extremis, the hostile or negative views of biomedical science in this context tend toward a coloring book parody of science, wedded to ideological claims about science, ranging from it being an irrelevant and bankrupt materialist-reductionist delusion, through to conspiracy theories of science as a malefic tool of Big Pharma and corporate capitalism whose agenda is social control, including suppression of grass roots access to herbs – the science straw man.

At the same time, traditional knowledge morphs into subcultural movements of a self-proclaimed “folk” herbal renaissance that fights the good fight against the evils of professionalism, scientism and other “very-bad-things” as Winnie the Pooh might say.

Metaphorically, we now have to get down with, not only the Straw Man, but with the Straw Man dating Aunt Sally. I
would venture their best bet for a long-term relationship and future happiness is therapeutic transformation of their caricature identities to transcend their otherwise historically limited estimated life span – or in what might here be dubbed a “psychokuhnian” check-in in light of the increasingly obvious anomalous and incommensurable data that threaten to intrude on their frivolities. Detailing this process in depth will have to wait until the second part of this article.

Here, I have proposed a conceptual foundation for articulating the historical trajectory of western herbal medicine based upon the premise that its current paradigm is in a “Kuhnian” crisis. The core of clinical herbal medicine is defined by its view of herbal medicines. The metaphysics of materia medica are the foundation of our medicine, as Thurston and Weiss both clearly saw. Herbal medicine and modern biomedicine may have a shared phylogeny, but the key to understanding this was always the plants themselves. Today, preclinical and clinical science has progressed to a point well beyond its own “2.0,” but herbal medicine appears, like Gatsby, to be fighting for a future that tragically recedes into the past. Having set out some preliminary conceptual foundations here, a variety of lenses and tools will be employed in the next installment, from literary criticism and integral philosophy to complexity theory, bioinformatics and network pharmacology. In Part 2, I will use this potpourri of approaches to argue in detail how a viable future Herbalism 3.0 requires restoring the primacy of materia medica by retooling the H1.0 concept of natures or virtues of herbs with the insights of 21st century life sciences.

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Notes

1 I was first inspired by the profound utility of this field by leftist philosophers Mary Hesse and Bob Young at Cambridge in the 1960s, but more recently have found the works of the feminist philosopher of science Evelyn Fox-Keller, and the Stanford School authors Nancy Cartwright and John Dupre invaluable in formulating my thoughts on H3.0 here, and beyond.

2 Paraphrased from the definition of a true conservative attributed to W. Buckley.

3 For US readers, Aunt Sally is a metaphorical English term, like Straw Man, denoting a fair ground game figure deliberately set up by someone in order to knock it down.

4 Thurston’s terminology for herbal medicines (true medicines) as opposed to pharmaceutical drugs which he classed as poison.
A Tree without Roots: Lessons for the Future of Herbalism from the 19th Century

Richard Mandelbaum, RH (AHG)

A people without the knowledge of their past history, origin and culture is like a tree without roots.

Marcus Garvey

On a brisk November morning, my wife, daughter, and I left our home in Forestburgh, NY, to travel 24 miles across the county to a cemetery overlooking the town of Liberty. Liberty lies in the southern Catskills of the Upper Delaware Watershed of New York, part of a region extending down to Long Island, eastern Pennsylvania and much of New Jersey that had been the historical homeland of the Lenni-Lenape.

I was not so confident that our search for a specific grave over a century old in this large cemetery would bear fruit. Would the most likely modest stone still be there, not cracked or concealed by overgrowth? Would it still be legible or would it be too worn down by time and acid rain? Would my four year-old Rose get too cold or too tired before we found it? As it turns out, it took only 30 minutes of wandering, and with sharper eyes we might have more quickly found the large, well-preserved monument prominently placed just inside the cemetery entrance:

PHOEBE CHAMPLIN LOW, M.D.
BORN JUNE 2, 1837
DIED AUG 21, 1911

Dr. Low, clearly a well-respected member of her community (if such a thing can be judged by her resting place), was buried overlooking the town where she practiced medicine a century and a half before our time. I first learned of Phoebe Champlin Low in a column by county historian John Conway published in the Sullivan County Democrat in September 2013, in which he profiled Dr. Low as most likely the first female physician in the region. But it was the third paragraph that captured my attention. “Dr. Low graduated from the Eclectic Medical College of Pennsylvania in Philadelphia in 1872…[and]… was consistently elected to high office in the Eclectic Medical Societies on the county, state and national level” (Conway 2013). During the decade after her graduation from the Eclectic Medical College, she served variously as the secretary of the National Eclectic Medical Society, treasurer of the New York Eclectic Medical Society, and secretary of the Sullivan County Eclectic Medical Society. One wonders if her name would be more widely known today if not for gender bias. She is buried alongside her two

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daughters, one of whom was also an M.D.

Despite her apparent prominence in her community, Dr. Low might have easily faded into oblivion. Despite living so close by and being a student of our Eclectic history, I would not have heard of her were it not for Conway’s article. I did not even know that our county had been home to a local Eclectic Society 140 years ago. 1

How inclusive were the Eclectics of women practitioners? Compared to many of their contemporaries, it can be argued that by and large, the Eclectics took a progressive stance on issues of gender. At their sixth annual meeting in 1855, the National Eclectic Medical Association admitted its first female member, Carrie Richard of Connecticut, only six years after Elizabeth Blackwell had become the first woman to earn a medical degree in the United States (NEMA 1877, NIH 2014). That same year, the association adopted a policy of co-education urging the various medical colleges to freely admit female students. In his 1870 address to the National Eclectic Medical Association in Chicago, Alexander Wilder, then president of the Eclectic Medical Society of New York, refers to 14 recent female graduates of the New York Eclectic Medical College and makes an impassioned argument in favor of open enrollment for women and co-education in fully shared classrooms. 2

Most notably, Wilder wrote, “We do not consider this to be liberality; it is not courtesy even, but simple justice” (Wilder, 1870).

That said, it is a natural human tendency to romanticize, and we must be careful not to do so with the Eclectics. They were clearly male-dominated, and we can have little doubt that at least some espoused and perpetuated the sexist mores of their day just as they utilized remedies and approaches handed down from unacknowledged or at least under-acknowledged traditional female healers. This is equally true of race as well of gender. To a great degree, the Eclectics were a reflection of their time, when white men gained the bulk of recognition and whose stories and names have survived to us through the ages, despite having stood on the shoulders of untold and usually anonymous women and people of color. Despite progress made since then, we – meaning the herbal community in general and the AHG in particular – still have work to do to ensure that those who attain prominence and recognition fully reflect the rich diversity of herbal practice. It is by recognizing and reflecting upon not only the successes but also the shortcomings of our past that we can move forward toward this goal.

A prime example of this inheritance is the life and achievements of Wooster Beach, widely considered the father of Eclectic medicine and deservedly praised in our history. Before establishing his own medical school in New York City, Beach apprenticed with healer Jacob Tidd, a German immigrant who had worked as an indentured servant to local practitioner Dr. George Viesselius. Tidd continued Viesselius’ practice after his death in partnership with his widow, whose work unsurprisingly has received

Phoebe Champlin Low’s gravemarker at Liberty Cemetery, Liberty, NY. Photo by Richard Mandelbaum
scarce attention and whose name I have not been able to uncover. In addition, Tidd attributed his knowledge to what he had learned from Native American healers during a period of captivity. After Tidd’s death his daughter Dr. Polly Bennett continued his practice (Nevins 2011), but unsurprisingly, little has been written about her.

Beach and Tidd’s story not only provides more examples of the prominence of women healers working equally alongside men, but also the reliance that Eclectic medicine had on the accumulated wisdom of Native American medical practice. Although the Eclectics referred to this inheritance, it can be said that they never fully acknowledged the debt they owed to Native American healers and could be justifiably accused of crossing the line from borrowing to cooptation.

While some herbalists like Phoebe Low were prominent in their time but since forgotten, and others such as Dr. Polly Bennett forgotten with stories remaining to be told, still others rose to prominence against the odds through force of will. James Still of New Jersey was such a man.

As early as 1772, New Jersey had begun to restrict the practice of medicine to those with licenses or diplomas from regular medical schools that provided training for conventional physicians predominantly utilizing heroic and often toxic remedies such as mercury-based calomel, while for the most part shunning botanical medicines (Nevins 2011; Berman & Flannery 2001). Later reforms granted freedom of practice but prohibited the collection of fees from non-licensed practitioners, a move explicitly enacted to put “root doctors” out of business. In America’s Botanico-Medical Movements, Berman and Flannery describe root doctors as “freelance botanic practitioners” also referred to as “herb doctors” and “Indian doctors” who used primarily native plant remedies. They were also often labeled as “irregulars” to distinguish them from licensed mainstream physicians (Berman & Flannery 2001).

In the mid-19th century, James Still, the famous “black doctor of the pines” and self-educated son of ex-slaves, successfully circumvented this law by charging fees only for herbs and not for consultation services. In 1880, the state legislature further restricted the practice of medicine, widely seen at the time as a move specifically targeting Still, who had angered the white medical establishment with his successful treatment of patients who had been deemed beyond hope. A public outcry resulted in an amendment to the law and kept Still in business (Sherk and Jackson 2012). Although highly successful and self-made, Still had to give up his life-long dream of attending medical school, thwarted by poverty and the intense racial prejudice of the time. As he described it, “I had no finance... and worst of all, I was not the right color to enter where such knowledge was dispensed.” In 1871, his son James Thomas Still became one of the first African-Americans to graduate from the Harvard School of Medicine, with honors (Sherk and Jackson 2012).

What other stories might lie buried in our backyards waiting to be unearthed, remembered, bearing lessons from the past? The history and lineage of 21st-century herbalists can be made even more obscure when bolstered by racial, gender, or other biases marginalizing so many of those to whom we owe our heritage and accumulated knowledge. We will never know all their names or stories, but we can honor them just the same. Perhaps the most meaningful form of honoring the likes of James Still and Phoebe Champlin Low is to work to
build a truly inclusive organization that represents the tremendous and beautiful diversity of herbal practice today.

History is a vast early warning system.
Norman Cousins

Restrictive laws similar to those James Still battled in New Jersey had been adopted in other states during this same period. In fact, the British colonies in North America had begun adopting laws restricting the practice of medicine as early as 1649 (Baas et al 1889). In 1760, the city of New York restricted the practice of medicine to those granted a license, with a penalty of £5 for any violations (Beck 1850). In 1827, the State of New York enacted what even at the time was being referred to as an “anti-quack law” to fully restrict medical practice to those licensed or having graduated from regular medical schools – a move Lyman Stanton, an Eclectic doctor in New York in the late 19th century, claimed was directly initiated to shut down root doctors including famed herbalist Wooster Beach and the followers of Samuel Thomson. Stanton describes the broad public opposition that was mobilized to challenge these legal restrictions: “Between the years 1828 and 1833, about seventy petitions, containing 100,000 names, were presented to the Legislature” (Stanton 1870). Continued opposition resulted in gradual abolition of the monopoly on medical practice: the botanical practice of medicine without a license became fully legal in 1830 but the collection of fees was punishable by fines and or imprisonment. This made it all but impossible to make a living as an herbalist. Finally in 1844, after more public outcry which included a “thirty yard long” petition, the restrictive law was fully repealed (Stanton 1870). Increasing regulation and medical licensing laws gradually came back in force throughout the country at the beginning of the 20th century began, solidified in New York with the passage of the Medical Practice Act of 1926 which once again restricted practice to licensed physicians (Johnson & Chaudhry 2012).

