



# SYMBIOSIS

THE JOURNAL OF ECOLOGICALLY SUSTAINABLE MEDICINE

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## Welcome

Welcome to the first issue of *Symbiosis: The Journal of Ecologically Sustainable Medicine*, published by the Teleosis Foundation. The goal of this publication is to provide current and insightful information about Ecologically Sustainable Medicine (ESM), an emerging field that lives at the intersection of personal health, medicine and environmental sustainability.

We at the Teleosis Foundation have a deep commitment to the principals of ESM as well as ensuring that these safe, environmentally sustainable forms of treatment are widely available and accessible. To this end, the Teleosis Foundation supports the delivery of ESM treatments in homeless clinics in Berkeley and New York and provides research and training on the principles and practice of ESM for the medical and environmental communities.

The publication of *Symbiosis* is supported by contributions to the Teleosis Foundation, a not-for-profit organization. To support our work and continue to receive this journal, we welcome your tax-deductible contributions. Simply use the enclosed envelope.

We welcome your feedback on our programs and publications and encourage you to contact us if you have any questions. We also welcome submissions for publication in *Symbiosis*.

Please email the editor at [teleosis@igc.org](mailto:teleosis@igc.org).

*In health,*

DR. JOEL KREISBERG, DC, CCH

FOUNDER AND DIRECTOR

THE TELEOSIS FOUNDATION



## SYMBIOSIS

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Sustainable Medicine*

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## Healing Without Harm: Ecologically Sustainable Medicine

AN INTERVIEW WITH EXECUTIVE DIRECTOR JOEL KREISBERG, DC, CCH

BY THE EDITOR, BEGABATI LENNIHAN

### **Q: What do you mean by Ecologically Sustainable Medicine?**

**JK:** Ecologically Sustainable Medicine gives you greater health and well-being while promoting the health and vitality of your family, your community and the global ecosystem. Imagine having a debilitating illness such as asthma, colitis or arthritis. You go to the doctor and receive a treatment that is safe, harmless, non-polluting, and cost-effective. This treatment works by catalyzing your own healing abilities in a natural way, using techniques and substances that promote both personal and ecological health. Since human health and planetary well-being are synergistic—and this is a central idea—your healing process is deeply connected to the health of the world we live in. For example, if we use medicines that are renewable, they are also protective of natural resources and, ultimately, of the quality of life on earth. What's best of all, we have these techniques already.

### **Q: What kinds of healing are included in Ecologically Sustainable Medicine?**

**JK:** Many forms of complementary and alternative medicine [CAM] fit the definition [see page 21]. Osteopathy is probably the most mainstream form of ESM in this country. Here I'm thinking of osteopathy which involves physical manipulation with the hands, not the kind in which the osteopath prescribes drugs like an MD. Osteopathy, which restores tissue function, is not resource-dependent; it uses the osteopath's hands for healing.

Osteopathy is not just a physical intervention. It is energetic, and like other forms of healing, it uses the energy of the patient as well as the healer to create a positive outcome. In this example, nothing is used up—even the healer's energy—because when energetic forms of healing are performed correctly, healers feel an increase of energy flowing through them.

Chiropractic is probably the second most common form of ESM. It's similar to osteopathy except chiropractic focuses on the spine and nerves, because of the belief that the spinal chord dictates the health of the rest of the system. Both chiropractic and osteopathy are vitalistic, meaning that they see the body as the physical expression of an inner spiritual reality. These forms focus on restoring the balance of 'vital' healing energy within the person.

Then there's acupuncture, which is oriented towards balancing energy pathways called the meridian system. It doesn't take much energy from the healer; in fact, the acupuncturist inserts the needles and leaves the patient alone for the body's own healing energy to do the work. The needles can be recycled with sterilization.

Homeopathy is perhaps the most ecologically sustainable medicine. The process of making homeopathic remedies, by diluting and shaking them hundreds, even thousands of times, means that a tiny amount of the original substance can be transformed into enough medicine for the whole of the planet.

For example, to make the remedy *Cuprum metallicum*, only a gram of copper is needed—an amount smaller than a penny. By the time it is ground with 100 times as much lactose, and the operation is repeated dozens of times, enough of the remedy has been produced for millions of doses. Homeopathy is an ideal way to use nearly-extinct herbs from the rainforest, for example.

**Q: Are there other forms of ESM out there?**

**JK:** Yes. Bodywork like massage, Shiatsu, acupressure, and craniosacral; energy healing like Reiki and polarity; yoga, Tai Chi, martial arts; meditation and prayer . . . Larry Dossey cites a famous study on prayer showing that when people prayed for heart surgery patients whom they didn't even know, the patients recovered faster, and needed fewer painkillers afterwards. He remarked that if a drug were discovered that yielded the same results, every hospital in America would adopt it immediately.

**Q: Why is ESM important right now?**

**JK:** We first need to look at how conventional medicine is harmful to the environment. There are two primary aspects to this problem: the harmful production process of many medicines, and the often extremely toxic waste stream produced as an output of conventional medicine. Let's take a look at both sides of the problem.

Sixty percent of conventional drugs are produced from petrochemicals. The process of drilling for oil and transporting it globally can wreak horrendous environmental damage. Many other drugs use non-renewable natural resources as a primary ingredient. Taxol is a great example. Until it was synthesized from pine needles, six yew trees had to be killed to produce enough taxol for a single woman with breast cancer.<sup>1</sup> Today, so many Pacific yews have been killed for taxol production that they are almost extinct.

Still other drugs are produced from animals in inhumane ways, like Premarin (which stands for 'PREgnant MAREs' urINe), an estrogen replacement used by more than 9 million post-menopausal women in the US alone.<sup>2</sup> The mares are confined in small stalls and kept perpetually pregnant.

Another significant aspect of drug production is the testing phase. Today, all drugs are tested on animals. Perhaps the worst example of this was in the development of the polio vaccine, for which 2 million rhesus monkeys were killed. We have since learned that the kidneys of the monkeys used in these tests may have been contaminated with all sorts of viruses that have now been spread by use of the vaccine.<sup>3</sup>

After drugs are used, they are generally flushed into the sewage system. Some of them, of course, pass through bodies first—either ours or those of farm animals. Many of these drugs are still viable and continue to effect the biota throughout the planet.

Vast quantities of antibiotics used in this country end up in the manure of farm animals that are routinely given antibiotics to prevent infectious illness and to fatten them for slaughter. The runoff from this manure carries huge amounts of antibiotics into our rivers. Antibiotics used in fish farming end up in public waterways. When antibiotic-resistant bacteria are bred in our bodies, or in our livestock, they end up in the sewage system and then in our lakes and rivers. These resistant bacteria pass along their resistance to other species of bacteria, with potentially destructive effects on the ecosystem. (See "Sex, Symbiosis, and Antibiotics," p. 8.)

Then there is the problem of waste from medical testing and equipment, like radioactive waste, which takes many lifetimes to break down and is difficult to dispose of safely. IV bags are made from PVC, which causes toxic fumes when burned. Tons of potentially infected syringes, scalpels, and

## The Elements of Ecologically Sustainable Medicine (ESM)

- Safe and harmless
- 
- Clean and non-toxic
- 
- Cost-effective
- 
- Non-polluting
- 
- Adaptable and flexible
- 
- Renewable, because human energy is the primary fuel
- 
- Protective of the quality of life on earth, of the environment and of earth's natural resources
- 
- Synergistic with human health and planetary well-being
- 
- Increases our connection with the web of life.





ESM gives you greater health and well-being while promoting the health and utility of your family, your community and the global ecosystem.

other surgical instruments are thrown away after a single use. You've probably heard the stories of syringes from hospital waste washing up on public beaches in New Jersey. Of course this medical trash is potentially harmful for humans, but it is also damaging the ocean environment as well.

