



Propolis and the health of honeybees PART 1

by Michael Simone-Finstrom and Marla Spivak

This is the first installment of a two-part article summarizing “Propolis and bee health: the natural history and significance of resin use by honey bees,” originally published in Apidologie 41 (2010), 295-311. The authors are with the University of Minnesota, St. Paul, MN. Dr. Simone-Finstrom is a member of the Department of Ecology, Evolution and Behavior. Dr. Spivak is a member of the Department of Entomology.

Summary: Propolis is an apicultural term for the resins when used by bees within a hive. Unlike pollen and nectar, propolis offers no nutritional benefit to the honeybee colony. It does play a valuable role, however. Within the hive it helps individual bees’ immune systems and provides social immunity for the colony. Current research on propolis’ antimicrobial properties is focusing on the activity of different sources of propolis against viruses and bacteria, with the goal of providing medical researchers with compounds that can be studied for their activity against human pathogens.

Introduction

Social immunity—the way in which individual behaviors of group members reduce disease and the transmission at the colony level—is widespread among social bees, ants, wasps, and termites.

For honeybees, one possible mechanism of this phenomenon is the collection and use, in the hive, of resins: complex plant secretions with a wide variety of antimicrobial properties. Bees harvest resins from various plant species and take them back to the colony, where they are used as propolis. This article compiles recent research on honeybees’ use of resins and propolis, with an emphasis on the potential evolutionary benefits of this behavior.



Dr. Marla Spivak

for covering holes and crevices in the nest and for narrowing the entrance to the hive. (“Propolis” originates from “pro”: “in front of” and “polis”: “the city.”) It is believed that bees’ use of propolis helps them maintain a stable environment for the nest, by reducing microbial growth on hive walls, preventing uncontrolled airflow into the nest, and waterproofing walls against external moisture—as well as protecting against invaders. Because the existence of propolis may make it difficult for beekeepers to open a hive, many of them have chosen honeybee lines that produce less propolis.

Collecting resin, using propolis

The use of resins by *Apis mellifera* colonies is far more widespread than by other honeybee species. Feral colonies in tree cavities and domesticated colonies in commercial hive boxes utilize propolis

Propolis’s effects on bee health

Especially in Eastern Europe, South America, and Asia, propolis is popular for its healing properties for humans. Strong evidence exists that it has strong liver-protection, antitumor, antioxidative, antimicrobial, and anti-inflammatory properties. There have been far fewer studies of the antimicrobial properties of propolis against bee pathogens. There is, however, evidence that propolis may serve as a natural mechanism of disease resistance and may hold potential for use as a treatment in the hive.

Because the disease known as American foulbrood has become resistant to conventional antibiotics, most

ALSO IN THIS ISSUE

Testimonial	5
Honeybee sanctuaries	6-7
Research roundup	8-9
Notes from the field	10
AAS news briefs	11

Continued on page 4

Journal of the American Apitherapy Society

The American Apitherapy Society, Inc.
15 Heights Road, Northport, NY, 11768
Phone: (631) 470-9446
Email: aasoffice@apitherapy.org
Website: www.apitherapy.org

EDITOR Patsy McCook

MEDICAL ADVISORS Andrew Kochan, M.D., Theo Cherbuliez, M.D.

PRINTER Essex Printing Company, Centerbrook, Connecticut

PUBLICATION INFORMATION The *Journal of the American Apitherapy Society* is published quarterly by the American Apitherapy Society (AAS). Readers are encouraged to submit articles and personal accounts related to Apitherapy; the AAS reserves the right to select, edit, and condense these for publication. Authors of articles that are published receive a free one-year membership. The AAS owns the rights to articles and original scientific research first published here.

ADVERTISING Rate sheets and insertion orders may be obtained from the AAS office. Rates are available to nonprofit and for-profit groups.

AMERICAN APITHERAPY SOCIETY, INC. The AAS is a tax-exempt, nonprofit membership corporation that promotes and teaches the use of honeybee products to maintain and improve health and to alleviate pain, suffering, and disability. The AAS:

- Assembles information on Apitherapy and collects data on the administration of and reactions to hive products
- Advises the medical and scientific communities and the general public, both national and international, about Apitherapy through this *Journal*, a website, and courses, conferences, and workshops
- Maintains a network of people involved with Apitherapy as apitherapists, beekeepers, and patients
- Establishes guidelines for the professional conduct of apitherapists
- Trains apitherapists.