As our past shows us, as we debate the benefits of licensing versus alternatives, perhaps we can learn from the legal victories of the Eclectics and Thomsonians in the 19th century. The decades-long period of health freedom that existed in New York and throughout the country might have seemed an unachievable fantasy to those herbalists in the 1820s whose practices were shut down. In the case of New York’s history at least, it seems that such a legal turn-around was only possible with the mobilization of the public. The fact that in the 1820s over 100,000 signatures calling for a repeal of monopolistic medical licenses could be delivered in New York alone is remarkable. We could compare this with the more recent public victory in 1997 over the government-proposed dilution of organic standards. Almost 200 years later, and with the aid of the Internet and a vastly higher population, it was viewed as monumental and unprecedented that the USDA received 275,000 total and 100,000 individual comments from around the entire nation to protect the integrity of organic agriculture (Keating 2011).

George Clinton

Such groundswells rarely happen on their own, but are usually the result of successful organizing, as in the case of the organic movement. Alexander Wilder alluded to this in 1870 when describing the moribund period of the National Eclectic Medical Association in the 1830s, which he attributed to “a centrifugal element in the ranks.” He went on to say, “The number of Eclectic
physicians would have been larger, the standard of professional attainment higher, and the principles of medical reform more pure and unmixed, if the National Association had continued to meet” (Wilder 1870).

The passage of time and loss of our collective memory can trick us into thinking the challenges we face are novel or somehow unique to our time. Our community is characterized by many free thinkers, non-conformists, and self-described anarchists (author included) – all things to be celebrated. Yet anarchism and chaos are not synonymous; the legal and political framework of our society determines the space in which we work as herbalists. The choice between a future of licensed herbalism that restricts the right to practice of some, or on the other hand increasing marginalization is a false dichotomy. The historical struggles of the Thomsonians and Eclectics, continued by the modern health freedom movement, inform us that engaging the legal and political challenges before us can lead to more freedom for herbal medicine, not less, by removing restrictive language in current law. If we are to play a role in determining this future, active participation in grassroots organizations will be crucial. The AHG has explicitly endorsed freedom of practice for herbalists; it is worth the public outcry. (Keating 2011)

Weed Parsons and Co., Albany, pp.45-46

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Notes
1 Can we envision a future in which the AHG for instance is vibrant enough to have not only state, but thriving county chapters?
2 At another point in the same address Wilder refers to “an eclectic college for the medical instruction of women in Hindoostan” (modern-day India), which would be a fascinating subject for future research.
3 In another version of the story it was not Tidd, but a relative, who had learned the use of herbs from Native Americans while in captivity.
4 This legal victory was all the more remarkable considering Still’s life story - told most notably in his autobiography Early Recollections and Life of Dr. James Still (Philadelphia: J. B. Lippincott and Company, 1877). Although not directly associated with the Eclectics, Still’s path was intertwined with theirs. As he recounted, he was inspired to become a physician when in 1815 at the age of three he was inoculated for smallpox, an experience which made a lasting impression. Smallpox inoculation at the time was being heavily promoted by John Redman Coxe M.D. of Philadelphia, not far from Still’s home in southern New Jersey. In addition to his Practical Observation on Inoculation for the Cow-Pock, published in 1802, Coxe also authored the American Dispensatory in 1806, a practical and comprehensive materia medica cited later by the Eclectics as one of their foundational works.
5 Interestingly and perhaps not entirely coincidentally, this is the same period in which male physicians began replacing female midwives. (Beck 1850)
6 Under the Clinton Administration the USDA had proposed the allowance of factory farming, industrial sewage sludge, and genetically modified organisms within the scope of organic certification – all of which was reversed as a direct result of the public outcry. (Keating 2011)
When I was 13 years old, I was diagnosed with mild myopia with astigmatism. Since that time I have used glasses only for driving or watching movies; my use of glasses has been very limited as I do not like wearing them.

One of the benefits of being nearsighted, however, is that I can do close work with no visual problems, and most myopic people don’t usually need reading glasses when they enter their 40s because their nearsightedness allows them to see the tiniest print.

Fast forward to my 63rd year. I was driving home from the Bay area and I noticed that my glasses did not “work” any more. They actually made things blurry. So, I took them off and found that I could see better without them! I figured it was time to see the optometrist and get a new prescription (it had been four years). But I put it off until the next thing happened.

About a month later I noticed that the vision in my right eye was obscured – like I was looking through crumpled cellophane wrap. This continued to get worse and I finally made an appointment with the optometrist. He checked my vision and found that my right eye had spontaneously improved by 65 percent, and my left by 35 percent. I could read the charts almost perfectly at the 20/20 level, in spite of the “cellophane” effect in the right eye!

But then he took a picture of my right eye which had the fuzzy vision and found the cause of the problem: branch retinal vein occlusion (BRVO). In other words, a blood clot had caused a vein in my eye to pop and blood was leaking onto the retina. Vein occlusions cause blood flow to “back up” into the retina, causing bleeding and swelling within the retina itself and can affect the macula adversely. The doctor said I had both macular and retinal swelling. To say the least, when the doctor showed me the photo of my eye and I saw all this blood leaking in it, I was freaked out! But my first thought after the initial freak-out was, “I have to figure out what herbal remedies I will use for this.”

The optometrist sent me to an ophthalmologist who re-examined my eyes and told me if it got worse to come in immediately. He recommended 81 mg aspirin and Vitamin C.

In response to the BRVO event, the eyes may form “rogue veins” in an attempt to bring oxygen to its tissues. Unfortunately, these new blood vessels break easily, so the bleeding just continues, further damaging the eye and increasing the risk of blindness. Knowing this, I did not take the aspirin for...
fear of thinning the blood and provoking more bleeding in my eye. Laser treatment is the only option for this condition.

Retinal vein occlusion
When I returned home that day, I went online and began to do the research on my diagnosis. Here are some of the things I found out:

A retinal vein occlusion occurs when the circulation of a retinal vein becomes obstructed by an adjacent blood vessel or a blood clot. This results in the stoppage of blood flow, causing hemorrhages in the retina. Some people call this condition a “stroke of the eye.”

Symptoms of retinal vein occlusion include:
• Sudden blurred or missing area of vision (branch retinal vein occlusion, BRVO)
• If the central vein is the source of the problem, then the center of the vision is usually significantly decreased or completely obscured (central vein retinal occlusion, CRVO)

Possible causes or contributing factors include the following:
• Aging (especially past age 60)
• Hypertension
• High cholesterol
• Smoking
• Cardiovascular disease
• Glaucoma
• Diabetes

I don’t suffer from any of the conditions that would predispose me to branch retinal vein occlusion other than my age. I have spoken to some people in their 30s and 40s who have BRVO or CRVO who don’t display any predisposing health issues either. Some people have a predisposition to blood clotting which may be the cause of this in people in

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their prime. In these cases, a hematologist may be consulted for special tests. Other treatments for retinal vein occlusion include laser treatment, steroid shots in the eye, “clot buster medicine” like the ones used for heart attacks, dissecting the vein, and making an incision in the optic nerve. None of these have proven to be guaranteed useful interventions.

So, basically, what I found out is that conventional medicine doesn’t offer any real solutions for this condition, though management of any underlying causes so that the retinal vein occlusion doesn’t recur or worsen is recommended.

As I began to reflect on this condition, one of my all-time favorite herbs, *Panax notoginseng* (tienchi ginseng), came to mind. Before I describe the virtues of that particular herb and others, I’d like to explain the Traditional Chinese Medicine (TCM) materia medica category to which it belongs.

**Herbs that Regulate the Blood**
In TCM, herbs in the “regulate blood” category deal with three types of blood pathology:

1. **Bleeding disorders:** Herbs that stop bleeding are used.
2. **Blood Stasis:** Herbs that invigorate the blood and help dissolve clots are used.
3. **Blood Deficiency:** Herbs that tonify (build) the blood are employed to nourish the person in general.

Herbs in the first subcategory treat various types of bleeding such as excessive menstruation, nosebleeds, bleeding from trauma, or, in my case, retinal bleeding. The herbs in this category are best blended with herbs that help to rectify the underlying cause of the bleeding, as I will discuss later.

Herbs in the second subcategory treat the specific pattern TCM calls “Blood Stasis,” which describes conditions in which the flow of blood is retarded, becomes blocked or is “static.” The most common symptom of Blood Stasis is pain that is rather precisely localized, feels deep or sharp, and may be of long duration. The most common types of pain of this nature are lower abdominal pain, chest pain, pain from trauma (internal and external bruising), and internal bleeding (like what I had in my eye). This concept can be understood in modern biomedicine as hematological disorders including hemorrhage, congestion and thrombosis (Bensky & Gamble 1993, p 249).

Subcategory three, Blood Deficiency, is handled by herbs and foods that nourish the blood. Primary manifestations of the Blood Deficiency pattern are pale face and lips, diminished vision, dullness of the eyes, palpitations, lethargy, irregular menstruation, pale tongue, and fine pulse. Most of the herbs listed in this category do not directly nourish the blood but instead strengthen the body and improve its nutrition, thereby indirectly increasing the number of circulating blood cells. I often add the herbs in this category to meat soups with the addition of molasses to help nourish the blood more deeply.

*Panax notoginseng,* (tienchi ginseng, *sanchi*)
**Properties:** Slightly bitter, slightly sweet, warm
Also known as pseudoginseng, tienchi ginseng is a blood-regulating superstar! Li Shizhen, famous Ming Dynasty herbalist, said, “Tienchi is more valuable than gold.”

Recently, one of my students asked me, “If you had to choose a single favorite herb what it would be?” Tienchi ginseng was my answer. Tienchi is considered a tonic herb – one that builds, sustains, nourishes and supports the body. It also stops bleeding without causing Blood Stasis. In fact, it resolves blood clots, which are a form of Blood Stasis, and keeps the blood moving in the proper way within the vessels. It is used for both internal and external bleeding. Because of this dual action, it is used for many conditions.

Because tienchi ginseng moves blood,
it stops pain. It is employed for all manner of traumatic injuries and bruising from trauma. I have used it in formulas for heart conditions, arthritis, headaches, back pain and stomach pains which show signs of Blood Stasis. In its prepared (cooked) form, it builds the blood. In unprepared form, tienchi appears to aid human synthesis of major adrenal and reproductive hormones. The most significant research however is around its ability to positively affect the heart and its tributaries. (Teeguarden 1984, p 115). Thus, depending on if you use it raw or prepared, tienchi covers all three of the categories listed above!

Tienchi ginseng helps blood conditions of many sorts and adapts to the situation as needed. It can treat not only acute conditions, but can also help to clear up the underlying pattern that might be the true cause of an illness. For example, with branch retinal vein occlusion, the person might have diabetes, high blood pressure, or plaque buildup in the arteries as well as bleeding in the eye. Tienchi can address all of these conditions. Because of all of these qualities, I knew tienchi ginseng would be the chief herb in my program.

**Salvia miltiorrhiza root**  
(red sage, *dan shen*)

**Properties: Bitter, slightly cold**

Dan shen is in the category of “herbs that invigorate the blood” and is used primarily to treat problems associated with Blood Stasis and circulation problems such as stroke, angina pectoris, other diseases of the heart and blood vessels, menstrual disorders, chronic liver disease, and trouble sleeping caused by complaints such as rapid heartbeat and tight chest. It is also used to relieve bruising and to aid in wound healing. Because of its cooling nature it is effective in clearing heat from the system and easing irritability.

Dan shen appears to thin the blood by preventing platelet and blood clotting. It
also causes blood vessels to widen, and thus improve circulation (Bensky & Gamble 1993, p 267). I expected this herb to help keep the platelets from clotting, thus helping to prevent any further "stroke of the eye."