**Q: But don't we have to use those items for surgery? And isn't it safer to dispose of them after a single use?**

**JK:** Yes, but let's look at the bigger picture: how much surgery performed in this country is really necessary? Western European countries have lower rates of many common surgeries. Are we really giving other methods of healing a chance first?

**Q: Do any conventional forms of medicine qualify as ESM?**

**JK:** Absolutely. Physical therapy, biofeedback, stress management, exercise and nutrition all qualify. Psychotherapy too, especially wilderness therapy and ecopsychology.

**Q: I notice you didn't mention herbal medicine. Why is that?**

**JK:** Herbal medicine is tricky because it depends on how the herbs are harvested. When the multinational pharmaceutical companies get involved, they can devastate an ecosystem in the quest for profits. There is a big movement now among the giant pharmaceutical companies to locate and patent herbal remedies from China and the Amazon. Holistic herbalists usually understand about harvesting herbs sustainably so they do not become extinct. They follow the example of the Native American herbalists who were respectful of the plants, always leaving enough to regenerate growth for the following year. Rosemary Gladstar's work with United Plant Savers promotes a way for herbalists to become actively involved with

the environmental movement out of a concern for vanishing herbal species.

**Q: Can you give us an example of how healing modalities can actually help the planet?**

**JK:** Homeopathy is a great example, because nearly every homeopathic remedy is made from a natural substance. Before they are used for patients, the remedies are put through a process called "proving" in which healthy people take a dose of the remedy and observe their own reactions in terms of their moods, energy and dreams as well as physical symptoms. In the process, many people feel they are tuning in to the consciousness of the plant or animal which the remedy was made from. It helps us to feel connected to the great web of life on this planet and grateful to the creatures which can each offer us a different type of healing energy. Flower essences do the same thing: each flower has a certain signature or gesture which can be healing for a particular emotional state.

**Q: Won't ESM be more expensive than conventional medicine?**

**JK:** Actually it will save a lot of money. Preventive medicine is certainly a form of ESM, like using diet, exercise and other lifestyle changes to help prevent cancer or heart disease. Think of what it costs, for example, to treat a child for repeated ear infections and then do surgery to put tubes in the child's ears. Let's say it costs \$10,000. Why not provide \$1000 for treatment with homeopathy, chiropractic or acupuncture, and then if these modalities don't work, go ahead with the surgery. If half the surgeries were avoided, we would come out ahead financially, and we would have all these children who would be physically healthier overall and not traumatized by surgery.

In countries with socialized medicine, CAM modalities are often included in the national health care system, because they are cost-effective. Profit-making medical practices tend to be more wasteful.

**Q: What other efforts are being made in this field?**

**JK:** Other people have been doing work along these lines for several years now, like Kenny Ausubel, founder of Bioneers, who is promoting Ecological Medicine.

Carolyn Raffensberger’s ecological think-tank Science and Environmental Health Network promotes a policy known as the ‘precautionary principle’: for new drugs (and other chemicals) to get approval, first they should be proven safe for the environment.

A pioneer organization tackling aspects of this issue is Health Care Without Harm (HCWH), which has been working for about five years to promote ethical standards for hospitals and health care companies, such as not using mercury blood pressure cuffs and thermometers. HCHW is also developing alternatives to incineration for the two million tons of medical waste which hospitals generate each year. All of these organizations have a role to play.

**Q: What’s the difference between their work and yours?**

**JK:** These organizations are doing a great job of trying to modify the conventional medical system to be more ecologically sound. They are saying, given that we need drugs and hospitals, how can we reduce the impact on the environment? I’m trying to open up the question a bit wider. Instead of just looking at the waste generated by medicine, let’s also focus on how the medicines are made and the selection of treatments impacts our ecological health. Do they pollute, or deplete precious resources, or make species extinct? And do we really need

all these drugs and surgeries, or can we use other forms of healing that are gentler on the environment—even positive for the planet?

**Q: What is your bottom line about Ecologically Sustainable Medicine?**

**JK:** I see an enormous potential for balancing our relationship with the environment through the development and use of Ecologically Sustainable Medicine. Michael Lerner, founder of Commonweal and The Collaborative on Health and the Environment, discusses the idea of a teachable moment. He feels that as a culture we are in a teachable moment as we have come to understand the negative effects of toxic waste on our health and the health of our planet.

Similarly, I believe that personal illness affords a teachable moment. By making a healthy choice as to what type of medicines we use and what we put in our body, we can have a profound impact on the environment. By using ESM we produce little waste while supporting a healthy balance between humans and the environment. The environmental potential is amazing, and we already have the technology available.

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- 1 Ohio State University Research Bulletin 150-99 [http://ohioline.osu.edu/sc150/sc150\\_\\_1.html](http://ohioline.osu.edu/sc150/sc150__1.html)
- 2 Buhner, S.H.(2002) *The Lost Language of Plants*. White River Junction, VT: Chelsea Green Publishing (See review on page 22).
- 3 <http://www.premarin.org/>

RESOURCES

- Ecologically Sustainable Medicine: [www.teleosis.org](http://www.teleosis.org)
- Health Care Without Harm: [www.noharm.org](http://www.noharm.org)
- Science and Environmental Health Network: [www.sehn.org](http://www.sehn.org)
- United Plant Savers: [www.unitedplantsavers.org](http://www.unitedplantsavers.org)



*Dr. Joel Kreisberg, DC, CCH, is the Director of the Teleosis Foundation, founder of the Teleosis School of Homeopathy, and a practicing homeopath and chiropractor in Berkeley, CA. He lectures nationally on Ecologically Sustainable Medicine.*

**By making a healthy choice as to what type of medicines we use and what we put in our body, we have a profound impact on the environment.**



Almost all major infectious diseases worldwide are becoming resistant to existing treatments.

## Bacteria in the News

THE FOLLOWING ARE HEADLINES ABOUT BACTERIA

FROM RECENT NEWS STORIES.

### Strep Throat Bacteria Show Resistance to Antibiotics

A recent study from the U.S. reports an outbreak of Group A Streptococci (GAS) that are resistant to erythromycin, an antibiotic commonly used to treat strep throat. GAS are the most common cause of strep throat, a disease that can lead to rheumatic fever in a small percentage of patients. In a study reported in the *New England Journal of Medicine*, 48% of throat cultures from schoolchildren containing GAS were resistant to erythromycin.

**SOURCE:** *NEJM* 2002 Vol 346, No. 16:1200-1206. April 17, 2002

### Drug Resistance Growing In US Strep Strains: Study

NEW YORK (Reuters Health): More and more strains of *Streptococcus pneumoniae*, a bacterium that causes pneumonia, meningitis, ear infections and other infections, are becoming resistant to antibiotic medications in the US, researchers report. The researchers predict that by the summer of 2004, 41% of *S. pneumoniae* strains will be resistant to both penicillin and erythromycin.

**SOURCE:** *Nature Medicine* 2003; 10: 1038/nm839. March 10, 2003

### AMA: Don't Prescribe Antibiotics for Potential Bioterrorism

The American Medical Association (AMA) is advising physicians not to give antibiotic prescriptions "just in case" of an anthrax attack. The AMA suggests that patients could take the antibiotics unnecessarily which can lead to greater antibiotic resistance. The AMA notes that antibiotic resistance is a public health threat in its own right. (October 15, 2001)

### Drug Resistance Threatens To Reverse Medical Progress: WHO Report

Dr. David Heymann, Executive Director for Communicable Diseases at the World Health Organization, and Dr. Jeffrey Koplan, Director of the US Centers for Disease Control and Prevention, recently issued a press release entitled "Drug Resistance Threatens to Reverse Medical Progress." WHO warns in its recent annual report on infectious diseases, "Overcoming Antimicrobial Resistance," that the world is facing a dangerous situation as once-effective medicines are becoming increasingly ineffective. Dr. Gro Harlem Brundtland, Director-General of WHO, stated that, "We risk losing these valuable drugs—and our opportunity to eventually control many infectious diseases—because of increasing antimicrobial resistance."