The efficacy of honeybee products for medical conditions has not been adequately evaluated in the United States, and bee venom therapy has been approved in the U.S. only for the desensitization of persons allergic to bee stings. Thus, the AAS makes no claims about the safety or efficacy of honeybee products and does not endorse any form of Apitherapy.

The AAS does not certify individual practitioners or therapists.

Articles appearing in this *Journal* and on the AAS website, as well as private or public representations, are the personal opinion of the author and do not necessarily represent that of the AAS.

AAS OFFICERS AND BOARD MEMBERS

President Frederique Keller, DOM, L.Ac. *Secretary* Kate McWiggins
Vice President Theo Cherbuliez, M.D. *Treasurer* Susan Cherbuliez

Moises Asis, Ph.D., M.S.W., J.D., Craig Byer, Donald Downs,
Jim Higgins, Kristine Jacobson, Chris Kleronomos, DAOM, F.N.P.,
Andrew Kochan, M.D., Glenn Perry, Molly Romero,
Vetaley Stashenko, N.D.

HONORARY BOARD MEMBER Pat Wagner

ADVISORY BOARD MEMBERS Sam Kearing, Esq., Fountain Odom, Esq.

DIRECTOR OF PUBLIC RELATIONS Priscilla Coe

EXECUTIVE DIRECTOR Marilyn Graham

Copyright © 2011 American Apitherapy Society. All rights reserved.
Reproduction in whole or in part without written permission is prohibited.

From the Editor

Contact:

BeeEditor@aol.com

Friends who know of my affiliation with the AAS periodically inquire about the latest findings

concerning the extent and the causes of colony collapse

disorder. So this column has become an occasional attempt to answer these questions.

Information on the extent of CCD comes from preliminary results of the U.S. Department of Agriculture's 2010-2011 winter honeybee loss survey. During that time approximately 30% of managed honeybee colonies in the U.S. were lost, a figure that has remained fairly stable over the past five years. Although the survey reports only those losses that occur during the winter, preliminary data from other surveys suggest that summer losses, in which queens or entire colonies fail and need to be replaced, can also be significant.

To date there is no scientifically verifiable explanation for the vanishing of the honeybees. But a consensus exists about the sources of weakened honeybees: intensive agriculture, limited forage, inadequate nutrition, pesticide use, transport of colonies, *Varioa* mite control, and varroacide-contaminated wax comb.

One group of suspects has, however, been tentatively eliminated from consideration. With the goal of understanding which viruses and bacteria exist in a normal colony throughout the year, scientists at the University of California, San Francisco, studied 20 colonies of a commercial beekeeping operation containing more than 70,000 hives that were transported from Mississippi to South Dakota and then to California for pollinating purposes. A total of 27 viruses that affect honeybees were tracked—4 of them previously unknown. By finding these viruses in healthy hives, the researchers were able to rule them out as a leading cause of colony collapse disorder.

A recent newspaper article on the growing popularity of beekeeping in cities across the United States, featured an intriguing fact: many honeybee experts believe that city bees are healthier than country ones. Among the reasons are abundant and mostly pesticide-free flowers and a longer nectar flow (city residents plant flowers that bloom from spring to fall). Research in Washington, D.C., is under way to compare urban bees' protein intake with that of bees in rural areas. One hunch is that pollen richer in protein makes bees healthier.

The research continues!

With my good wishes,
Patsy McCook



From the President

Contact:
KellerF@optonline.net

Hello, everyone,

I'd like to start by mentioning the coming Charles Mraz Apitherapy Course and Conference, scheduled for November 4-6, in New Orleans. Having analyzed the evaluations of and comments made at past CMACCs, we have adopted several of your suggestions. We are pleased to announce the creation of two levels of instruction: Level 1, for first-timers to Apitherapy, and Level 2, for more-advanced practitioners. In addition, we have invited two new speakers—Brad Weeks, M.D., from the state of Washington, and Allen Dennison, M.D., from Rhode Island—who are eager to share their knowledge about Apitherapy. This will be a CMACC packed with new topics, extended practical sessions, and case management discussions.