**Crataegus pinnatifida fruit**  
**Properties:** Sour, sweet, slightly warm

Hawthorn fruit is high in Vitamin C and contains the same antioxidants found in grapes. Hawthorn is often used in Chinese herbal medicine to aid digestive functions in the human body; it especially helps the digestion of protein. It lowers blood pressure, and has been shown to be useful in the prevention and treatment of atherosclerosis (Tierra 1989, p 259). I thought this would make a useful adjunct for my formula.

As I was contemplating my formula I was still searching the Internet for info on my condition when I came across a formula called “Celosia 10” from Seven Forests Herb Company. It contained some of the herbs mentioned previously, plus other herbs that I had not considered, which I will discuss below:

**Celosia argentea L seed**  
**Properties:** Sweet, cool

Celosia seeds drain Liver Fire and clear Wind which, in layman’s terms, basically means it calms the nervous system. The main constituent in celosia is celosiaol, a chemical that dilates the pupil of the eye (Bensky & Gamble 1993, p 63). Celosia seeds treat eye-related disorders such as impaired or blurry vision, and inflammation of the eyes. Some practitioners use the seeds to treat hypertension. Given these properties, celosia is a specific for retinal vein occlusion.

Rehmanna is used for deficient Blood patterns with such symptoms as pallid complexion, dizziness, palpitations and insomnia. It nourishes Yin, the moistening aspect of the body, and is considered to be tonic to the eyes and ears. Raw rehmannah is said to be cooling to the blood, while prepared rehmannia is warming. Both nourish the blood and Yin, which could benefit aging eyes. Yin diminishes with age and dryness can result.

**Sophora japonica flower**  
**Properties:** Bitter, slightly cold

Sophora flower clears heat from the blood, meaning it helps stop bleeding. It is cooling to the Liver, which rules the eyes in TCM, thus improving eyesight. It is indicated for conjunctivitis.

**Paeoniae rubra root**  
**Properties:** Bitter, slightly cold

Red peony’s cold energy removes heat from the blood, promoting blood circulation and relieving pain. It is indicated for syndromes caused by Liver Fire, including inflammation of the eyes.

**Chrysanthemum morifolium flowers**  
**Properties:** Bitter, sweet, slightly cold

Yellow chrysanthemum has a beneficial action on headache and eye complaints. It has long been used as an eye tonic and can help relieve red, painful, dry or excessively watery eyes. It is also used for blurry vision, dizziness and spots or floaters in front of the eyes. Chrysanthemum is also used to clear headaches and fever associated with colds and flu. Its actions are antibacterial, antifungal, antiviral and anti-inflammatory. It also may help lower blood pressure and relaxes blood vessels.

**Lycium chinensis fruit**  
**Properties:** Neutral, sweet

Goji berries are a modern “super food,” but
they have been used for centuries in China. This fruit is known in Chinese medicine to be a great tonic for the liver and the blood. Goji berries increase vitality and brighten the eyes, especially improving night and blurred vision. They also calm the heart and nervous systems, alleviate dizziness pertaining to old age, diabetes, fatigue, loss of blood or anemia, and fluctuating weight.

**Eclipta prostrata herb (han lian cao)**
**Properties: Sweet, sour, cool**
Eclipta nourishes kidney and liver Yin to help with blurred vision. It also stops bleeding due to heat in the blood. It’s a very good choice for the symptoms of BRVO.

**Angelica sinensis (dang gui, tang kuei, dong quai)**
**Properties: Warm, sweet, pungent**
Dang gui warms the inner organs, improves circulation, hastens healing of cuts and wounds, and helps with mild anemia. The whole root is said to harmonize the blood, meaning that it contributes to the general nourishment of the blood and thus helps with vitality. It is useful in stagnant blood situations (such as the blood clot and rogue vessels of BRVO) and helps blood that is not moving in the vessels properly to do so.

Given the actions of all the herbs in Celosia 10 outlined above, I decided to take six pills, three times daily. In addition, I incorporated the following products into my regimen:

**Diosmin: 600 mg daily**
On the recommendation of herbalist and author Alan Tillotson, I got some diosmin, a flavonoid derived from sweet orange peel used to strengthen the vascular system for conditions of venous insufficiency and to improve lymphatic flow. Because of these qualities it has been found effective for varicose veins, hemorrhoids, and as in my case, bleeding disorders of the eyes.

**Lifetime Brite Eyes™ With FloraGlo**
**Lutein®: 1-2 capsules daily**
This product is a vitamin and mineral supplement enhanced with lutein and zeaxanthin, carotenoids that protect the retina and the macula, respectively. Lifetime Brite Eyes also includes *Vaccinium myrtillus* (bilberry) fruit extract, and *Euphrasia officinalis* (eyebright) herb, which are both anti-inflammatories and astringents specific to the eyes.

In addition, I took 2000 mg of fish oil per day. I also used eye drops to keep my eyes lubricated and to clear irritants.

Just as an aside, I also went to my chiropractor once a week for a month to make sure my upper vertebrae (C1 – C7) were in place. Blood to the eyes can become restricted when the neck is not aligned properly.

In addition to the above pre-made formulas, I blended my own tincture of equal parts of the following herbs, most of which I have already discussed above:

- *Panax notoginseng*, 1:5, 70%
- *Salvia miltiorrhiza*, 1:5, 40%
- *Crataegus pinnatifida*, 1:5, 40%
- *Vaccinium myrtillus*, 1:5, 40%
- *Euphrasia officinalis*, 1:5, 40%
- *Terminalia arjuna*, 1:5, 40%

This formula protects and clears the arteries, resolves blood clots, regulates the heart beat, and opens the blood vessels. I took about six or so droppersful (cumulatively, about 6 mL) per day.

The last ingredient listed, arjuna, is specific for disorders of the heart and blood vessels, and is used to treat chest pain, high blood pressure and high cholesterol. I thought that arjuna could help with the movement of blood and any constrictions that there might be in the system.

I wanted to make sure I covered myself! The thought of losing one’s eyesight is terrifying and I felt that it was probably
not a bad idea to take care of any possible underlying undiagnosed condition.

**Back to the Ophthalmologist**

I went back to the ophthalmologist about three and a half months after my diagnosis. I was nervous, to say the least. My husband came with me again for support. As the doctor looked into my eye with his machines, I sat quiet with anticipation. He looked very carefully and thoroughly. Then he said, “If you had gone to another ophthalmologist who did not know you had a problem, he would not have found anything wrong with your eye!” He said that he was looking very hard for some sign of branch retinal vein occlusion and he could only find two very tiny specs. The blood clot had resolved and the retina and macula were no longer swollen or inflamed. He said that he had seen this condition heal before, but never in this short a period of time. He proclaimed it extraordinary. I looked at my husband and said, “Yes! Tienchi ginseng.” We went out and celebrated with tea and ginger-molasses cake at a local restaurant.

Because this condition has a slightly higher chance of repeating itself I have stayed on the program described above, but at half dose. I do check my sight with an eye chart and I also check my vision when I am driving (look out with one eye at a time at the signs). The doctor said I did not have to come back to see him again unless I had a problem but I have decided to go and get my eyes checked out at least once a year to keep on top of things.

For my constitution, age and gender, this protocol worked for me, but it may be tailored to fit individual cases. For example, a person presenting with more dryness (Yin deficient or “vata in nature” in Chinese and Ayurvedic parlance, respectively), may benefit from more *Rehmannia*; for someone hotter in nature, more heat-clearing herbs might be necessary. There is no standard procedure with herbal constitutional medicine, and if we use the same protocol with one person who presents a different pattern than another, then we may find ourselves at a loss.

I hope this story will help you to see how I thought through my condition and went about treating the specific pattern that was presenting in me. I hope this can be of help to some of you or your clients.

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The Role of Inflammation in Depression: Phytotherapeutic Possibilities

Courtney J. Fischer

The significance of chronic inflammation in the development of neuropsychiatric disorders has been the focus of increasing attention, with particular relevance placed on pro-inflammatory cytokines' involvement in overall depressive pathogenesis and symptomatology. The dysregulation of a variety of immune mediators has been associated with major depression (Myint, Leonard et al 2005), with a meta-analysis by Dowlatti et al (2010) reporting high concentrations of interleukin-6 (IL-6), tumor necrosis factor (TNF) and C-reactive protein (CRP) as the most reliable biomarkers of depression in humans. This cytokine dysregulation is thought to reflect a more primary imbalance between T-helper cells 1, 2, and 3 with evidence of the latter being lowered in depression and consequently unable to regulate appropriate balance between the former two, which are both shown to be elevated in depression (Myint et al 2005). In addition to the association between these particular cytokines and depression, there is also a causal link: studies demonstrate that the chronic administration of interferon-α (IFN-α) to non-depressed humans leads to an induction of depressive symptoms (Raison & Borisov et al 2005a, Raison & Demetrashvili et al 2005b). The involvement of cytokines in depression should come as no surprise given the closely related phenomena of "sickness behavior": The psychological and behavioral components that accompany viral and bacterial infections such as malaise, lassitude, fatigue, and reduced appetite arise in response to pro-inflammatory cytokines. Sickness behavior and clinical signs of depression draw such parallels that from some perspectives, depression is seen as an exaggerated and thus pathological manifestation of sickness behavior, due to a variety of conditions including excess quantity and duration of cytokine release (Dantzer & Wollman et al 2009).

Both peripheral as well as central pro-inflammatory cytokines have been implicated in depression, with constant bidirectional communication between the periphery and the brain making the question of which came first, brain cytokines or peripheral cytokines, in some ways a moot point. Peripheral cytokines are able to cross the blood brain barrier (Banks & Farr et al 2002) as well as communicate neurally through the vagus nerve (Majer 2003). Similarly, brain-derived cytokines can and do enter the peripheral circulation (Reichlin...
Cytokine influence on neuronal development

Cytokines in the brain, regardless of their origin, can interact with virtually every pathophysiological arena relevant to depression including neural plasticity, neurotransmitter metabolism, and neuroendocrine function (Miller & Timmie 2009). For instance, microglia, shown to be over-activated in depression (Schroeter & Abdul-Khaliq et al. 2008), can overproduce IL-6 (Monje & Toda et al. 2003), a cytokine demonstrated to have anti-neurogenic properties in the hippocampus. Similarly, TNF is seen to have anti-proliferative activity on neuronal progenitor cells in the hippocampus (Losif & Ekdahl et al. 2006). Given the common presence of reduced hippocampal volume seen in depression (Campbell & Marriott et al. 2004), coupled with the impact of cytokines on neuronal development, the role of these pro-inflammatory signals in such mood disorders cannot be overlooked.

Cytokines and neurotransmitters

Pro-inflammatory cytokines are capable of modulating mood-relevant neurotransmitters including dopamine, glutamate (Anisman & Merali 2003), and serotonin (Dunn & Wang 1995). IFN-α has been shown to alter dopamine metabolism contributing to neurovegetative symptoms including anhedonia, psychomotor slowing, sleep disturbances and fatigue (Schaef er & Schweiger et al. 2003). More specifically, pro-inflammatory cytokines can lead to decreased expression of glutamate transporters and increased release of glutamate (Ida & Hara et al. 2008), a key neurotransmitter found to be elevated in the frontal cortex of patients with bipolar disorders and major depression (Hashimoto & Sawa et al. 2007). Glial cells are extremely vulnerable to excessive glutamate signaling, which can lead to apoptosis or necrosis of these cells (Matute & Domercq et al. 2005). Further connecting the dots, loss of oligodendrocytes, a type of glial cell, in mood-relevant brain regions marks a fundamental morphological abnormality in major depression (Rajkowska 2007).