The report details how almost all major infectious diseases worldwide are slowly but steadily becoming resistant to existing treatments: “In Estonia, Latvia, and parts of Russia and China, over 10% of tuberculosis (TB) patients have strains resistant to the two most powerful TB medicines. Because of resistance, Thailand has completely lost the means of using three of the most common anti-malaria drugs.

“Approximately 30% of patients taking lamivudine—a drug recently developed to treat hepatitis B—show resistance to therapy after the first year of treatment. A small but growing number of patients are already showing primary resistance to AZT and other new therapies for HIV-infected persons. In the United States alone, some 14,000 people are infected and die each year as a result of drug-resistant microbes picked up in hospitals. In many instances, poorly planned or haphazard use of medicines has caused the world to lose these drugs as quickly as scientists have discovered them.”

**AMA Recommends Restricting Antibiotic Use In Animals**

The policy-making group of the American Medical Association (AMA) adopted a resolution at its 2001 annual meeting opposing the sub-therapeutic uses of antimicrobials in animal agriculture and called for regulations to support this stance. The AMA resolution says that almost 80% of anti-microbial use in agriculture is for growth

promotion, as pesticides, or prophylactic (disease prevention). The resolution notes that this prolonged low-level use of antimicrobials is likely to promote the development of resistance. The resolution states that the increase of antimicrobial resistance is a threat to human health. (June 2001)

**Antibiotic-Resistant Bacteria In Human Colon**

Bacteria that normally reside in the human colon have been found to be significantly more resistant to the antibiotic tetracycline than colon bacteria of thirty years ago. A recent study funded by the National Institutes of Health has shown that *Bacteroides*, a strain of bacteria not harmful in the lower intestines, but often life-threatening when they escape during surgery or trauma, increasingly carry a gene that confers this resistance. Furthermore, this gene can be passed from bacteria to bacteria, regardless of species, in a form of bacterial sex that transfers segments of their DNA. Eighty percent of colonic bacteria are now carriers of this gene, demonstrating just how rapidly the genetics of resistance can spread through a bacterial population.

**SOURCE:** University of Illinois at Urbana-Champaign, 10/8/1999, <http://www.sciencedaily.com/releases/1999/10/991008075908.htm>

**Our Mission**

The Teleosis Foundation is devoted to the principles of Ecologically Sustainable Medicine (ESM). The Foundation has four major goals:

**To educate**

health professionals, environmentalists and the general public about the principles of Ecologically Sustainable Medicine.



**To provide access**

to high quality, cost-effective Ecologically Sustainable Medicine through low-cost integrative health clinics for underserved communities.



**To train**

medical professionals in ESM.



**To provide a community**

network for those who are teaching, researching or practicing ESM.

For more information:

**[www.teleosis.org](http://www.teleosis.org)**





Bacteria stabilize  
the atmospheric  
gases that humans  
as well as all  
animals and plants  
require.

## Sex, Symbiosis and Antibiotics

Many of us are aware that there is an emerging crisis around the overuse of antibiotics. Mainstream medicine has us believe that the solution to this crisis is new and better antibiotics. However, if one looks closely at the interrelationship of bacteria and their relationship to the planetary ecosystem, it becomes clear that there is a better approach. The following article looks at the science of bacteria from the larger perspective of their function in the ecosystem. We need to reconceive our relationship to bacteria, not simply continue on the path of eradicating the latest “bad” ones.

BY JOEL KREISBERG, DC, CCH

### Bacteria Have Sex With Dead Partners

Fredrick Griffith discovered in 1928 that living pneumococci are capable of acquiring traits from other pneumococci even though the latter organisms are dead. (Margolis & Sagan 1986) This property of bacteria initiated the research leading to the discovery of DNA in 1944. DNA does not have to be living to be able to transfer information to live bacteria. Watson and Crick were awestruck by this feature of DNA and subsequently studied bacteria, thoroughly articulating how DNA worked in 1953.

**COMMENTARY:** *Actually, reproduction for bacteria, as for most living things, is much different than the usual reproductive process of the animal kingdom. Sex is not required for members of the other four kingdoms of living things (bacteria, protocista, fungi, and plantae).*

### Bacteria Reproduce In Three Ways— All Without Sex

Bacteria grow larger, then simply divide in half. They also bud, meaning that their DNA replicates, then a small portion of the mother cell forms a separate cell and breaks off, growing into another adult. A third way

involves the DNA of bacteria becoming encased in a spore that survives rough times to reemerge as a new bacterium when conditions are favorable.

**COMMENTARY:** *In vertebrates, reproduction and the exchange of genes occur simultaneously. In bacteria, reproduction has little if anything to do with genetic exchange, which takes place independently from reproduction.*

### Bacteria Have Sex Any Time

Genetic exchange (bacteria’s version of sex) happens all the time. Bacteria are prokaryotic cells, meaning they do not have a single nucleus that holds the genetic material in one central place. Therefore they are constantly exchanging bits and pieces of their genetic material in a rather random fashion. Since there is much less genetic material in prokaryotic cells, individual bacteria operate with a ‘bare-bones’ minimum set of instructions for maintenance and replication.

If there are situations that require more information for bacteria to function, they use visiting genetic particles called ‘replicons’. These replicons are shared during bacterial sex. Sometimes they are used and incorporated into the DNA of individual bacterium. Sometimes they are used on their own, like a ‘satellite’ strand of DNA.



**COMMENTARY:** *Why is this so important? Because these reproductive and genetic skills mean that all bacteria potentially share the same genes. Different bacterial species in the formal sense do not exist.*

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### All Bacteria Are One Organism

This giant superorganism is capable of genetic engineering on a planetary or global scale. Small replicons can travel from one bacteria to another in a process known as transduction. Another technique called conjugation involves a tiny tube forming between two cells. These are two exceptional ways that bacteria can share immunity (to household disinfectants, drugs, chemotherapy, and even radiation). These exchanges happen so frequently, there are few if any individual bacteria. In many ways, there is one bacterium superorganism (Margolis & Sagan, 1986).

**COMMENTARY:** *The point is that bacteria never function as individuals. They work as a team in any given ecological niche. Lynn Margolis and Dorion Sagan believe that bacterial teams act as organs do in animal bodies. “Dispersed, as our blood cells, in any viable corner of our planet, the composition of a given team becomes adjusted for local conditions. The arrangements are dynamic, ready to change or to start in a new way if conditions around them change . . . The teams even maintain their own microclimate and temperature control. In addition, throughout the biosphere bacterial teams interact with various plants, animals, and fungi . . . These larger consortia also operate with the dynamic harmony of a single organism.” (Margolis & Sagan, 1986 p. 91-92)*

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### Bacteria Condition The Entire Planet

Bacteria are responsible for the cycling in the biosphere of organic and inorganic matter such as carbon, nitrogen, and sulphur. Bacteria purify water and render soils fertile. They recycle a constant fresh supply of the important gases that make up earth’s atmosphere. James Lovelock (1983) argues that these microbial-produced gases act as a control system stabilizing the living environment.

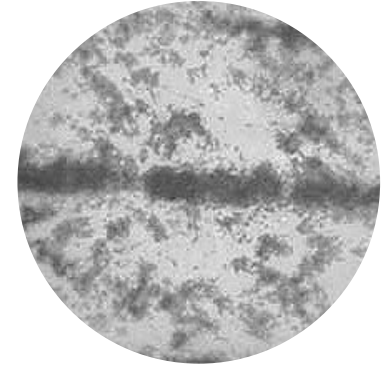
**COMMENTARY:** *Because bacteria and the environment are so interwoven, there is no clear boundary between life and inorganic non-life. Bacteria everywhere are at this edge, and they live there very successfully.*

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### Bacteria Are Immortal

Because bacteria trade genetic information in the same generation—directly to their neighbors—they are functionally immortal. While an individual organism may die, its genes live on and can be passed along indefinitely. Teams of bacteria are continually selecting the best solutions to maintaining life on earth. Bacteria stabilize the atmospheric gases that humans as well as all animals and plants require. The surface environment remains stable for other life forms, including animals and plants. Without bacteria we humans couldn’t exist.