I urge you to take advantage of early registration by October 3, as we have a strict hotel and conference room cancellation policy. If you register now, we can reach the minimum number of participants to hold the space without penalty. Come learn about Apitherapy with like-minded people—share your own experiences—make new connections—enjoy and support New Orleans!

The AAS was active this summer as we organized a full day of Apitherapy presentations in the morning and practical workshops in the afternoon at the Eastern Apiculture Society's annual conference, held in Rhode Island in July. It was an unqualified success! More than 115 people participated in the event through the day—

exceeding even some of the scheduled beekeeping presentations—and many of them joined the AAS.

It was a pleasure to meet Allen Dennison, who transfixed the group with his presentation on honey and wound healing. He then held an interactive practical workshop on honey dressing, during which people

were able to put honey in a jar to take home. Allen also showed how to apply this honey mixture to his own deep post-surgical abdominal wound. He is a natural speaker and has graciously accepted our invitation to give presentations at CMACC in New Orleans.

Our newest elected board member, Craig Byer (see page 11 of this issue), served as program moderator,



keeping the program running smoothly and on time. Thank you, Craig, also for printing the beautiful AAS glossy bumper stickers in both white and yellow and generously donating them to us. We set up two tables: one with past issues of the JAAS, the bumper stickers, and the new AAS “honeybees for health” postcards; the other with items for a silent auction.

Susan Cherbuliez was spectacular in greeting attendees at the door, obtaining their email addresses, and encouraging them to join the AAS. Theo Cherbuliez was his typical inspiring self, dividing his time among handling the projector, keeping the sessions organized, and delivering poignant presentations.

At the conclusion of the formal activities, AAS members and guests enjoyed beer and wine accompanied by cheese, olives, and grapes. It was an exhausting and rewarding day—a wonderful feeling to work together as we delivered our passion and knowledge of Apitherapy. EAS board vice chair Kathy Summers reported that she heard numerous comments about our group: all of them favorable! We are immensely grateful to the EAS for extending the AAS a generous donation for our participation in the event. We look forward to joining the EAS at a repeat performance next in Vermont!

Also keeping us busy this summer was the renovation of the AAS website. Some of it is still under construction and is being worked out. We ask for your patience as we strive to make it function more efficiently and in a more user-friendly manner.

Donations are urgently need to pay for this new website! Although we welcome sizable donations, any amount would help greatly. As most of you know, the entire AAS board and advisory board volunteer their time and resources, and we exist solely on membership dues and donations. All donations are applied 100 percent to the project indicated. It's easy: go to www.apitherapy.org, press “donate,” and fill in a specific amount. Thank you!

I hope to see some of you at Apimondia in 2011 in Buenos Aires, Argentina, in late September—and lots of you at CMACC 2011 in New Orleans.

Peace and great health,

Frederique Keller L.Ac.



Dr. Allen Dennison

Ferris Apiaries

Since 1993

We ship small boxes of bees for bee venom therapy. It's as easy as calling to place an order and your bees arrive to your door within 2-3 days

Call **1.800.787.4669**

P.O. Box 143 Marbury MD 20658

www.honeybeesbymail.com



Propolis and the health of honeybees

Continued from page 1

research on propolis's effectiveness has studied the disease's causative agent, *Paenibacillus larvae*. Scientists have found that while propolis treatments may temporarily reduce the spread of disease, it is not enough to cure an entire colony. One recent study found that feeding colonies ethanol extracts of propolis mixed into sugar syrup can reduce the amount of *P. larvae* spores in honey stores. However, because honeybees apparently do not actively ingest propolis, it is unclear that oral treatment would be effective against severe infections.

Varroa destructor is the most destructive parasite afflicting honeybees. Our continuing study is examining the effects of propolis on the reproductive ability of *V. destructor* in field colonies that have experimentally controlled mite levels. We have treated the colonies in two ways: by painting the inside walls with propolis extracts collected from colonies in Minnesota and Brazil, and by spraying empty combs with the propolis extract. Early results suggest that the propolis treatments may reduce the number of mature females produced with a single cell. Perhaps the altering of this level of reproductive output could reduce population growth of the parasites within a colony—and, ideally, reduce the need for the harsh chemicals now used against *V. destructor*.

Another large pest that threatens honeybee colonies is the greater wax moth, an opportunistic parasite that concentrates on weakened hives. Studies suggest that contact or possibly volatile emissions from propolis may reduce the ability of the moths to effectively reproduce and develop within a hive.