Serotonin is affected by cytokine production as well: Pro-inflammatory cytokines including interferon-γ (IFN-γ), IL-6 and TNF, induce indoleamine 2,3-dioxygenase (IDO enzyme) which catalyzes the rate limiting step in the synthesis of kynurenine from dietary tryptophan, thereby degrading tryptophan. This can lead to depressive symptoms by reducing the precursor for the synthesis of serotonin and melatonin (Schrocksnadel 2006). Kynurenine also gives rise to metabolites such as quinolinic acid, which has been shown to damage hippocampal neurons (Schwarcz 1983).

Cytokines and the HPA axis

One more domain to explore relevant to cytokines and mood is the hypothalamic-pituitary-adrenal axis (HPA). TNF and IL-6 increase the release of corticotropin releasing hormone (CRH), adrenocorticotropic hormone (ACTH) and subsequently cortisol by acting directly on the hypothalamus and pituitary gland (Dantzer 1999). Inflammatory cytokines can disrupt glucocorticoid function and expression, with in vivo and in vitro studies illustrating an inhibition of glucocorticoid receptor translocation and transcription upon exposure to interleukin-1 alpha (IL-1α) and beta (IL-1β), as well as IFN-α (Miller & Pariante et al. 1999, Hu & Pace et al. 2009, Engler & Bailey et al. 2008).
These cytokines’ influence on the HPA axis corresponds to the reduced negative feedback by glucocorticoids seen in depression, and the subsequent elevation of HPA axis hormones, in particular corticotropin-releasing factor (CRF), commonly found in patients with depression and other mood disorders (Carrol & Cassidy et al 2007, Banki & Karmacsi et al 1992, Bremner & Licino et al 1997, Banki & Bissette et al 1987, Merali & Du et al 2004, Nemeroff & Widerlöv et al 1984, Raadsheer & Hoogendijk et al 1994). In support of these findings, some anti-depressants improve glucocorticoid-mediated negative feedback, with such normalization of the HPA axis thought to be one of the mechanisms through which anti-depressants exert their therapeutic effect (Pariante & Papadopoulos et al 2004).

Ultimately, disordered HPA axis activity in response to pro-inflammatory cytokines can have detrimental effects on the brain, leading to mood disorders like depression. Some ways in which this is thought to occur include cortisol’s ability to inhibit neurogenesis in the hippocampus (Gould & Cameron et al 1992), as well as altered production and action of brain cytokines in response to elevated CRF (Linhorst & Reul 1999). Taking into account the adverse effects of pro-inflammatory cytokines on neurotransmitters and neural plasticity, as well as the hippocampal damage commonly seen in depression, the impact of HPA axis irregularity on depression speaks for itself.

**Chronic stress, immune response and depression**

The type of stress response that demonstrates the most sweeping adverse effects on the body is chronic stress, which is defined as stress lasting more than three to five days, as opposed to acute stress that terminates within five days (McEwen 1998). One area where this harm is evident is the immune system, with acute stress being generally immune-enhancing and chronic stress dominantly immune-suppressive (Dhabnar & McEwen 1997, Segerstrom 2010). An overactivity of glucocorticoids that often occurs in the chronic stress response is connected to a variety of adverse immune
consequences including thymus involution, lymphopenia, eosinopenia, decreased lymph activity, inhibition of cytokine release essential for T and B cell maturation, and suppression of natural killer (NK) cell activity (Oya & Kawamura et al 2000, Munck & Guuyere 1991). These alterations in immunity provide part of the explanation for the link between chronic stress and many pathological patterns, with studies validating the role of chronic stress in cancer, primarily through NK cell inhibition, as well as the connection between enduring stressors and increased susceptibility to the common cold (Ben-Eliyahu & Yimiya et al 1991, Cohen & Miller 2001).

Despite the overall immune suppression seen in chronic stress, certain aspects of immunity such as pro-inflammatory cytokine production are often increased, the end result being overall immune dysregulation rather than complete immune suppression (Robles & Glaser et al, 2005). In light of the discussion regarding inflammation and depression, the role chronic stress plays in depression through immune activation deserves serious attention.

**A modern explanation for traditional uses of botanicals**

Traditional indications for specific herbs from American Eclectic medicine, popular in the late 19th and early 20th centuries, reflect a relationship between inflammation and depression, foreshadowing the current scientific discoveries unveiling this interdependence. Possible rationales for some of the traditionally observed mind-body effects of herbs like *Gentiana* and *Crataegus* can be found within the science uncovering the connections between inflammation and mood.

H.W. Felter (1922), an Eclectic MD, illustrates this perspective through his description of the specific indications for *Gentiana*: “Sense of epigastric depression, with physical and mental weariness” (Specific Indications). Highly esteemed as an herb for digestion, *Gentiana*, considered a pure bitter, is not commonly thought of as a mood herb. Yet, recent research uncovering connections between bitter agonists and the orexigenic hormone ghrelin, as well as ghrelin’s impact on mood, provide insight into the potential downstream actions of bitter botanicals such as *Gentiana* — actions that were evidently observed by traditional herbalists like Felter.

In vivo murine studies have demonstrated an increase in ghrelin concentration in response to bitter agonists (Jannsen & Laermans et al 2010), logically stirring up inquiries around *Gentiana*’s ability to do the same. Furthermore, ghrelin has been shown to be elevated after acute and chronic stress, with studies on murine models demonstrating a link between the release of epinephrine and norepinephrine in chronic stress and the presence of elevated ghrelin. This rise in ghrelin in response to stress has been shown to have undeniable mood effects in murine models (Chuang & Zigman 2010, De la Cour & Norlen et al, 2007, Lutter & Sakata et al, 2008, Spencer & Xu et al, 2012). The precise type of mood effect still remains controversial with many studies showing an antidepressant/anxiolytic effect in response to elevated ghrelin, while others contrarily revealing an anxiogenic-like response. Human studies are needed to determine how these discrepancies within murine models translate over to ghrelin’s behavioral effects in humans, but of great relevance and possible support to the findings linking ghrelin with anti-depressant/anxiolytic activity, there is the fascinating discovery of ghrelin’s relationship with inflammation. Ghrelin receptors have been discovered on immunocytes with ghrelin shown to have an inhibitory effect on pro-inflammatory cytokines, specifically IL-6 and TNF, the very cytokines consistently shown to be elevated in depression (Chuang & Zigman 2010).

If bitter *Gentiana* does indeed influence ghrelin secretion, and ghrelin does have
anti-depressant/anxiolytic effects as demonstrated in many murine models, this could very well point to one of the possible mechanisms underlying the traditional indications of *Gentiana* for both gastric stagnation and mental weariness. There is some speculation that ghrelin may exert its mood effects through direct interaction with the hippocampus, where ghrelin receptors exist and have been shown to uptake peripherally administered ghrelin (Chuang & Zigman 2010). Ghrelin’s ability to inhibit the very pro-inflammatory cytokines associated with depression may offer an additional clue into *Gentiana*’s mood effects, providing an understanding of this botanical’s actions as not only a primary bitter but also a downstream immunomodulator, and consequently, anti-depressant. This collective research around ghrelin and bitters, as well as the traditional indications for *Gentiana*, point to the need for further investigation into the potential role of certain bitters as secondary immunomodulators and thus mood effectors.

The Eclectic physician Finley Ellingwood (1919) describes the use of *Crataegus*: “It dispels gloomy forebodings, increases the strength, regulates the action of the heart, causes a general sense of well being” (p 219). The traditional use of *Crataegus* spp. for improving gloominess and elevating the mood finds possible rationale within the research around inflammation and mood as well. *Crataegus*’ well known and supported activity as a cardiovascular herb is partially attributed to its various flavonoids and the role they play as antioxidants; more specifically, *Crataegus* has been shown to have anti-inflammatory activity, with flavonoids such as hyperoside from the fruit demonstrating in vitro and in vivo inhibition of prostaglandin E2 (PGE2) and cyclooxygenase-2 (COX-2) (Kao & Wang et al 2005). Interestingly, two of the biomarkers reliably elevated in depression, IL-6 and TNF, are induced by PGE2 and COX-2. In consideration of the vaster inflammatory cascade, it is only accurate to acknowledge not only the role IL-6 and TNF may be playing in depression, but equally their upstream inducers including COX-2 and PGE2. In the context of the whole rather than merely isolated parts, it makes sense that influencing the mediators which precede IL-6 could equally have the potential to affect mood. In support of such thinking, mounting evidence has revealed the benefits of COX-2 inhibitors on mood disorders, with various studies showing their anti-depressant activity both in animals and clinical trials (Muller 2010). Could it be that within this science uncovering the detailed mechanisms between inflammation and depression, and the pharmacology revealing *Crataegus*’ impact on inflammation, there is an explanation for what herbalists like Ellingwood knew over a century ago regarding the mood effects of *Crataegus*?

**More common than meets the eye: Additional immunomodulator/mood herbs**

A look into two well-known botanicals with both immunomodulating and mood-lifting actions strengthens the argument that these two seemingly separate actions are actually intertwined. *Curcuma longa* is an herb traditionally used as both an immunomodulator and a mood effector. Widely known and studied for its potent anti-inflammatory actions, curcumin, the principal curcuminoid in *Curcuma*, has been shown to inhibit a variety of pro-inflammatory messengers including CRP and TNF, both of which are strongly implicated in depression (Chainani-Wu 2003, Lantz & Chen et al 2005). Not so coincidentally, a variety of *Curcuma* species, including *longa*, each are used in Traditional Chinese Medicine for “calming the nerves and easing the mind” as well as for mania (You-Ping Zhu 1998). More recently, both curcumin and aqueous extracts of the whole plant *Curcuma longa* have been studied for their
role in central nervous system disorders, with benefits seen in major depression (Kulkarni & Dhir 2010, Sanmukhani & Satodia et al 2014). One of the key mechanisms behind Curcuma’s anti-depressant activity is thought to involve serotonergic neurotransmission; this neurotransmitter modulation provides a key piece in the possible link between Curcuma’s actions on mood and as an immunomodulator, as pro-inflammatory cytokines can have an inhibitory effect on serotonin (previously discussed). Could Curcuma’s well-known immunomodulating activity and its lesser-known role in depression be two expressions of one process? It is time that Curcuma’s activity as an immunomodulator and anti-depressant be seriously considered as just one example of the underlying connectivity of seemingly separate herbal actions and more specifically as further support for the potential benefits of using immunomodulators for depressive symptomatology arising alongside inflammation.

The significance of immunomodulators in depressive disorders is bolstered by yet another botanical with both anti-inflammatory and anti-depressant activity.
There is perhaps no herb better known in popular culture for its anti-depressant actions than *Hypericum perforatum*. Although there is some controversial data regarding such claims, extensive clinical trials back up the hype, revealing improved symptoms in mild to moderate depression with the use of *Hypericum* compared with placebo (Linde & Mulrow et al 2005). While *Hypericum*’s use for mood issues like depression is most commonly seen in modern times, this indication was still far from unknown to traditional herbalists, with the Eclectics’ use of *Hypericum* for “nervous affections with depression” (Felter & Lloyd 1898, p 1038) supporting such evidence. Despite the traditional acknowledgement of *Hypericum* for mood issues, this herb was more dominantly seen as a supreme nerve tonic for “spinal injuries, throbbing of the whole body, spinal irritation, and lacerated and punctured wounds of the extremities with excruciating pain and hysteria” (Felter & Lloyd 1898, p 1038). Reinforcing these traditional uses, *Hypericum* has demonstrated anti-inflammatory activity both in vivo and in vitro through its modulation of COX-2 (Raso & Pacilio et al 2002), PGE2, TNF (Huang & Rizhsky et al 2011), and IL-6 (Fiebich & Hollig et al 2001). *Hypericum* has demonstrated anti-inflammatory activity in clinical trials, with positive results seen in atopic dermatitis with the use of a *Hypericum* cream (Schempp & Windeck et al 2003). Given the strong links between pro-inflammatory mediators and depression, and particularly IL-6 and TNF, it is only logical to consider the potential role *Hypericum*’s anti-inflammatory activity plays in its anti-depressive actions. Once again, here is another illustration of the usefulness of an immunomodulator for depression: *Hypericum*’s strongly supported use, both traditionally and scientifically, as an anti-inflammatory and an anti-depressant, is far from two isolated actions but rather likely points to the reality of an integrated system and the complexity of connected effects that botanicals are capable of instigating within such a system. *Hypericum* serves as just one more well-researched example of a botanical with both immunomodulating and anti-depressant activity, reinforcing the likely connection between these two actions.