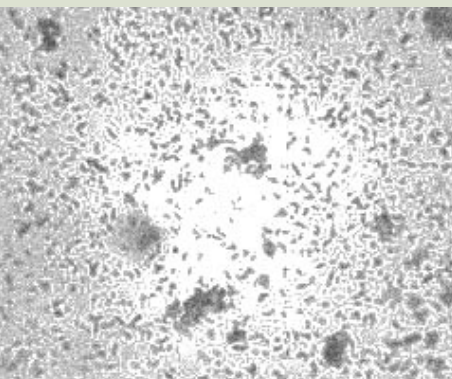
**COMMENTARY:** *A deeper way of looking at it is to say that bacteria have a symbiotic relationship with all other life forms on the planet. Symbiotic means that the relationship between bacteria and most life forms (including humans) is mutually beneficial. There may be up to one trillion bacteria on the skin of a normal, healthy human being. The total bacteria living around and inside an individual human weighs close to one pound. (Lappe, 1995)*



**The point is that bacteria never function as individuals. They work as a team in any given ecological niche.**



Alexander Fleming,  
the discoverer of  
penicillin, predicted  
back in 1945 that  
it would lead to  
resistant bacteria.



### Antibiotics Produce Drug-Resistant Bacteria

In 1942, Merck and Company introduced a new drug—penicillin—in a live clinical trial. Penicillin, isolated from mold by the British scientist Alexander Fleming in 1928, had shown its ability to destroy staphylococcus, a bacteria causing infection through the skin. The results for the burn victims from the Coconut Grove fire in Boston brought this drug into the limelight, offering new hope in the search for medical treatments. Yet Alexander Fleming himself predicted the development of resistant bacteria within three years of penicillin's introduction. In a little-known comment in 1945, he suggested that the misuse of penicillin would lead to mutant forms of bacteria that become resistant to this drug. In fact he had already grown those strains of bacteria. By 1946, 14% of the strains isolated from sick patients were resistant to penicillin, and nearly 60% were resistant by the end of the decade. (Levy 1998)

**COMMENTARY:** *Initially these shocking findings were only true in city hospitals, but by the middle of the 1970s these resistant bacteria began to appear throughout community hospitals and finally throughout local communities.*

### Drug-Resistant Gonorrhea Spreads in SE Asia Brothels

Scientists believe that resistant strains of gonorrhea grew because penicillin had been routinely given prophylactically in brothels in southeast Asia, where servicemen were in regular contact with prostitutes. *H. influenzae* was resistant to penicillin. It turns out the gene in gonorrhea was the same one found in *H. influenzae*. The identical gene had been picked up by these two different bacteria. (Levy 2002 p. 12)

**COMMENTARY:** *The problem with resistant strains of bacteria goes beyond simply finding new antibiotics when old ones don't work. After the initial peak of antibiotic effectiveness, many of the bacterial diseases thought to be under control do not just return, they become increasingly difficult to treat. In 1942, there were 600,000 cases of syphilis in the United States. By 1955 there were less than 100,000. But in 1985 syphilis infections began to rise sharply again. Salmonella infections have increased dramatically over the last 30 years; tuberculosis and pneumococcal pneumonia are on the rise after years of decline. (Lappe, 1995) These infectious diseases have become resistant to most antibiotics.*

### Resistant Bacteria Can Destroy Antibiotics

At this very moment tetracycline, trimethoprim, sulfonamides, and quinolones are met by more and more resistant bacteria. Since non-resistant bacteria can't survive these drugs, resistant forms are more prosperous. The resistant bacteria even learn how to destroy antibiotics "Antibiotics are deposited in the environment via human and animal excrement in a 'post-treatment' phase, where they can continue to select resistant bacteria. This period may be called their 'life after treatment'." (Levy p. 102)

**COMMENTARY:** *Antibiotics are now found in soils and municipal waters. These low concentrations will continue to place selection pressure, killing non-resistant forms of all bacteria and thereby favoring resistant forms.*

### Cipromania, Anthrax, and the Fear of Bioterrorism

"The run on *Cipro* thus becomes a further threat to our national health and welfare.

Ingestion of this drug by millions of people who stockpiled it will cause a significant change in the microbial environment.” (Levy, p. 318) One unintended consequence of the events of 9/11 is the stockpiling of the antibiotic Cipro. The use of massive doses of antibiotics will accelerate the shift towards more and more resistant strains of bacteria. Self-medication and antibiotic overuse will have a significantly greater detrimental effect on our long term health than the number of anthrax attacks we have currently suffered.

**COMMENTARY:** *The use of antibiotics for confirmed cases of serious illness such as anthrax is not in question. However, the misuse of antibiotics on a mass scale—to prevent a disease before there is even exposure—has the potential for devastating ecological damage. It will produce infectious illnesses that are far more difficult to treat. (See “AMA: Don’t Prescribe Antibiotics for Potential Bioterrorism” in *Bacteria in the News*, p. 6.)*

**Humans Develop Natural Immunity To Bacterial Pathogens**

Human beings normally adapt to bacteria in a relatively short time, even those causing epidemics of fatal illnesses. “The adaptive processes which increase resistance to infection are an important aspect of ecological equilibrium between microbes and their potential victims.” (Dubos 1959 p. 66) In numerous epidemiological studies, human-bacterial interactions always lead to ecological equilibrium.

The initial response to virulent bacterial exposure involves epidemic mortality. However, by the fourth generation of exposure within a family, susceptibility often drops to less than 1%. More importantly, bacterial infections take a more chronic course involving less virulent expression (Dubos 1959) An example of this is polio,

which is now endemic in Africa, rarely causing symptoms more serious than a respiratory infection.

**COMMENTARY:** *Rene Dubos, a contemporary of Fleming, isolated soil bacteria with antimicrobial activity as early as 1939. This led to the isolation and production of several important bacterial-based antibiotics. Dubos predicted the limitation of the bactericidal approach, foreseeing antibiotic-resistant bacteria. Dubos’ continued research into bacteria’s symbiotic/parasitic relationships and the role of antibiotics revealed startling ecological implications.*

**Killer Microorganisms Usually Produce Only Self-limiting Diseases**

If a parasite kills its host, ultimately the parasite itself is destroyed. No host, no food. To Dubos’ mind it would seem that a successful parasite allows its victim “as much life as possible.” (p. 77) Inevitably, an equilibrium is established.

**COMMENTARY:** *Many disease-causing organisms, even fatal ones, can persist in humans for extended periods without causing any illness at all. “Disease, when it occurs, is due to a change in the conditions under which the ecological equilibrium had evolved.” (Dubos p.19) Dubos argues that these changes are caused by many factors, either internal or external, including but not limited to weather, nutrition, work habits, economic status or emotional stress.*

*The common notion that the presence of bacteria or virus equates with the presence of the illness may not be entirely accurate. For example, recent research into the prevalence of streptococcal bacteria shows that a large percentage of the human population harbors it without showing any symptoms. When the immune system is lowered, symptoms can arise from the resulting overgrowth of bacteria.*



Disease, when it occurs, is due to a change in the conditions under which the ecological equilibrium had evolved.



Disease decreases  
when flexibility  
within the  
environment  
increases, leading  
to improved states  
of well-being.