Embalming predators or parasites in propolis, possibly widespread among social bees, is similar to immune function at the individual level. The propolis envelope is a type of mechanical barrier that not only limits parasites' ability to enter the nest but also prevents them from developing once that are inside the nest.

In addition to directly defending honeybee colonies against parasites, it is likely that propolis plays a subtle role in colony-level immunity. Our 2007 field study found compared two groups of seven-day-old bees: those from colonies whose interior walls had been painted with extracts of Brazilian green propolis or propolis collected from Minnesota, and bees from control colonies. We found that the study group had far lower expression of two immune-related genes—a

reduction that appeared to result from a reduction in the overall bacterial loads of these colonies. An elevated immune response has an associated fitness cost, as demonstrated by reduced colony productivity in honeybees and decreased individual survival in bumblebees. We also found that a component of the nest environment can affect individual immunity in honeybees—and, therefore, that the presence of propolis in a honeybee colony may reduce the investment in the innate immune response by acting as an external immune defense mechanism.

It has been speculated that in collecting resin, honeybees may be engaging in self-medicating behavior. Although honeybee colonies infected with diseases or parasitic mites do not appear to respond by collecting more resin, research is under way to determine the amount of resin collected after pathogen challenge. There may be a tradeoff between the energetic costs to individual bees of collecting resin and the antimicrobial properties of the resins, which benefit individuals' immune systems and increased colony fitness. The result could be a continued selection for resin collection regardless of levels of pathogens and parasites.

We recommend that research on the effectiveness of propolis against bacterial pathogens be conducted both alone and in combination with such other disease resistance mechanisms as hygienic behavior. This could help us better understand whether propolis is valuable as a direct treatment. Studies are under way to identify specific fractions and components of propolis extracts that are active against the bacterial agent of American foulbrood and common honeybee viruses. In light of earlier findings that propolis extracts are active against some human viruses *in vitro*, it is possible that these studies of honeybee viruses could have implications for human health.

Another area deserving of study is honeybees' use of propolis as a mechanism for resisting disease. For example, preliminary research suggests that bees may embed strands of propolis to prevent disease transmission when cells are re-used. We also recommend research on the possibility that the antimicrobial properties of royal jelly and honey stored in combs are enhanced by the addition of propolis. Finally, the behavioral ecology of resin collection should be studied if we are to fully understand how it can affect bee health. ○

Part 2 of this article, appearing in the October-December (18:3) issue of the Journal, will look at the mechanisms of resin collection and use as propolis within the colony. It will also examine the regulation of resin foraging at the individual and colony levels.

TESTIMONIAL

Bee venom therapy for Lyme disease

After 15 years with chronic neurological Lyme disease, and after dozens upon dozens of treatments and alternative therapies, I found myself in a place where I was beyond the help of any physician. All treatments were failing, as Lyme is a highly intelligent bacterium and becomes immune to treatment. As time goes on, hope for a long-term Lyme sufferer wanes; the symptoms become worse with every relapse and every failed treatment.

What happens when you get to the point where nothing is helping and you're getting sicker with each passing day? Your quality of life is so diminished that you are just fighting with your own body to be able to get out of bed. The trouble with Lyme disease is that you do not get a vacation from it. Your symptoms constantly change before you get a moment to understand what is going on.

Just a few months ago, this was what I was facing: live out the rest of my days until I could not endure it anymore, or wait for my body to finally shut down. Would I even live to see my 40th birthday? I truly did not think I would. I had experienced all the symptoms of Lyme: multiple sclerosis, muscular dystrophy, Parkinson's disease, seizures, arthritis, chronic fatigue, short-term memory loss. You name it, I had been through it, for 15 years. I was tired, worn out, and running out of time and hope.

I was staying with a friend who was moving to southern California and invited me to come. Why not? I had an interesting thought—call it a premonition—that I would find something in nature that would cure my Lyme. I mentioned this, half joking: "Watch—I will find some wildflower or root or something that cures Lyme disease." Thankfully this premonition did not involve bees; I would have never gone.

We moved to California, and on our first weekend here we decided to go for a walk; the only way to stay healthy enough to battle this disease is to keep going. We were taking in the views of the mountain ranges, the neighborhoods, and a property that looked as though years ago a builder had planned to develop it but nothing happened. While I was standing close to a gate near what had once been a nice brick entrance to the property, a bee started buzzing around my head. I gave it the usual swipe and started to walk away.