The biomedical link between inflammation and depression deserves earnest attention from a botanical perspective. The traditional uses of herbs like *Gentiana* and *Crataegus* for mood elevation have possible rationale within the modern research uncovering their anti-inflammatory effects; additionally, *Hypericum* and *Curcuma* provide two more examples of herbs shown to be potentially useful for both inflammation and depression, further reinforcing this connection. Given this relationship between inflammation and mood, as well as the rampanty of chronic stress, inflammation and depression in modern life, it may be fruitful to further examine the conceivable role of additional herbal immunomodulators for depression. Tradition and science support both the anti-inflammatory and mood enhancing effects of herbs like *Gentiana*, *Crataegus*, *Curcuma* and *Hypericum*: could there be additional herbal immunomodulators capable of influencing mood? As modern understandings of system integration grow, and changes take place throughout time in both the external and internal milieu of the human organism, a current look into the vaster potential of herbs beckons.
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**Viola odorata** (L.)  
**An Herb Monograph**

Donna L. Koczaja, M.S.

**Scientific name**  
*Viola odorata* (L.) (*Violaceae*)  
(McGuffin, Kartesz et al 2000)

**Common names**  
Sweet violet, English violet, garden violet, sweet blue violet  
(McGuffin, Kartesz et al 2000)

**Parts used**  
Dried leaves and flowers (British Herbal Medicine Association 1996)  
Dried leaves and flowers as well as the whole fresh plant (Grieve 1931)

**Botanical identification**  
*V. odorata* is a European native wildflower that was naturalized in the United States and is commonly found around dwellings and roadsides. It flowers in the April-May timeframe (Ahles & Magee 2007). Violets are easily cultivated and, due to their tendency to propagate via stolons emanating from long rhizomes, can often escape into undesirable locations. Viola spp. range from bright yellow to various shades of blue or purple, varying up to white (Cronquist & Gleason 1991). *V. odorata*, in particular, are blue (British Herbal Medicine Association 1996) to deep purple, purple/white variegations, and white (Cronquist & Gleason 1991). The flowers grow on hooked peduncles and are very fragrant – hence the common name “sweet violet.” The sepals and ovaries are ciliate, the style is recurved-hooked at the tip, and the lateral petals are bearded. Sweet violets also have cleistogamous flowers: buds that do not open but serve the purpose of self-pollenization for more efficient seed propagation. The seeds themselves are large and yellowish-white in color (Cronquist & Gleason 1991).

The dark green leaves of *V. odorata* are also finely hairy, evenly scalloped, cordate at the base, and rounded at the tip. They can be between two and six centimeters in length (Cronquist & Gleason 1991).

Regarding the cut herb, the *British Herbal Medicine Pharmacopoeia* (1983) indicates that macroscopically the herb...
presents as a mixture of curled light green leaf fragments, curled yellow flower petals, pod pieces containing yellow seeds, and ribbed, hollow light green or yellow stems.

Taste/odor/energetics

Taste:
- Flowers: astringent (Nadkarni 1976)
- Leaves (and roots): bitter and mucilaginous (Lyle 1897)
- Cut herb: mucilaginous (British Herbal Medicine Pharmacopoeia 1983)

Odor:
- Flowers: sweet-smelling (British Herbal Medicine Pharmacopoeia 1983)

Energetics:
- Cooling (Frawley 2001)
- Neutral, moist (Holmes 1998)

Key physiological actions

Pharmacological perspective
- Anti-microbial, cytotoxic activity of cyclotides, anti-inflammatory, antipyretic, diuretic, expectorant, diaphoretic, demulcent (Bradley 2006)
- Free-radical scavenging (Ebrahimzadeh, Nabavi et al 2010)

Traditional perspective
- Expectorant, mucolytic, bronchial antiseptic, antitussive, antitumoral (Holmes 1998)
- Laxative, gentle purgative, emollient, expectorant, suppressive (topical) (Crellin & Philpott 1997)
- Laxative (flowers), reduces swelling (topical), respiratory spasmytic, expectorant, anti-cancer (Grieve 1931)

Key constituents

As described by Bradley (2006):

Leaves:
- a. Volatile oils
- b. Flavonoids and saponins
- c. Salicylates: methyl salicylate as a glycoside
- d. Triterpenes: friedelin, 3 beta-friedanol
- e. Cyclotides: vodo M, vodo N, cyclovioicinics
- f. Phenolic acids: ferulic and sinapic acids
- g. Beta-sitosterol

Flowers:
- a. Volatile oils
- b. Flavonoids: rutin (quercetin 3-rutinoside) and two other flavonol glycosides
- c. Saponins: unidentified saponin detected in an experiment from 1937 at a lower amount than in the leaf.
- Bradley (2006) also indicates that there is no modern phytochemical data to validate this claim.
- d. Salicylates: Methyl salicylate as a glycoside
- e. Anthocyanins: 4.0%, including violanin
- f. Polysaccharides: undetermined, but mucilage content of dried flowers was 18%
- g. Other constituents: minerals, reducing sugars, Vitamin C

Pharmacology

1. Cytotoxic, in the context of destroying cancer cells. In 1980, Charlson studied the effects of several herbal extracts, including a 50% ethanolic extract of V. odorata leaf, against lymphoid leukemia (L-1210), Lewis lung carcinoma, or sarcoma 180 in mice. In this study the V. odorata extract was found to be ineffective (Charlson 1980).

More promising are several studies that investigated the effects of a cyclotide isolated from V. odorata, namely cyclovioicacin O2 (CyO2). In 2002, Lindholm, Göransson et al tested CyO2 isolated from a butanol-soluble fraction of V. odorata against 10 human tumor cell lines as well as direct human ovarian cancer cells in vitro. For all cell lines nearly 100% tumor cell growth inhibition was achieved at concentrations as low as 0.45 micro-m. Also promising was the fact that CyO2 showed selective action: significantly
larger concentrations of chemical were required to kill healthy lymphocytes versus hematological chronic lymphocytic leukemia cells (Lindholm, Göransson et al 2002).

A follow-up study was conducted in 2007 by Svangård, Burman et al in which the same CyO2 assay as the 2002 study was used on a human lymphoma cell line. Again, significant cytotoxic activity was noted. The primary purpose of this study was to understand the mechanism of action of CyO2, discovered to be disruption of the cell’s outer membrane. Burman, Svedlund et al (2010) further elaborate indicating that the disruption of the cellular lipid membrane can be attributed to the cyclotides’ charged amino acids.

Gerlach, Rathinakumar et al (2010) suggest that CyO2, like other cyclotides, ruptures cancer cell walls by binding to the membrane through a hydrophobic patch, resulting in rapid leakage from the tumor cells. With this mechanism of action in mind, Gerlach, Rathinakumar et al (2010) conducted a controlled in vitro trial of CyO2 against two types of breast cancer cells, one being a doxorubicin-resistant variety of the other. The hypothesis was that a combination of CyO2 and doxorubicin would produce better results than with using doxorubicin alone. In drug-resistant cancer cells treated only with doxorubicin, only 19% of the cells took up the drug. With a combination of doxorubicin and isolated CyO2, 57-64% of the cancer cells took up doxorubicin. The IC50 values for a combination of CyO2 and doxorubicin were approximately four times lower than for either CyO2 or doxorubicin alone (Gerlach, Rathinakumar et al 2010). These results suggest that CyO2 could be useful for increasing the efficacy of existing cancer drugs by increasing the permeability of the diseased cells, thereby allowing better penetration of the drug. Additionally, Gerlach, Rathinakumar et al 2010 indicate that while CyO2 has been shown to disrupt cancer cells, it did not seem to significantly damage human endothelial brain cells, suggesting that CyO2 specifically attacks tumor cells.

Finally, a single in vivo study of CyO2 isolated from V. odorata was conducted by Burman, Svedlund et al in 2010. Despite the encouraging results of the in vitro testing as described above, the anti-tumor and toxicity effects of CyO2 on mice were far less promising. Mice were inoculated with either human lymphoma, leukemia, or small-cell lung cancer cells, after which they were administered CyO2 at a dose of 1 mg/kg of body weight. A second test involved xenografting colorectal adenocarcinoma cells onto mice and then providing 0.5 mg/kg of CyO2 for two weeks. Neither method of dosing resulted in significant anti-tumor activity. Additionally, in the toxicity study, mice which were given increasingly larger concentrations of CyO2 suddenly died when a concentration of 2 mg/kg was reached. This was after no ill effects were noted at the previous dosage of 1.5 mg/kg.

2. Antipyretic—Khattak, Gilani et al (1985) studied the antipyretic effects of several native Pakistani herbs, including V. odorata in vivo. Rabbits were artificially made hyperthermic by yeast suspension injection. After an average temperature increase of ~2°C, a 3% suspension of extract was administered at a constant dose volume of 5 mL/kg. Toxicity studies were also conducted, in which doses of up to 1600 mg/kg of body weight were administered to additional subjects who were monitored for seven days (Khattak, Gilani et al 1985).

Within the confines of this study, V. odorata proved to be comparable to aspirin in its ability to reduce fever. After 270 minutes, aspirin reduced fever by ~2°C, while the hexane-extracted V. odorata reduced it by ~1.8°C (the water- and chloroform-extracts having slightly lesser efficacy). Additionally, no adverse effects were noted in the toxicity studies (Khattak, Gilani et al 1985).
3. Anti-microbial—Several studies of *V. odorata*’s efficacy against various microbes were found. In 2007, Arora & Kaur investigated whether various aqueous extraction methods of various herbs affected the herb’s anti-microbial properties. For testing *V. odorata*, in particular, an infusion of crushed plant parts in hot (not boiling) water to produce a 20% concentration was applied in a viable cell count method against *S. aureus*, *P. aeruginosa*, *S. flexneri*, *S. typhimurium*, *S. typhi*, and *E. coli*. Results indicated 100% killing of each type of bacteria within four hours (Arora & Kaur 2007).

Another in vitro anti-microbial study was done by Al-Heali & Rahemo (2006) to characterize the effects of a combination of aqueous extracts of *V. odorata* and *Ruta graveolens* (L.) (rue) against *Trichomonas vaginalis*, an undesirable microbe found in the reproductive organs of both women and men. This study was a follow-on from individual trials using single extracts of violet and rue, in which significant inhibitory effects of each were discovered (Al-Heali & Rahemo 2006). The combination of *V. odorata* and *R. graveolens* provided complete inhibition of parasite growth (i.e., death) after 24 hours (Al-Heali & Rahemo 2006).