### Do Germs Cause Diseases, Or Diseases Cause Germs?

“The characteristic microbe of a disease might be a symptom instead of a cause.” (G.B Shaw in Dubos 1959) The difference between health and disease, symbiosis and parasitism is one of equilibrium. Many, if not most, bacterial diseases express failure of equilibrium. “The outcome of the interplay between two individuals is determined not only by their intrinsic endowments but also, and even more, by the conditions under which they come into contact.” (Dubos p. 75)

For example, a frequent contemporary illness is the problem of ‘yeast’ (overgrowth of *Candida albicans*). *Candida* is part of the normal microbial flora in healthy humans. This yeast overgrowth and associated symptoms are not the real disease. Why yeast grows unchecked is the issue. Symptoms of ‘yeast’ are caused by a weakened immunity, allowing the yeast to grow out of control. The ecological equilibrium has shifted, allowing an explosive overgrowth of yeast.

**COMMENTARY:** *Ecological equilibrium is established out of necessity, either through immune functioning, adaptation, or in the grossest form, survival of the fittest. As noted before, over several generations, even the most virulent form of pathogen will stabilize, returning to a less virulent equilibrium. This could be viewed as a function of the larger immune system of planetary ecology. (Lovelock 1988)*

### Bacteria ‘R’ Us

Bacteria have evolved as an integral symbiotic partner in the functional health of our cells. Mitochondria as well as the

cilia are thought to be permanent evolutionary adaptations of early symbiotic bacteria. (Margolis & Sagan 1986) Intestinal bacteria are an easily recognized example of symbiosis: they produce our vitamin K, biotin, and riboflavin, to name a few nutrients. Shifting away from a pathogenic model of health and disease to an ecological perspective favoring organismic equilibrium within the biosphere will promote strength and vitality for many of the organisms involved in the relationship.

**COMMENTARY:** *Many of the complementary and alternative medical practices, including acupuncture, homeopathy, chiropractic and osteopathy, are ecologically sustainable because they improve the capacity for humans to maintain equilibrium with their environment. Proper metabolic functioning, biomechanical integrity, nutrition, and emotional and spiritual well-being promote healthy relationships with the macroenvironment as well as a healthy internal environment. Increased ecological equilibrium between human beings and the biosphere can be achieved. Disease decreases when flexibility within the environment increases, leading to improved states of well-being.*

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*Spotlight on ESM Therapies*

THE FIRST IN A SERIES HIGHLIGHTING SPECIFIC HEALING MODALITIES WITHIN ESM

## Ortho-Bionomy: The Homeopathy of Bodywork

BY LUANN OVERMYER

Ortho-Bionomy is a gentle, effective approach to somatic re-education that uses comfortable positioning and relaxing movements to unlock tension, relieve pain, promote structural balance, reduce stress and increase personal awareness and well-being. Ortho-Bionomy incorporates a wide spectrum of techniques ranging from hands-on contact to non-physical contact with the client's energy field to initiate innate, self-corrective reflexes that remind the body of its own natural ability to find balance.<sup>1</sup>

In a typical session the client, clothed and without shoes, lies on a table and identifies any areas of discomfort; the practitioner slowly moves the client into positions of comfort that allow patterns of tension to release and to be replaced by a sense of well-being. Ortho-Bionomy addresses a remarkable number of painful and debilitating physical and emotional conditions; it is taught and recognized worldwide for its simple, gentle and lasting effectiveness.

### Origin and History

The philosophical and scientific roots of Ortho-Bionomy lie in the field of Osteopathy. This 100-year old system of health care recognizes the self-healing, self-regulating capacity of the body, and seeks to facilitate and augment the basic curative force inherent in the body. Osteopathy has developed a system of treatment that

acknowledges the relationship of the physical structure of the body (both osseous and somatic) to the self-healing potential of the individual.<sup>2</sup>

A particular osteopathic treatment procedure, known as positional release, was developed by Lawrence Jones, an American osteopath. In 1964, Jones described in an article, "Spontaneous Release by Positioning," that pain and tension could be relieved in a few minutes by slowly and carefully exaggerating an abnormal posture so as to make the patient maximally comfortable. He found that muscle spasms that had been holding the bones in an abnormal position would spontaneously relax without a forceful manipulation.

Arthur Lincoln Pauls, a British osteopath, was inspired by Jones' work to dedicate himself to the principles of non-force corrective techniques. By 1976 Pauls had developed the Phased Reflex Techniques of Ortho-Bionomy. These techniques encompass positional release and energetic techniques that enable the client to understand, consciously experience and even participate in their own capacity to self-correct.

### In Conventional Health Care

Ortho-Bionomy's primary benefits lie in helping people to break the cycle of pain, to correct structural and somatic dysfunction, and to release stress. This non-invasive, quick acting approach is an effective preparation



*Luann Overmyer is a Nationally Certified Therapeutic Bodyworker and a Registered Senior Practitioner and Advanced Instructor with the Society of Ortho-Bionomy, International. She teaches Ortho-Bionomy seminars in the United States and Australia, and maintains a private practice in Albany, California. Luann has developed techniques to address carpal tunnel syndrome and neuritis conditions of the arm and is currently writing a book on Ortho-Bionomy self-care.*





*Courtesy of North Atlantic Books*

**This respectful  
non-force approach  
affirms the natural  
wisdom of the body,  
offering the client  
possibilities for  
change.**

for movement and therapeutic exercise. Ortho-Bionomy incorporates a re-education process that includes isometric and isotonic techniques, posture and gait training, awareness-based therapeutic exercise and positional release as part of the client's self-care program.

Ortho-Bionomy facilitates the therapeutic process. The body is always moved in the direction of comfort, allowing the client to relax and develop trust in the practitioner's hands and the therapeutic process. With Ortho-Bionomy the client experiences a greater sense of well being and ease from within, and learns to move toward comfort and away from pain. The client becomes physically and mentally attuned to inherent possibilities of change.

The key to the effectiveness of Ortho-Bionomy lies in the reflex activity and in the proprioceptive nervous system. This system generally works below normal waking consciousness, shaping posture and movement patterns by registering and adapting the body's subtlest responses to a lifetime of experience.

In Ortho-Bionomy, the slow movements, gentle positioning and slight compression stimulate the proprioceptors at a pace that allows the client the opportunity to be consciously present and attuned to the stored experience within these movement patterns. Proprioceptively, the client is offered alternative and more functional patterns. This respectful non-force approach affirms the natural wisdom of the body, offering the client possibilities for change.<sup>3</sup>

The techniques of Ortho-Bionomy educate the client to recognize which positions relieve pain or stress. Finding these optimum positions stimulates self-correction and interrupts the reflex arc that perpetuates the pain cycle. This is especially useful in chronic cases where the trauma pattern has been proprioceptively incorporated.

For example, take the case of a woman who suffers an injury that disturbs her normal, healthy structural pattern of movement.

She adapts to the trauma and develops compensation patterns somewhat more limiting, perhaps painful, yet still functional.

The practitioner, guided by the client's preferred posture and subtle movement, supports and follows the movement patterns inherent in the tissue. This allows the client to self-correct her own structural faults, while at the same time releasing any emotional and mental trauma that may have been generated by the injury and stored in the compensation posture.

Through the action of the proprioceptive system the client can release the trauma, resistance and pain, increase her range of motion, and learn to integrate more effectively her physical, emotional, and mental experiences.<sup>4</sup>

In effect, Ortho-Bionomy is compatible with any system of traditional medicine. These techniques have already been incorporated into a variety of health care settings: medical offices, physical therapy clinics, sports medicine clinics, outpatient chemotherapy clinics, HIV and AIDS clinics, dental and chiropractic offices. Ortho-Bionomy is currently being used by osteopaths, nurses, manual lymph drainage therapists, physical and occupational therapists, massage therapists, bodywork practitioners, counselors, psychotherapists and social workers.