Well, this bee wasn't having any of that and followed me, attacking my head. Then a few more bees joined in. As we were running down the street, swatting at our heads, the angry bees were on the attack. My ear and head were stung at least four times, maybe eight. An intriguing dilemma! As we got further away, the bees finally stopped. We then headed straight home to access what had just happened.

We didn't know how many bees had attacked us, but I did know that I'd been stung at least four times on my ear and that I'd pulled one stinger out of my head. We had been attacked by Africanized bees, and we realized how lucky we were—they usually swarm by the hundreds, not just 10 or 15. I knew nothing about bees, except that I had been afraid of them since I was very young.

For the next three days I felt as though I was going to die. I was not having an allergic reaction to the bees stings; I was having a Lyme reaction to the stings, what is called a Herxheimer reaction. If you're familiar with Lyme disease, you know that if you have a Herx, it's a good thing. After the third day, my brain woke up and I felt completely alive—I hadn't felt like that in 15 years. My curiosity got the better of me, and I started researching everything I could find on bee venom and the Lyme spirochete.

I found only one clinical trial, conducted by Lubke and Garon at the Rocky Mountain Laboratories (a biomedical research facility of the National Institutes of Health), which you can find online. If you really know your stuff you can find the entire clinical trial, too. The bees gave me hope, something that had been entirely foreign to me just a few months earlier.

I understand that bee venom therapy has not been approved by the U.S. Food and Drug Administration (FDA). But I do believe it is approved by GOD.

This is how I got involved with Apitherapy; I understand the struggles of just wanting to have a better quality of life and to be able to function at least somewhat in society. As my treatment with bees continues, I am getting stronger and I have more energy than ever. God bless the bees! I am no longer afraid of them stinging me; I welcome it.

Ellie Lobel
Temecula, CA
drlobel@live.com

Allen's Apitherapy Bees

We provide bees for those using apitherapy.
The practical way to go.

Get Bee Venom Therapy bees delivered by mail.

Can be scheduled weekly, monthly, or as needed.
Ed Allen 19150 Smith Lane, Redding, CA 96002

Call 530-221-1458



Honeybee sanctuaries

by Priscilla Coe

In 2007 Priscilla Coe was a cofounder of The Melissa Garden (www.themelissagarden.com), a honeybee sanctuary in Healdsburg, CA. This article discusses the creation of that project and the importance of creating vital habitats for honeybees.

“Sanctuary” is a rich word that is a pleasure to contemplate. It implies insulation from a troubling world and, of course, connotes a holy or sacred element to a location. This is precisely what the honeybees need at this unique moment in history. In Apitherapy, we need the healthiest bees possible to produce everything from honey to bee venom for our medicine chest of hive products. Offering the bees ample forage and undisturbed homes in clean environments is not as complicated as it may initially sound. Designating our gardens, large or small, as bee sanctuaries is a minimum gesture of respect for these creatures that weave together the context of nature’s spaces and provide us with some of the most potent healing remedies on earth. Here are some of the basic principles involved.

We first heard the term “colony collapse disorder” (CCD) in 2006. By the time of almond pollination in California in February 2007, the stories of massive bee losses were heartbreaking. Many beekeepers were searching for ways to help the bees. At that time, I was receiving bee venom therapy to improve my circulation. I noticed that within a few hours after having bee stings, I would always have obsessive thoughts about what I could do to help the honeybees. I attributed the thinking to the neurotransmitters in the bee venom and the idea that the bees were summoning me to help them in some way.

In July 2007 I was visiting a beekeeper friend, Barbara Schlumberger, at her ranch in northern California. She asked me what I would really like to do for the bees. I told her I was thinking a lot about creating a bee garden. She was immediately enthusiastic and said, “Let’s do it.” Over the next two months, we refined the bee garden concept to that of a honeybee sanctuary. We hadn’t come across the term “sanctuary” yet, and it actually emerged in a contemplative moment. For several hours one afternoon, I sat with the question of “What is the best thing we can do right now to support the bees?” The answer that came to mind in an absolutely clear way was to create a honeybee sanctuary. A Google search showed there were two other people in the United States who were working with this concept, but there were no formulas for what to do, so we were off and running on our own.