Returning to the secondary constituent of *V. odorata*, CyO2, Pränting, Lööv et al (2010) tested this isolated cyclotide against a number of bacteria, including: *S. enterica serovar Typhimurium* LT2, *E. coli* and *S. aureus*. For this study, the effectiveness of CyO2, extracted from the plant’s aerial parts, was tested three ways: radial-diffusion assay (RDA), minimum inhibitory concentration (MIC) assay, and time-kill kinetics. Results from both the RDA and MIC tests indicated promising effectiveness against *S. enterica serovar Typhimurium*, but very little inhibition against *S. aureus* (Pränting, Lööv et al 2010). In the time-kill studies, results showed that CyO2 concentrations of 25 μM generally eliminated strains of *S. enterica serovar Typhimurium, E. coli,* *Klebsiella pneumoniae, Streptococcus pyogenes,* and *P. aeruginosa* within five hours. Once again, no significant effect against *S. aureus* (or *Staphylococcus epidermidis*, also tested) was noted (Pränting, Lööv et al 2010).

Extracts of *V. odorata* also appear to have anti-fungal properties, as evidenced by a study conducted on numerous herbal extracts by Amin, Salehi-Surmaghi et al (2002). Of the 278 tested extracts, *V. odorata* was one of 11 selected as having “potentially noticeable antifungal effects” (Amin, Salehi-Surmaghi et al 2002). For this study, a methanol extract of the powdered herb was introduced into 15 in vitro cultures of various fungal strains, including several species of *Candida* and *Trichophyton* isolated from local patients. Results indicated complete fungal eradication in 13 of the 15 cultures (Amin, Salehi-Surmaghi et al, 2002), suggesting a wide-spectrum ability of *V. odorata* extract as an anti-fungal.

4. Diuretic: Bradley (2006) cites a study whereby an effective 300 mg of dried leaf (via an aqueous infusion, a dry methanolic extract, or ash) “significantly increased the volume of urine [in rats] excreted over a period of 5 hours.” This effect was attributed to the presence of flavonoid glycosides and potassium in the leaf.

5. Free-radical scavenging: Ebrahimzadeh, Nabavi et al (2010) studied the free-radical-scavenging effects of a methanol-extract of *V. odorata*. Due to the presence of flavonoids and phenolic compounds in *V. odorata*, results were considered favorable for scavenging DPPH (2,2-diphenyl-1-picrylhydrazyl), a concentrated powder of stable free-radical molecules) and hydrogen peroxide. Scavenging ability of *V. odorata* in regard to nitric oxide appeared to be unremarkable, as the maximum concentration used yielded only 34% inhibition of the free radical.
6. Anthelmintic:

Two studies were surveyed in relation to anthelmintic activity of cycloviolacins isolated from \textit{V. odorata}. Colgrave, Kotze et al (2009) tested CyO14 in vitro against the larval and adult stages of dog hookworm (\textit{Ancylostoma caninum}) and larvae of the human hookworm (\textit{Necator americanus}). Colgrave, Kotze et al (2008) tested numerous cycloviolacins against larval and adult stages of \textit{Haemonchus contortus} and \textit{Trichostrongylus colubriformis} (two gastrointestinal nematode pests of sheep). Both studies showed significant anthelmintic activity against these parasites. At least 99\% inhibition was achievable against \textit{A. caninum} and \textit{N. americanus} larvae (Colgrave, Kotze et al 2009). Similarly, the IC99 scores of several cycloviolacins (particularly that of CyO2) against \textit{H. contortus} and \textit{T. colubriformis} larvae show favorable results at reasonable concentrations (Colgrave, Kotze et al 2008). With regard to efficacy against adult forms of these parasites,
Colgrave, Kotze et al (2008) also show that, at higher concentrations of CyO2 or CyO14, life inhibition can be achieved. While neither paper suggested a method of action, Colgrave, Kotze et al (2008) reference other research that suggests that cyclotides (in general) act by disrupting cell membranes, and in the case of nematodes, rupturing the gut cells of these microorganisms.

7. Anti-inflammatory:
In rats, an aqueous extract of *V. odorata* was tested for anti-inflammatory properties in the lungs as compared with hydrocortisone. Results indicated that the effect of *V. odorata* extract was equal to hydrocortisone in partially preventing lung damage (Koocheka, Pipelzadeha et al 2003).

8. Antihypertensive and antidyslipidemic:
In 2012, extensive testing on the effects of a crude methanol extract of *V. odorata* (21% weight-in-weight) on the cardiovascular system in vivo was done by Siddiqi, Mehmood et al. A 49% reduction in mean arterial pressure was observed in anesthetized rats injected with 1.0 mg/kg extract. Isolated aortic tissue sample testing suggested that the mechanism of action was endothelium-dependent vasodilation mediated through inhibition of Ca++ influx through various channels (Siddiqi, Mehmood et al 2012).

With respect to blood fats, adult rats fed an atherogenic diet for six weeks resulted in nearly a 400% increase in total cholesterol as compared to the control. Atherogenic rats who were simultaneously administered 600 mg/kg of the violet extract daily experienced only an 183% increase, which was comparable to the 173% increase in rats who were administered avortastatin. Additionally, the violet extract treatment significantly inhibited the rise in low-density lipoproteins while enhancing the level of high-density lipoproteins as compared to untreated subjects. Neither triglycerides nor glucose levels were significantly affected by any treatments (Siddiqi, Mehmood et al 2012).

Siddiqi, Mehmood, et al (2012) postulated that the mechanism of action of *V. odorata* on blood fats may be due to the plant’s flavonoids inhibiting cholesterol synthesis coupled with the presence of saponins which inhibit lipid absorption.

**Traditional use:**
*V. odorata* is a native plant of both Europe and Asia. As such, there exist several, varied cultural traditions that include this plant in their herbal medicine.

Nadkarni (1976) summarizes Indian uses of *V. odorata* as follows: “Flowers are used in bilious affections, lung troubles, prolapse of the rectum and uterus and in restraining suppuration; also useful in cough, kidney diseases and liver affections. In pulmonary affections the drug acts as a diaphoretic and a nauseating emetic. In large doses it is emetic.”

Nadkarni (1976) also notes that a syrup made from violet petals is suitable to administer to infants for coughs or tightness of the chest; mixed with almond oil and senna it can also be given to children for its demulcent and aperient properties. Finally, an infusion of the flowers can be used to lower a fever.

In the Physiological tradition, Lyle (1897) indicates similar uses for violet flowers as Nadkarni. Additionally, he notes that the flowers are expectorant and slightly anodyne.

Lyle (1897) also describes antiseptic properties of *V. odorata* leaves, suggesting an infusion as a wound dressing. This same infusion is indicated as a treatment for cancer: “Substantial claims are made that not only is pain early allayed, the growth or swelling gradually reduced, but perfect cure effected” (Lyle 1897).

Grieve (1931) contains the most comprehensive compilation of uses for
numerous preparations of *V. odorata*, and clearly draws from earlier references discussed above, among others. In addition to those uses previously described, Grieve (1931) provides the following guidance:

“The fresh seeds can be used as a purgative, a diuretic, or for urinary complaints. The roots are strongly emetic and purgative. A syrup of violet may be used to treat ague, epilepsy, inflammation of the eyes, sleeplessness, pleurisy, jaundice, and quinsy. An oil infusion can be drunk to lubricate the throat, or tincture of the whole, fresh plant may be used for spasmodic cough or dyspnea. Topical preparations of *V. odorata* (leaves, in particular) serve to locally cool inflammation or bruising, or ease pain” (Grieve 1931).

Because *V. odorata* is not a native plant of North America, there is no formal record of the Native Americans using this particular species of violet. However, Crelin & Philpott (1997) provide historical context whereby the indigenous American *V. pedata* was considered equivalent to the European *V. odorata*. Moerman (1997) indicates the Native Americans utilized myriad species of violets, including *V. pedata* by the Cherokee. For completeness and comparison, Native American use of species *pedata* is summarized.

The Cherokee used *V. pedata* to treat several ailments as well as for general health. Infusions of the leaves were used to treat diarrhea (dysentery), a cold, and a cough (with sugar), and could be sprayed up the nose for catarrh. It was also used as “blood medicine,” a spring tonic, and the fresh leaves and stems were used as food. Topically, a poultice of leaves was used to treat headache pain (Moerman 1997).

Like the Native Americans, the Chinese traditionally used a different species of violet, namely, *V. yedoensis* (Mak). In Traditional Chinese Medicine (TCM) parlance, this violet was primarily used to clear heat and relieve fire toxicity. In this case, “toxicity” refers to fever and other symptoms caused by an infectious disease. Therefore, to translate into western terms, *V. yedoensis* was used both topically and internally to reduce heat in the form of fever, swelling, or inflammation, for sores and abscesses, and swollen throat and/or eyes (Bensky, Gamble et al. 1993).

**Clinical Trials**

After an extensive literature search no clinical trials on single preparations of violet were discovered. Bradley (2006) corroborates this assertion.

**Preparation and Dosage:**

**Infusions (water):**

Dried herb: Internally: 2-4 g (British Herbal Pharmacopoeia 1996).

Topically as a poultice (Grieve 1931).

Fresh leaves: “handful” in a pint (470 mL) of boiling water. Cover and stand for 12 hours before straining (Lyle 1897).

Fresh flowers: 2 drachms (~g) in a pint (470 mL) of warm water – dose 1-2 oz (28 – 56 mL) (Nadkarni, 1976)

**Infusions (oil):**

Stand dried, powdered leaves in olive oil for six hours in a water bath (Grieve 1931).

**Tincture:**

2-4 mL of 1:1 in 25% alcohol or 2:1 fresh leaves in 45% alcohol (British Herbal Pharmacopoeia 1996)

**Syrup:**

Infuse 100g fresh flowers in 386 mL boiling water for 24 hours. In a pot add strained liquid and double its weight in sugar. Simmer until sugar dissolves (Grieve 1931).

Use 1-2 drachms (3.5–7 mL) for infants (Nadkarni 1976)

**Safety Issues:**

The American Herbal Products Association *Botanical Safety Handbook* lists *V. odorata* (leaf) as an herb that “can be safely consumed when used appropriately” (McGuffin, Gardner 2013). There is an absence of mention of any contraindications, side effects,
drug interactions, toxicity indications, or cautions regarding pregnancy and lactation. Bradley (2006) indicates that there are no known contraindications or side effects.

**Discussion**

*V. odorata* is a very safe, widely accessible herb available in many forms. Capsules of approximately 500mg of violet extract, alcohol extracts, dried leaf, powdered leaf, even live plants, are all available. Essential oil is also available, but as *V. odorata* contains precious little essential oil (similar to rose petals), care must be taken to obtain from a reputable source to ensure that the product is pure. The sweet scent of violet coupled with its topical calming properties makes it a popular ingredient in perfumes and skin creams. Numerous topical products containing violet ingredients are available, some for their fragrance and others purporting skin healing properties.

It is the author’s experience that dried aerial parts of *V. odorata* make a soothing tea – slightly “green”, slightly salty, and slightly mucilaginous. Overall it is a very mild taste that is easily combined with other herbs, such as *Mentha x piperita* (peppermint) and *Scutellaria lateriflora* (skullcap), and drunk regularly or used to saturate a cloth for a cooling compress. Several of its supportive properties, particularly cooling and demulcent, anti-microbial, and anti-oxidant make this herb a good choice for general health maintenance. These properties also make violet a potential choice for extra support for when the body is in a state of compromised health, particularly in respiratory ailments and infections, and, topically, inflamed areas. Though the traditional literature describes *V. odorata* as a cancer treatment, the scientific study to date, largely on isolated cycloviolacins in vitro, is inconclusive. Therefore, use of *V. odorata* for this direct purpose is not recommended. Still, given the safety of various preparations of *V. odorata* coupled with the promising, if fledging, in vitro research on CyO2 negatively and selectively impacting cancer cell walls, the author would consider including a tea or a tincture of the herb in a complementary treatment protocol for clients undergoing chemical therapy to treat various forms of cancer.

Wild violets are prevalent in the eastern United States – in residential lawns and along roadsides as well as in the wild. There are literally dozens of species of wild violet – some endangered in some parts of the country, but many of them having similar properties as *V. odorata*.