#### **In Allied Health Care Practices**

Conventional allied health care benefits from integrating Ortho-Bionomy in several ways. The techniques work quickly to release pain and discomfort. The average position of release is only held for 20-60 seconds, yet the relief can be profound. The client becomes engaged in the therapeutic process, learning that pain is not endless, and that comfort is a realizable outcome. Health care practitioners find that once pain is relieved, patients can communicate more coherently about their symptoms and take a greater role in their healing process. Patient resistance to therapy is eliminated and recovery time can be reduced.

The work has been safely and extensively applied for a wide variety of orthopedic

conditions. Ortho-Bionomy has totally eliminated pain in post-surgical patients with bilateral hip replacements who could not tolerate any extrinsic movement. It is used to address the chronic and acute pain of scoliosis. Low back conditions and sciatica problems quickly resolve with the techniques and gentle exercise program of this work.

Physical therapists use Ortho-Bionomy positional release to relieve muscle pain and spasms, muscle imbalances, and increase range of motion. The techniques prepare the soft tissue and joints for mobilization, movement, therapeutic exercises, and more direct stretching and soft tissue work. Ortho-Bionomy is a useful adjunct to traditional physical therapy as it uses physiological principles that allow healing and release to come from within. Internal cues increase proprioceptive awareness to allow reintegration, realignment, and the release of habitual or compensated postural and movement holding patterns.

Ortho-Bionomy effectively treats sports injuries by stimulating natural neuromuscular reflexes to reduce swelling, decrease pain, increase range of motion, and enhance healing capacity.

In chiropractic clinics, Ortho-Bionomy balances muscle dystonia and dysfunctions, increases joint mobility and range of motions, and especially re-educates muscle spasm in preparation for joint mobilization and adjustment.

Ortho-Bionomy is highly effective in dealing with the side effects of cancer treatment. It alleviates discomfort secondary to surgical procedures including frozen shoulder and pain due to access port surgery. It also relieves nausea, lack of energy, and discomfort during chemo therapy sessions.

The hands-on component of physical touch helps the cancer patient to relax, to reintegrate a somatic sense of their bodies, and to alleviate fear. Patients appreciate the opportunity to engage and focus on their bodies within a wellness perspective that

encourages a sense of their natural healing capacity. Their somatic and emotional feelings are acknowledged in a safe and supportive manner.

Ortho-Bionomy allows cancer patients to slow down, experience and reintegrate their sense of themselves in a somatic way that focuses on wellness and quality of life. The work helps them to understand how stress and fear affect the body and to implement somatic techniques that empower them to alleviate their own pain and discomfort.

Orthopedic surgeons, neurologists, doctors, acupuncturists, nutritionists, psychologist, massage therapists and chiropractors all refer patients to independent practitioners of Ortho-Bionomy. These professionals find that a wide variety of physical and emotional conditions respond to Ortho-Bionomy's non-invasive techniques. The gentle approach allows for physical, mental, and emotional effects of trauma to be released effortlessly and re-alignment and reintegration to occur naturally.

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- 1 Society of Ortho-Bionomy, International®, P.O. Box 257899, Chicago, IL 60625-7899, (800) 743-4890, offers information on practitioner training programs, a newsletter with a schedule of classes throughout the United States, Canada and Europe, and sells a directory listing Registered Practitioners and Instructors by state and country. Recommended reading: *Ortho-Bionomy, A Manual of Practice*, Kathy L. Kain with Jim Berns, is available from North Atlantic Books, P.O. Box 12327, Berkeley, CA 94712.

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- 3 Overmyer, *ibid*.
- 4 *ibid*



**Ortho-Bionomy  
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and quality of life.**



Courtesy of North Atlantic Books



## Integral Homeopathy

Integral Homeopathy is a newly evolved form of homeopathy with even closer ties to ESM, since it is based on three principles:



**stimulating healing** within ourselves, our patients and our community on all levels: body, mind, heart, and spirit;



**fostering cooperation** between practitioners and the broader community of professional healers;



**affirming interdependence** with our natural environment through ecologically sustainable practices.



## Integral Homeopathy

The previous publication of the Teleosis Foundation, *Integral Homeopathy*, has now been incorporated into *Symbiosis* as a regular column.

# Three Faces of Borage: Medicinal Herb, Homeopathic Remedy, Flower Essence

BY JOEL KREISBERG, DC, CCH

For thousands of years, wise women and shamans have cultivated the lore of medicinal plants, based on their intuitive inner perception, their observation of the plants in the wild, and their experiences with plants as healers. The ancient herbal tradition focused primarily on physical healing, with some relatively rudimentary and generic potions for mental and emotional conditions.

Homeopathy, developed 200 years ago, is a relative newcomer in the field of natural medicine. Yet its founder, the German physician Samuel Hahnemann, translated texts of herbal medicine from around the world and used medicinal herbs as the primary source of his newly formulated pharmacy. From the very beginning homeopathy was deeply rooted in the rich lore of herbal knowledge from the ancient past.

The refinement process of the homeopathic pharmacy brought out the subtle power of plants to heal a range of issues including mental, emotional, behavioral and energetic imbalances. Yet homeopathic remedies maintained the strengths of their herbal predecessors in addressing physical conditions as well.

Still more recently, the flower essence system of healing has taken the medicinal uses of plants to yet another level of refinement. Developed first by English physician Edward Bach, the flower essence system focuses entirely on emotional healing, based

on the principle that healing on the soul level will heal ailments on the physical level.

### Integral Homeopathy

Integral Homeopathy bridges ancient herbal lore, classical homeopathy and the modern practice of flower essences therapy. Integral Homeopathy offers a more complex use of medicines, by considering a variety of perspectives.

All three traditions—herbs, homeopathy, flower essences—use medicinal plants in ways that overlap, yet each maintains its own perceptual lens. This article examines how each of the three healing modalities views plants and their powers to heal, using as a model the common pot-herb borage. Borage will first be introduced through the objective lens of botany, as *Borago officinalis*.

### Traditional Botany

Thought to originate in Syria, borage is now naturalized throughout most of Europe and the United States. It flourishes as a weed near houses and on rubbish heaps. While many modern gardeners consider it a nuisance, it was traditionally grown in gardens to use as an herb, for its edible flowers, and for its ability to increase the yields of honey.

The plant is easily recognized by its white prickly hairs and its bright blue star-shaped flowers. It grows to about 1-2' high,



with many hollow, almost succulent branching stems. The ovate to lanceolate leaves are 3" long and 1-1/2" wide, growing in an alternate pattern up the stems. The lower leaves are stalked, with stiff one-celled hairs on the upper surface as well as on the veins below. The deep green leaves have sinuous, wavy margins. The inch-wide bright blue star-shaped flowers have prominent black anthers forming a cone in the center. The fruits consist of brownish-black nutlets in groups of four.

Borage does well in ordinary soil. It can be propagated by division of rootstocks, however, it is easily grown from seed, which it does quite successfully on its own year after year. The seeds often grow in the same place. (Hoffman 1995)

### Constituents

According to the US Department of Agricultural, borage contains:

- macronutrients such as carbohydrates, protein, fats, fiber, glucose and galactose, and gamma-linolenic acid (an essential fatty acid)
- vitamins such as ascorbic acid (vitamin C), beta carotene (pro-vitamin A), and choline, niacin, riboflavin and thiamine (elements of the B complex)
- minerals including calcium, cobalt, iron, magnesium, phosphorus, potassium, sodium and zinc
- other plant compounds including allantoin, lactic acid, malic acid, mucilage, rosmarinic acid, and tannin (Warkinton 2002)

### Origins of the Common Name

While there are many popular theories as to the origin of the name 'borage,' it is believed that the Latin *borago* is a corruption of the word *corrago*, having the root *cor*, 'heart', and *ago*, 'I lead.' The plant was said to have a 'cordial' effect, i.e. to have a tonic and strengthening effect on the heart.

The Italian *borra* and French *bourra*, signifying 'hair' or 'wool,' are derived from the Latin *burra*, 'a flock of wool.' These names for the plant apparently refer to its thick covering of short hairs.