The initial thinking was largely an antidote to the prevailing dilemmas of CCD. For example, with migratory beekeeping it was clear that honeybees no longer had a home, so we wanted to offer the bees a space that was theirs—year round, year after year. Another obvious problem was that honey was removed from the

beehives by large commercial operations and the bees were fed sugar syrup or corn syrup to get them through the winters. We decided we would leave adequate honey in each hive for the bees to feed on their own honey throughout the winter. We consulted numerous experts on what to plant for the bees for year-round nectar and pollen sources. Loss of habitat is widely recognized as a contributing factor to CCD. We decided to embrace holistic methods of beekeeping. One example was to shun the use of plastic and readymade foundations and let the bees build their own comb so they could determine optimum cell size. We also decided to try a variety of different hives (other than the Langstroth design) to see if there was one that especially stood out for supporting bee health.

Now, four years later, we have a gloriously vibrant and beautiful garden designed by Kate Frey. We have a website. We offer many tours and classes for the public, send out an email newsletter every two months, and have been featured in numerous articles and documentaries. We have heard from hundreds of people around the world. Many have told us they, too, plan to create honeybee sanctuaries.

We no longer feel there is one perfect hive design for the bees. We continue to experiment with new designs, including rustic log hives that are used in many developing countries around the world, and thoughtful new designs that are emerging out of today’s organic beekeeping movements, such as in Germany. We have changed some of our practices. We no longer bring in any swarms from the outside; instead, we let our colonies swarm and we then hive those bees. We are observing the results of new practices—for example, some apiculturists feel there is “horizontal transfer” of disease when hives are adjacent to each other. Our hives are now placed at least 100 yards apart on the 42-acre ranch. Our holistic beekeeping advisor and instructor, Michael Thiele of Gaia Bees (www.gaiabees.com), is sensitively attuned to these new practices.

At one time, success as a beekeeper might have been measured in terms of quantity of honey harvested, or as a rigorous pass-fail enterprise that simply counted how many hives made it through the winter. Today, we are learning that our relationship to the honeybees has more nuance. Many people are starting to attune to the fact that we have co-evolved with the honeybees for millennia. Most scientific research continues to pursue the question of *What* are the honeybees, with unlimited contributions in such areas as conducting mite counts and endless hive management techniques that are highly invasive. A more



worthwhile question may be *Who* are the honeybees? Sharon Callahan of Anaflora (www.anaflora.com) in northern California is an interspecies communicator who has contributed beautifully to this more profound question. She has commented that honey should be regarded as a sacrament, rather than just as a food. She has also written that bees receive the pulse of energy from the Creator and are playing a key role during evolutionary transformation at this time.

Surely, having a sanctuary for honeybees provides more than the intended goal of creating an optimum physical environment to support the health of the bees. It also provides a loving and respectful venue for observing the bees and musing over who they are and what they want us to know now, and for engaging in deep conversations with other bee lovers. At The Melissa Garden, we have also observed many times how visitors are transformed and renewed by even a few hours in the serenity and vitality of the garden. A sanctuary for the bees is also a sanctuary for human beings. It is natural to think of extending this vision to

one of a bee sanctuary that includes an apitherapy component.

Think of an organic garden abundant with beautiful plants, including many medicinal plants, providing forage for bees that not only meets their needs but also is transformed by the bees into a tremendously nourishing honey. This same honey could be used to make beebread, the fermented blend of honey and pollen that is known for its superior nutrition. Resins in a clean environment provide bees with the optimum raw materials for making propolis to safeguard the hygiene of their hives. Propolis also provides humans with one of the most anti-toxic remedies available anywhere. Against this backdrop of great beauty, imagine skilled apitherapists helping people with bee venom therapy. Creating hundreds or thousands of bee-centered healing centers like this around the world is easily within our reach, providing a foundation of green medicine. These centers would venerate the bees for their incomparable capacities to support human health. ◉

Priscilla Coe lives in Sonoma, CA. She worked in food public relations for many years and now helps to publicize AAS conferences and other apitherapy and bee events. Contact her at priscillacoe@earthlink.net.