Violet flowers, regardless of their particular species, possess much natural beauty. As such, provided that the specimen is not on the endangered list, the author encourages (responsible) gathering of these lovely flowers for sensual enjoyment. After all, sometimes something as simple as surrounding oneself with the splendor of nature is the most powerful medicine of all.

**References**


*British Herbal Medicine Pharmacopoeia* (1983) Great Britain:
MATERIA MEDICA

British Herbal Medicine Association, p 232-233


A birthday wish for the AHG

James Duke, Ph.D

Born in 1929, I have been intensely interested in plants for more than 75 years. I took my AB in Botany in 1952, my MA in 1955, and my Ph.D in 1960 or 1961 (in absentia). The late Dr. C. Ritchie Bell, my senior by about a decade, realized that my university training at University of North Carolina, Chapel Hill, left me what he called educationally “in-bred.” To fix this, Ritchie conceived an enticing idea to collect botanical vouchers (pressed herbarium specimens) of the Apiaceae family whose flower buds he would chemically preserve so he could count their chromosomes. So, in the summer of ’59, we drove to Mexico and cris-crossed the country for a couple of months, collecting and vouchering celery relative flower buds. Then we parked his car at a Mexican airport while we flew into Guatemala and Costa Rica for a few days each doing the same thing. After shipping off many of the most important collections, we flew back to Mexico, picked up Ritchie’s station wagon, and drove to St. Louis, where he had arranged a post-doc internship at the Missouri Botanical Garden to further compensate for my “in-breeding.” As I was slowly becoming interested in Latin American plants and mariachi music, I took my guitar along with me.

All along, since age 5 in my native Alabama, I had been intensely interested in edible plants. But not until I arrived as a post-doc at the Missouri Botanical Garden did my intense interest in medicinal plants come into being. My boss, taxonomist R. E. Woodson, a specialist in the dogbane and milkweed families, was studying medicinal plants collected by naturalist Felix Woytkowski in Peru. Woytkowski’s field notes were transcribed to labels which accompanied the flattened voucher specimens, with notes on the locality, habitat, folk medicinal uses, and common names. My job was, among other things, to identify those Peruvian plants, which were being examined for their medicinal potential by a major drug company, and to assist my boss, who was publishing The Flora of Panama at the time, by curating the Panamanian herbarium vouchers.

Finally, I was invited to the field in Panama. When I saw those same specimens in three dimensions, it almost frightened me back onto the plane. But no, I collected plants there along with their local common names (often clinchers in positive identification), to identify when I got back to Missouri.

In 1963 I left the Missouri Botanical...
Garden and took a job at the U.S. Department of Agriculture (USDA) which got me into Puerto Rico, home to more Latin American plants and music I had come to love. All too soon I got an invitation I could not refuse, with research and development giant Battelle Memorial Institute in Columbus, Ohio. But the job was not to be in Ohio; rather, Battelle would ship me straight back to Panama, furniture, belongings, family and all, where I would be involved in an ecological study of potential sea level canal routes in Costa Rica, Panama and Colombia. I was to sample, and collect vouchers of all the plants that the natives ingested from their environment. I was to focus on the least inhabited part of Panama, primary forests in the province of Darién, near the border with Colombia. In Darién were Pacific-slope villages largely inhabited by African-Americans, a few cattle ranches run by African-Americans and Latinos, and inland rivers mostly inhabited by Choco Indians with a few inland Kuna Indians. The Atlantic Coast and near shore San Blas Islands were inhabited almost exclusively by Kuna.

Gradually I realized that for the children of all these ethnic groups, almost all, if not all, of their medicines were coming from the native and imported plants and animals around them. These kids seemed as happy and healthy as my own back in Panama City, where they had access to the best medicines and medical facilities. And so, here in early midlife, I had become an ethno-\textit{b}otanist before I even learned the word “ethnobotanist.” My field studies terminated in 1967 when my family and I moved from Panama to Battelle in Columbus to finalize my work on the sea level canal program. After seven years as economic-botanist/ethnobotanist with Battelle, I was already a devout believer in the healing power of herbs. When Battelle’s funds dried up, I was pleasantly surprised that the USDA said they would take back their prodigal ethnobotanist. They had an interesting and challenging program dealing with three of the most controversial medicinal plants: \textit{Erythroxylum coca} (coca), the source of the narcotic cocaine; \textit{Cannabis sativa} (marijuana), the source of the controlled...
substance, THC, and related compounds of interest; and *Papaver somniferum* (opium poppy), source of codeine and morphine, very important medicinal compounds in their own right. I began learning about the growth and cultivation of these controlled substances, and was sent to study coca in the Andes, marijuana in West Indies, and opium poppy in the Golden Triangle and Burma (now Myanmar). It was very interesting and somewhat hazardous at times. All three of these millennially used plants that the Drug Enforcement Administration wished to make disappear have been clinically approved for several indications. Yes, all cause a few American deaths each year, but they do not cause as many deaths as U.S. Food and Drug Administration (FDA)-approved synthetic pharmaceuticals, “clinically proven safe and efficacious”... to the FDA’s satisfaction.

Compared to my botanically-driven globetrotting adventures, the American Herbalists Guild is just a new kid on the block. Over the last quarter of a century, I have enjoyed watching the growth of the AHG and its journal, the biggest voice of the clinical herbalist. Me, I’m not clinical. But I truly believe in the importance of clinical use and studies of herbs.

It is my opinion that the AHG needs somehow to convince the FDA to sponsor unbiased clinical comparisons of promising herbs with competitive synthetic pharmaceuticals. Until there are clinical comparative trials, the FDA does not know that their expensive and dangerous synthetic drug is as good as any of the food “farmaceuticals” they say cannot legally be recommended. Too expensive for AHG and me. But until it is done, we don’t know whether fenugreek or licorice is better or worse than Lipitor at raising HDL cholesterol and lowering LDL cholesterol. I feel very strongly that that no new synthetic should be FDA-approved until it is proven cost-competitively safer and more efficacious than an herb or food. (In terms of natural statins, we have over 100 food species from which to choose!) Don’t we deserve the best and most cost-effective option available? Isn’t it worth it to find out what that is?

It is already time that our government, like most of the progressive governments of the world, investigated the wholesome plants that American herbalists have been investigating as the AHG for 25 years. I have been trying for decades to prove that wisely used natural medicines are much better and safer than the unnatural synthetics, used wisely or unwisely. AHG, I’m pulling for you to carry on the battle I have fought for nearly 50 years since my work concluded in the jungles of Panama. Fortunately, I will have passed on to greener pastures by your 50th anniversary, but I hope that by then you can accomplish what I failed to do. Convince the American government, especially the FDA, that they should be seeking the best and cheapest medicine, not necessarily Big Pharma’s poisonous new expensive synthetics, for taxpaying Americans, who deserve better medicines than what they are getting. It is an elusive goal. Good luck, and happy anniversary.
Adaptogens in Medical Herbalism: Elite Herbs and Natural Compounds for Mastering Stress, Aging, and Chronic Disease by Donald R. Yance, CN, MH, RH (AHG)
ISBN 978-1-62055-100-4, September 2013
Hardcover: $50.00, 672 pages, 8.5x11
Also available as an e-book
Imprint: Healing Arts Press
Reviewed by James Duke, Ph.D.

My copy of Adaptogens in Medical Herbalism bears an inscription from the author: “To Jim, I hope and pray you find this book inspiring and like a bible. I have written it with my heart, mind and soul. And I thank you for you and thank God as well. Donald.”

That’s the first thing I read when I was blessed to receive this expansive and useful book. I have long been impressed with the natural cancer protocols developed by Donald R. Yance, and I have been corresponding productively with him about his adaptogen studies for the past few years. All of these have been especially interesting to me at age 85, enduring those conditions for which adaptogens are made: aging, chronic neuropathy, disease and stress, if not trivial cancer. Yance’s monographs are treasures in themselves and impress me with the dogged scholarship of this man, at once “adaptogenologist,” herbalist, musician, oncologist, and theologian.

What, exactly, is an “adaptogen”? There are many definitions, and among them, I fear there is no unanimity. Adaptogen authority Israel Brekhman describes them as follows:

1) Safe, with no significant side-effects or contraindications
2) Have a general nonspecific action to improve resistance to stress
3) Have a balancing, normalizing effect on body functions, regardless of the origin of disruption or the direction of the homeostatic disturbance.

To these, Yance adds the qualification of clinical proof. His definition, as given in his new book’s introduction: “The word ‘adaptogen’ refers to the nonspecific endocrine-regulating, immune-modulating effects of certain plants that increase a person’s ability to maintain optimal balance in the face of physical or emotional stress.”

I grew uncomfortable reading Yance’s clarifications on pp. 104 and 105. Clinically he distinguishes three main categories, not too well defined:

1) Primary adaptogens. These meet the classical definition given by Brekhman above. By regulating the hypothalamic pituitary adrenal axis (HPA), primary adaptogens:
   a) Increase and modulate the flow of energy
   b) Decrease feelings of stress
   c) Increase endurance
   d) Support mental alertness
   e) Promote deep, restful sleep

2) Secondary adaptogens. These meet most of the criteria mentioned above, but lack sufficient scientific validation. Among other actions, many may have immunomodulating, immunostimulant or immunotonic properties useful especially for the elderly and immunocompromised, but also for the
physically fit. I have to say to this point that I am fairly well convinced after years of compiling data (but no clinical experience), that all plant species will modulate the immune system. Among the thousands of biologically active phytochemicals they contain, there are probably hundreds if not thousands of phytochemicals in each plant species that modulate the immune system. If I may quote myself from the introduction of David Winston and Steven Maimes’ *Adaptogens: Herbs for Strength, Stamina and Stress Relief* (Healing Arts Press, 2007), “All plants contain adaptogenic/tonic compounds because plants have to contend with a good deal of stress.” And it seems that stressed plants are more adaptogenic/tonic than pampered plants. Tantalizing question for which I have no answer: Would stressed, wild *Panax quinquefolius* (American ginseng) be more adaptogenic than pampered, cultivated Chinese *Panax ginseng*?

3) Adaptogen companions. These may not meet all the traditional criteria, but enhance the actions of herbs in the first two categories.

*Adaptogens in Medical Herbalism* offers 17 chapters by various introductory clarifications, most of which are useful in understanding Donnie’s complex interpretation. Chapter 3, “Vital Energy and the Neuroendocrine System,” frames the body’s energetic and protective functions in terms of the Eclectic Triphasic Medical System (ETMS) model that breaks down life force into three energies: vital force (cellular energy), vital essence (neuroendocrine system), and vital spirit (spiritual energy). He says lack of energy is the most frequent complaint of his patients, and cites studies reflecting the same for other practitioners. Adaptogens, like tonics, are energizers. In Chapter 5, “Adaptogens, the Ultimate Evidence-Based Medicine,” he notes that adaptation can be broadly classified into two categories: that which helps an organism survive, and reproductive adaptation, that assures that the genes are passed on. Later chapters discuss adaptogens specific to cardiovascular health, the immune system, cancer, aging, the brain, and weight management, among others.

Yance’s materia medica of adaptogens include a lot of species considered by the Chinese to be Qi and Yang tonics as well as ones that appear in Ayurvedic rasayana formulas. But I must say that I am confused by his list of “Adaptogens and Adaptogen Companions with an Affinity for Improving Insulin Utilization” (p. 138). Clearly he calls all these antidiabetic plants adaptogens or adaptogen companions, but does not include them in his main materia medica. Are they adaptogens or not?