Interestingly, the herbalist Henslow suggested that the Celtic *barrach*, meaning 'a man of courage' relates to the borage plant as well. (Grieve 1971)

### Historical Herbal Use

The French herbalist Gerard discussed borage by referring to the ancient Greek naturalist Pliny, who said that the plant 'maketh a man merry and joyful.' (Hoffman 1995) Dioscorides, the first century Greek physician, mentioned the use of borage to 'comfort the heart, purge melancholy and quiet the lunatic person.' Both Pliny and Dioscorides believed borage was the famous *nepenthe* of Homer, which when steeped in wine brought about forgetfulness.

John Evelyn, the seventeenth century English herbalist, spoke of borage 'to revive the hypochondriac and cheer the hard student', while his contemporary Culpepper used the plant for 'putrid and pestilential fever, the venom of serpents, jaundice, consumption, sore throat and rheumatism.' (Hoffman 1995)

The tops of borage were used throughout Europe as a pot-herb for making soups and stews, and the young leaves were often added to salads. With a faint cucumber-like flavor, the leaves can impart coolness to sweetened drinks. It has been added to vinegars and wine to enhance flavor, and the flowers were traditionally made into candies.

Modern herbals consider this plant a diuretic, promoting the activity of the kidneys; a demulcent, soothing raspy sore throats; and an emollient. (Grieve 1971) It is also used for fevers and pulmonary complaints. Other modern herbalists use borage as a restorative for the adrenal cortex for people who are overworked, exhausted and burned out. The leaves stimulate



Courtesy of the Flower Essence Society

The herbalist  
Henslow  
suggested that the  
Celtic barrach,  
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courage' relates  
to the borage plant  
as well.



production of milk in nursing mothers. (Hoffman 1995)

Modern clinical trials have shown that borage seed oil “reduces cardiovascular reactivity to stress by reducing the systolic blood pressure and heart rate and by increased task performance.” (Haughton 2001) It helps prevent inflammation of the gastrointestinal mucosa in cases of allergy and infection, and it may also assist in iron absorption. It has also been useful as an eyewash to relieve irritation. It has an expectorant action, promoting the loosening of phlegm in a cough.

The oil is rich in gammalinolenic and linoleic acid, used as a source of prostaglandins to treat menstrual problems and chronic skin conditions. Combined with evening primrose oil, it helps reduce blood cholesterol levels. (Haughton 2001)

#### Homeopathic Medicine and Empiricism

As Samuel Hahnemann established the principles of homeopathic medicine between 1796 and 1804, one of the key tenets was that the action of a medicinal substance is ‘discovered’ through an empirical process or ‘proving.’ This process involves healthy people ingesting the substance and empirically noting, by self-observation, all the resulting physiological and psychological changes.

Borage has recently been added to the homeopathic pharmacopeia through such a proving, conducted by four provers under the supervision of Stephen Olsen. The resulting proving journals were published (Olsen 1997) and will be briefly summarized here. The combined experience of these provers point to a remedy type of a strong-minded person who has difficulty compromising. This type of person becomes hard and abrasive or even angry to the point of rage if not listened to and from an inability to listen to others and to see different points of view.

A person needing Borage fears failure. They feel that it is their duty to take on all

the responsibility in a given situation, resulting in resenting their role in life. Somatically this attitude can be expressed as stiffness in the joints, high blood pressure, tension headaches and flaring eczema. People needing the remedy borage tend to be warmer than others and to feel worse in the heat.

It seems this ‘borage type’ may have a history of taking on the role of parent in their family at young age. If a parent was missing or sick they take on heavy family responsibilities such as looking after younger siblings. Since they are often not ready for this task, they may compensate for their anxiety by taking on a more exaggerated parental nature, becoming overly protective, strict and authoritarian. They are argumentative, forceful, and angry, tending to create tension and to lack flexibility. (Olsen 1997)

There is a sense that they must attend to every detail or a catastrophe will befall the family. By saving others, they are limiting the possibility that they themselves will be abandoned. Gradually they lose any playful, care-free, and spontaneous aspects, because they feel that everything has to be right. They may become very disagreeable and easily offended, resenting the choices of other people.

#### Flower Essence and Goethean Science

Flower Essence Therapy was discovered by Edward Bach in the early 20th century (Barnard 2002) Richard Katz and Patricia Kaminsky (1996) in the development of the Flower Essence Society, have taken the work of Bach and further developed its principles, using Goethean science. Borage is one of the remedies developed by the Flower Essence Society.

Borage, as a flower essence, is for heavy heartedness and lack of confidence when facing challenges. The remedy is said to bring courage to the taker, providing a condition of “buoyancy of the soul”. (Katz and Kaminski 1994) Borage is said to bring “lightness and ebullience to the soul, filling it with optimism and enthusiasm.”



Two thousand years ago Dioscorides noted that Borage ‘cheers the heart and helps drooping spirits.’

The use of Goethean science allows the flower essence approach to consider the ‘gesture’ of the flower and the plant as a whole. The practitioner first observes the plant carefully, then meditates upon the flower, trying to bring a mental image of the plant into the mind. This active or ‘exact’ imagination allows one to “see the essential gesture of the plant” (Katz & Kaminsky). As we tend to our perceptions, our understanding becomes richer.

When I did this with the borage growing in my front yard, I first began to notice the contrast between heaviness and lightness. The stems are thick and the flowers drop back down towards the earth, yet the tiny hairs are light and almost translucent. The leaves have a heavy mucilaginous, watery quality, while the light blue flowers have a richness and lightness of color. The star flower radiates outward, with well defined symmetry. The newly blossomed flowers look up toward the sun before nodding downward with age. This uplifting form bestows lightness and speaks of spiritual harmony.

I chose to meditate with the borage plant when I was feeling heavyhearted myself, and I could feel my inner state resonating with the drooping of the older flowers. Yet the longer I meditated, the more I could feel the lightness and upliftment of the newer flowers soothing my heart.

The full vitality of the plant in spring becomes quiet and calm in the summer months, dying back in the full summer sun. The heavy nodding of the flowers down to earth links borage to usage for venous blood such as phlebitis, where gravity plays a part in the action of the blood stream. (Pelikan 1997)

**Borage: a Remedy for An Integral Homeopathy**

Each healing modality which uses borage—medical herbalism, classical homeopathy and flower essence therapy—illuminates different aspects of this plant. In Integral

Homeopathy, the practitioner uses any of these forms of the remedy, depending on which aspect of the plant is needed.

As an herb, it comforts the heart, bringing cheer, restoring adrenal functioning, promoting lactation in nursing mothers and healing fevers of pulmonary origin. As well, it reduces cholesterol and soothes the gastric mucosa and respiratory tract.

As a homeopathic remedy, it brings playfulness and spontaneity to persons who have been burdened by family responsibility, becoming hardened and resentful. Their argumentativeness stems from their protective nature due to their anxiety about the family’s welfare.

The flower essence promotes optimism and enthusiasm in a person who has suffered burdens experienced in the heart.

A central theme emerges: borage is a remedy for heaviness of the heart, bringing lightness and flexibility. Dioscorides’ remarkable observation of two thousand years ago is consistent with all three modern perspectives: he said that borage ‘cheers the heart and helps drooping spirits.’

May the reader find borage, as a remedy or flower essence or even a living plant to meditate with, as a healing balm for a heaviness of the heart.

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**Modern clinical trials have shown that borage seed oil “reduces cardiovascular reactivity to stress by reducing the systolic blood pressure and heart rate and by increased task performance.”**



### Learn More about ESM

In the past six months, Dr. Kreisberg has spoken on the topic of ESM at several national venues, generating significant interest in this new field among medical professionals, environmentalists, and interested laypeople. Dr. Kreisberg's experiential workshop style adds real depth to the concepts, enabling participants to integrate the material into their experience, often leading to increased awareness of their personal role in generating ecologically sustainable healing for themselves and our planet.