For reasons that elude me, Yance calls black pepper *Piper longum*, which is a closely related but different species often used exactly like black pepper (*Piper nigrum*) and likewise a source of the bioactive piperine. *Piper longum* is more commonly called long pepper.

There’s a lot of useful healing information filling these pages based on Yance’s years of clinical experience. I like a sturdy big reference book like this, with Part 1: Adaptogens and Part 2: Materia Medica. I think I would be better served, though (if my adaptogens keep me alive long enough), if the two parts are printed as two separate paperback volumes, should there be another edition in my time. I thank the author for his kind and learned words and for sending me a copy of the book, with all its useful information, well researched.
Best Smartphone Apps for the Clinical Herbalist
Compiled by Susan Kramer

Bencao: Traditional Chinese Medicine and Herbs
Developer: eXebche
Available for: iPhone or iPod touch, 2.0 and higher; Windows Phone 7, 7.0 and higher
Price: $29.99

Totally worth the price! Search by herb, herbal formula, symptom, or syndromes. This is useful for TCM practitioners and also for Western herbalists. Herbal search by pinyin, pharmaceutical name, English name, category, and by channel. Each herbal “page” includes a photo that you can view on full screen, the properties, channels, actions (such as “expels Wind/Heat”), indications (such as “skin rashes”), contraindications and cautions, dosage, the formulas in which the herb appears, and a notes section for the user. The syndromes list is extensive; I sometimes scroll through it when I am looking for insight into what is happening with a client. An excellent second choice is TCM Clinic Aid ($12.99 plus additional for add-on functions). TCM Clinic Aid includes acupuncture and auricular points and is frequently updated. Both apps include English herb names.

Audubon Guides to Birds, Mammals, Wildflowers, and Trees
Developer: Green Mountain Digital
Available for: iPhone, iPad, iPod touch 4.3 or later; Android
Price: $14.99 for all four (iPhone). Individual guides are available for $4.99 each.

These guides assist with plant (or animal) identification. The guides provide simple keys for identification, geographic range, photos and description. For trees, this includes general description, leaves, bark, twigs, diameter, height, habitat, flower, and fruit. You also can post your own photos. Yes, I love my identification books, but this app is very handy and contains more photographs. A mushroom guide is also available.

Foodle
Developer: Pomegranate Apps
Available for: iPhone, iPad, iPod touch 6.1 or later
Price: $3.99

Foodle lists nutrition facts about 8,000 different foods! It includes basic foods and then allows you to choose the specific type. For salmon, choose among: Atlantic farmed, chum, coho, king and sockeye and differentiate by preparation method. The app also includes many fast food restaurant items and prepared foods. For each food, the app provides nutrition facts including the now standard calories, total fat, cholesterol, sodium, total carbohydrate, fiber, sugars, and protein, 10 different vitamins and 12 different minerals. This is my “go to” source for nutrition facts.

Epocrates
Developer: Epocrates
Available for: iPhone, iPad, iPod touch 6.0 and later
Price: Free

This free drug reference enables you to research brand name, generic and over-the-counter medications. It includes drug information, side effects, black box warnings, drug interactions, and a key for drug identification. It also includes how the drug is metabolized, how it is excreted and its mechanism for action. I frequently use this app to compare the side effect and black box warnings against symptoms of clients who are on medication. I have found this app to be invaluable for clients who developed symptoms following or during their use of medication. Clients
can decide for themselves whether their medication is contributing to their symptoms. I look up warnings and side effects on my iPhone, hand it to my client, and let them see the list. Often, clients are astounded at seeing their symptoms listed on the phone – and often tell me of additional symptoms that they did not think were important. Clients can speak with their doctors, citing the app, or I can. This is a popular app among doctors. In my experience, doctors are far more open to information from Epocrates, than to information found online.

**Square**

**Developer:** Square, Inc.

**Available for:** iPhone, iPad, iPod touch 6.0 or later; Android

**Price:** Free with free reader.

Using the reader that plugs into your smartphone, swipe credit cards from your clients or customers. Square charges 2.75% of the swiped transaction as its fee, or 3.5% plus $0.15 for manually entered transactions. There is no need to sign up with credit card companies. Square deposits your money in your bank account the next day. Square emails receipts directly to your clients.

A comprehensive app for Western herbs has yet to be developed. Development of a high quality app can be expensive and time consuming. Perhaps this is a project that The American Herbalists Guild could promote!

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**Online Resources for the Clinical Herbalist**

Compiled and reviewed by Becki Garza

**Materia Medica, Medicine-Making and Herbal Constituents**

- **Southwest School of Botanical Medicine**

  Michael Moore’s pioneering website continues to offer a treasure trove of herbal knowledge. Under “Texts and Manuals,” find Moore’s *Materia Medica*, which lists approximately 400 plants along with notes on parts used, fresh or dry, tincture ratio and strength, and dosage range.

- **Numen Resource Guide: Making Your Own Medicine**

  Basic preparation instructions for teas, tinctures, oils, and salves. Includes a few formulas and a resource list.

- **Solubility of Herbal Constituents**

  This excerpt from Lisa Ganora’s book *Herbal Constituents* (self-published, 2009) covers solvent polarity relative to what constituents are desired from the plant. Includes a table of low, medium, and high ethanol percentages for tinctures and fluid extracts.

- **The America Extra Pharmacopoeia**

  David Winston’s list of little known and rarely used herbs that, if used more widely, can help to alleviate stress on once common herbs that are threatened or endangered due to overuse.

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**A History of Herbal Use**

- **Native American Ethnobotany**

  Dan Moerman’s database catalogs plants utilized by Native American peoples for food, drugs, dyes, and fibers. The list is cross-referenced by tribal, common and taxonomic name.

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*Susan W. Kramer, Ph.D., RH (AHG), CCH, is a therapeutic herbalist and certified classical homeopath in private practice in Atlanta, Ga. She is passionate about clinical practice and for finding what you need wherever you are. She is the author of the book, *The Naturally Healthy Traveler* (Lotus Press, 2012).*
• **Botanicus.org**
  Free access, web-based encyclopedia of digitized historic botanical literature from the Missouri Botanical Garden Library.

• **Henriette’s Herbal Homepage**
  A list of classic herbal texts from around the web.

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**Monographs and Full-Text Journal Articles**

• **High Wire from Stanford University**
  The largest archive of free full-text science on Earth! Not all are free, but search results are presented in table form and include cost to purchase along with any related articles that are free.

• **American Botanical Council: The Complete Commission E Monographs**
  Access to this English translation of the complete German Commission E Monographs is available with membership to the American Botanical Council.

• **Journal of the American Herbalists Guild archives**
  Coming soon: Articles on case studies, therapeutics, materia medica, herbal history and more will be available for sale to the public. Free with AHG membership.

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**Educational Resources**

• **Biodigital Human**
  Anatomical identification using a 3-D interface cross-referenced with medical conditions related to body systems. Users select a condition, and the anatomical parts involved are highlighted. Includes animation of parts in disease state.

• **The Medical Biochemistry Page**
  Well-organized site provides brief discussion of biochemical processes in the human body, synthesis of biological molecules, and their role in disease and health. Includes tables of hormones, vitamins and minerals, and clinical values. A section on dietary supplements offers an overview of compounds found in 45 medicinal herbs while offering a biological context by linking key processes back to descriptions of same within the site.

• **Carnegie Mellon University Open Learning Initiative**
  Offers free online courses to anyone who wants to learn or teach. Educators can set up a class using the free curriculum, track student progress, and customize a course by adding other curricula included on the site. Students can also work without an instructor. Courses that may be useful to clinical herbalists include Anatomy & Physiology, Biology, Chemistry, and Biochemistry.

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**Originally from the south Texas-Mexico border, Becki Garza is a medicine-maker, community herbalist, and former biology teacher, living and practicing in Tucson, Arizona. She runs an online retail shop, La Yerberia Botanicals.**
Cascade Anderson Geller was a beloved herbalist, teacher, wife, mother, activist, and friend to many in the herbal community. In her decades-long career, she served as faculty at Bastyr University, California School of Herbal Studies, Southwest College of Naturopathic Medicine, and was department chair of Botanical Medicine at the National College of Naturopathic Medicine. Cascade was instrumental in the founding of several institutions and programs, both in her hometown of Portland and across the United States. She helped lay the cornerstone of United Plant Savers and was present at the founding meeting of the American Herbalists Guild.

Cascade passed away from cancer on Herb Day, May 4, 2013, at the age of 59. Her close friend Rosemary Gladstar has shared this tribute to her life with JAHG:

Cascade Anderson Geller
(1954-2013)

It’s been just over a year since that big old bear lumbered out of the woods, just a few days before Cascade died, walked up to our house, to sniff, greet us once more, and then leave us... Who knows about such things? We’re only left to imagine, feel, yearn, and dream. But this I know to be real, this is truth: As that bear walked away, ever so slowly, she turned once more to give me a long look and a nod before continuing into the forest. And a feeling of peace washed over me in place of a bottomless pit of grief and the endless tears I’d been shedding for days. Who knows about such things...

A long time ago, Cascade introduced me to and gave me my first book of Mary Oliver’s poems. It was 1996; I remember because my beautiful big Bernese mountain dog, Hannah, had just died and Cascade had sent Mary’s poem, Her Grave, to comfort my heart:
How strong was her dark body!
How apt is her grave place.
How beautiful is her unshakable sleep.

Finally,
the slick mountains of love break
over us.

It’s been over a full year since the bear visited our back yard, walked up our porch, and nodded to me. It’s been a year since my dearest friend and beloved sister passed into the spirit world, her spirit making as big a splash there as it did here, I’m sure. It’s easy to immortalize loved ones after they die; to dust off the pedestal and stick them there. Cascade would have hated that, but in truth, she was no ordinary being; she was extraordinary in every sense of the word. She lived life with a fire and a passion that was hard to beat. Ask anyone who knew her, who studied with her, who had the grace to know her. Ask her neighbors in the old Portland neighborhood she lived in for over 30 years, where she anchored her roots, grew her children, and cultivated her restless dreams. Ask those who argued with her, or against her, or who stood on the same or different sides of issues she believed in and fought for. You didn’t have to agree with Cascade to respect her for her passion, her fury, and her willingness to dig deeply into issues.

Cascade could be fierce, but she was also one of the most compassionate and kind people I know. She was “mama bear”… always ready to defend the things she loved the most.

Is it any coincidence that Cascade should die on Herb Day, a day when everyone green would be celebrating and honoring the plant world? I heard someone say that Cascade wouldn’t have liked all the “hoopla” that happened around her death — that she would have just wanted to be “buried and be done with it.” But Cascade was a teacher here as well; she always created ceremony and celebrations at the herb gatherings she attended in honor of those who have passed on before. She was the one who lit the candles, created the altars, and told stories of our elders who had journeyed on... She was always remembering.

And we will always remember... Tonight, I light a candle to place in the spring moonlight, in honor of one of the great human beings I had the gift of knowing. We do her the greatest honor by continuing to grow the traditions of the green nations, by speaking our truth and standing tall for what we believe, and by remembering to be kind and compassionate to one another.

This is a poem that Cascade loved:

Post Humus
by Patti Tana

Scatter my ashes in my garden so I can be near my loves.
Say a few honest words, sing a gentle song, join hands in a circle of flesh.
Please tell some stories about me making you laugh. I love to make you laugh.
When I’ve had time to settle, and green gathers into buds, remember I love blossoms bursting in spring. As the season ripens remember my persistent passion.
And if you come in my garden on an August afternoon pluck a bright red globe, let juice run down your chin and the seeds stick to your cheek. When I’m dead I want folks to smile and say, that Patti, she sure is some tomato!
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**BlueRidgeSchool.org**  
**Director:** Corey Pine Shane, RH (AHG)

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