For information about scheduling a lecture or workshop with Dr. Kreisberg, contact [teleosis@igc.org](mailto:teleosis@igc.org).

## News and Announcements

### Alternative Medical Professionals Gathering in Seattle

This past March, at the *7th Annual Alternative Medicine Symposium in Seattle*, Dr. Kreisberg presented a workshop entitled *Medicine and The Planet: The Coming Age of Ecological Medicine*. Sharon Ackerman, a Physician's Assistant from California who participated in the workshop, commented, "Joel's presentation opened my mind and heart to a new level of responsibility—for plants, animals and the people in my life. I walked away from that one workshop with more self-awareness than from anything else in the conference. The learning was very deep because it was experiential.

Sharon concluded "As a medical practitioner serving with the intention to facilitate the deepest level of healing and to 'do no harm', the idea of ESM supports the highest ideal in creating health for people and the planet."

### 1st Annual Leadership Training Program For Complementary and Alternative Medicine (CAM)—Summer 2003

Twenty medical students from across the nation were selected to participate in a weeklong retreat this past summer sponsored by the *American Medical Student Association (AMSA)*, the *National Center for Complementary and Alternative Medicine*, and *Omega Institute*. The goal of the retreat was to help medical students understand more deeply about complementary and alternative medicine as well as engage in leadership skills training.

During the training, Dr. Kreisberg presented a workshop on the Greening of Medicine to this appreciative and engaged

audience of emerging leaders. He also participated in a panel on Holistic Clinical Practice. Participant Steve Turner, the student director of the AMSA commented, "Dr. Kreisberg gave a wonderful talk about environmentally sustainable medicine and generated much discussion around this topic among the audience of medical student leaders and activists interested in improving the practice of medicine. The students were engaged and eager to understand how the health care industry must become more sustainable in the future for the benefit of individuals and the planet as a whole."

### Integrative Medicine at the University of California, Berkeley

Dr. Kreisberg engaged students at the *University of California, Berkeley* as part of the first *Conference on Integrative Medicine*. With over twenty different sessions taught by local practitioners, Dr. Kreisberg's hands-on seminar on ESM brought together a unifying approach to CAM therapies—ecological sustainability. Dr. Kreisberg subsequently taught as a guest lecturer for the spring semester class on Integrative Medicine in the Integrative Biology Department.

### Ken Wilbur's Integral Institute Convenes Conversation about Integral Ecology

Twelve ecologists met with Ken Wilbur in June to begin a groundbreaking conversation about integral ecology. Participants included such thought-leaders as Michael Zimmerman of Tulane University and Robert Greenway, leading wilderness psychologist. Dr. Kreisberg shared the principles of ESM in the context of Integral Ecology, advocating that the impact of medicines on the environment must be



included in any theoretical model of ecological health. Dr. Kreisberg's work will be included in the new website for the Integral Institute *The Multiplex*  
<http://www.integralinstitute.org/multi.cfm>

#### **ESM on WZBC in Boston**

*Symbiosis* editor Begabati Lennihan was interviewed on Boston's WZBC-FM on July 19 on homeopathy and ESM. "I find that ESM is one of those concepts that brings about an immediate 'aha' moment. For many of us it makes so much sense—it brings together our commitment to holistic health care and to the environment—that we're surprised we didn't think of it before."

#### **Upcoming Events**

*SolFest in Hopland, CA – August 23-24*  
 Dr. Kreisberg will conduct a workshop on ESM at the upcoming SolFest – Renewable Energy & Sustainability Festival in Hopland, CA in August 23-24. Joel's workshop, entitled *Sustainable Medicine for the Planet* will take place on August 24 at 10:00 am. For information go to the Solar Living Institute website at  
<http://www.solarliving.org/>

ESM will also be included in the curriculum of *Teleosis School of Homeopathy* in Boston, opening in the Longwood Medical area in September of 2003 (info@teleosis.com, www.teleosis.org).

## The Practices of ESM

The following is a list of healing modalities which support the tenets of Ecologically Sustainable Medicine.

For more information please see [www.teleosis.org](http://www.teleosis.org)

#### **Alternative Systems: Eastern Practices**

Acupressure, Acupuncture, Auricular Therapy, Chi Kung, Hatha Yoga, Tai Chi

#### **Alternative Systems: Western Practices**

Flower Essence Therapy, Homeopathy

#### **Bioenergetic Medicines**

Reiki, Therapeutic Touch

#### **Manipulative Therapies**

Chiropractic, Craniosacral Therapy, Osteopathy

#### **Massage Therapies**

Alexander, Feldenkrais, Massage, Orthobionomy, Rolfing, Shiatsu, Trager

#### **Mind-Body Medicines**

Biofeedback, Guided Imagery, Hypnosis, Meditation, Prayer

#### **Nutrition and Lifestyle**

Clinical Ecology, Clinical Nutrition, Exercise, Environmental Medicine, Myofunctional Therapy, Orthomolecular Medicine, Stress Management

#### **Pharmacological-Based Practices**

Anthroposophical Medicine, Sustainable Herbology

#### **Psychotherapies**

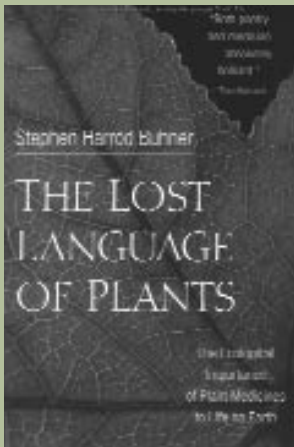
Psychotherapy, Wilderness Therapy



## BOOK REVIEW

## The Lost Language of Plants

BY JOEL KREISBERG, DC, CCH



*The Lost Language of Plants* by Stephen Harrod Buhner presents the overarching vision of Ecologically Sustainable Medicine. Buhner captures the spirit of ESM by demonstrating how plants function within the earth's ecosystem as medicines. Using Gaia theory, Buhner argues that plants serve as medicines for the planet as a whole.

Beginning with a discussion contrasting the epistemologies of modern reductionistic science with the transcultural views of ancient and non-industrial cultures, he asserts that nature does a better job than we do at solving problems of personal, community and planetary health. He offers ample evidence to back his argument.

Buhner discusses the loss of our deep connection with the earth (biophilia), reminding us of how far we have strayed from our ecological roots. His discussion of the impact of medicine, and its profound disregard for ecosystem integrity, is far more condemning when framed in the context of this loss. Buhner presents many carefully documented examples of the ecological consequences of pharmacological drugs, personal care products, chemotherapy, dioxin, and the radioactive materials used in diagnostic imaging. His description of the horrific consequences of medical wastes and the impact of antibiotics on the environment is precise and compelling.

After his critique of conventional medicine and pharmacology, Bruhner offers a profound perspective. He presents current evidence that plants serve many of the roles now taken over by modern pharmacological agents. Having done this for thousands, if not millions, of years, plants are better adapted to maintaining a healthy balance among diverse systems than humans are. And, as will be obvious, there are no negative ecological consequences to the activity of plants—little pollution and no toxic waste. Buhner provides many examples of the way plants react and promote health and integrity for individuals, communities and ecosystems. Buhner argues that plants have much to teach us if we can learn how to listen to them.

*The Lost Language of Plants* concludes with exercises that deepen one's relationship with Gaia. He also provides brief biographies of four people whose work reflects the vision offered in his book—Carol McGrath, Sparrow, Rosemary Gladstar, and John Seed. These practitioners, along with Buhner himself, are visionaries working to bring humanity back into a healthy balance with nature. Each of their visions reflect the wisdom and understanding of elder healers, whose power comes from a faith in the natural world. Anyone interested in ecological perspectives of healing will find this seminal work inspiring.

For thousands of generations, human beings in all cultures on earth have known that plants (and all of nature) express meaning with intent behind it.



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