RESEARCH ROUNDUP

Data review supports using honey to treat wounds, ulcers, and burns

Recent laboratory studies and clinical trials have studied honey's antimicrobial properties and its external and internal applications. It has been used to treat adult and neonatal postoperative infection, burns, necrotizing fasciitis, infected and nonhealing wounds and ulcers, boils, pilonidal sinus, venous ulcers, and diabetic foot ulcers. [See the following three summaries.] These effects result from honey's antibacterial action, in turn the result of acidity, hydrogen peroxide content, osmotic effect, nutritional and antioxidant content, stimulation of immunity, and unidentified compounds. When taken internally, honey also promotes healing and shows antibacterial action by decreasing prostaglandin levels, elevating nitric oxide levels, and exerting prebiotic effects—factors that play a major role in controlling inflammation and promoting microbial control and healing processes.

Source: Noori S. Al-Waili, Khelod Salom, Glenn Butler and Ahmad A. Al Ghamdi, "Honey and microbial infections: A review supporting the use of honey for microbial control," *Journal of Medicinal Food*. Online ahead of print: August 22, 2011.

Combining honey with a superabsorbent dressing to treat a venous ulcer

In chronic wounds, exudate is believed to prolong the inflammatory phase and is detrimental to healing. A new treatment for highly exuding wounds comes in the form of superabsorbent dressings, which have greater fluid-handling capacity than traditional dressings and require changing less frequently. Now scientists have reported on the combined use of a superabsorbent dressing with an antibacterial dressing.

A 102-year-old patient presented with a painful infected venous ulcer complicated by arterial disease. The combination of the superabsorbent KerraMax® with the antibacterial honey Algivon® created a dressing for treating this infected mixed-etiology ulcer. The dressings worked together to reduce the bacterial load on the wounded bed surface, with the honey selectively destroying the bacteria. The dressing absorbed and locked away the bacteria-containing exudate, which helped to reduce further exudate production, prevent maceration, and reduce the potential for a wound to become malodorous.

Source: Sylvie Hampton et al., "Using a superabsorbent dressing and antimicrobial for a venous ulcer," *British Journal of Nursing*, 11 August 2011, Volume 20, Issue 15—Supplement, pp. 38-43.

Using honey for wounds may reduce hospital stays

Leptospermum honey is increasingly popular in treating wounds. Now scientists in the United Kingdom have shown that it is possible to conduct a randomized controlled trial of honey dressings to treat wound infection that follows microvascular free tissue reconstruction for cancer of the head and neck.

A total of 49 patients admitted to a maxillofacial ward for free tissue in Liverpool were randomly assigned to a study group (receiving honey dressings) and a control group (receiving conventional dressings). The costs of standard and honey dressings were similar. For the honey group, the average hospital stay was 12 days, compared with 18 days for the control group.

The investigators acknowledge that to show a clinical benefit for honey, a much larger sample size is needed. They recommend further research to confirm that honey dressings can shorten hospital admission time—and, if so, whether that is due to more rapid healing.

Source: Val Robson et al, "Randomised controlled feasibility trial on the use of medical grade honey following microvascular free tissue transfer to reduce the incidence of wound infection," *British Journal of Oral and Maxillofacial Surgery*, published online 10 August 2011.

Honey can help manage allergic fungal rhinosinusitis

Allergic fungal rhinosinusitis, a subtype of chronic rhinosinusitis, is a common disorder that often results in the need for surgery and long-term treatment with steroids or antifungals or both. There is no long-term successful treatment. Now three scientists from Canada have found that Manuka honey may be effective in alleviating symptoms.

Two patients were seen at St. Paul's Sinus Centre in Vancouver, British Columbia. Both had chronically recurrent allergic fungal rhinosinusitis and had undergone functional endoscopic sinus surgery and follow-up management.

The first patient, a 71-year-old man, had a three-year history of nasal congestion and discharge, facial pressure, and a loss of smell. Following a 12-week course of Manuka honey irrigation, he was free of symptoms, and endoscopic examination showed no polypoid edema or allergic mucin. His sense of smell improved, and there was a complete resolution of nasal discharge, ear fullness, dizziness, fatigue, and reduced productivity.

The second patient, a 31-year-old man, had a three-year history of sinus pressure, thick nasal discharge, and difficulty breathing through his nose. He too found major relief after 12 weeks. His symptoms were reduced from moderate to very mild for nasal obstruction, sense of smell, and nasal discharge. He also showed improved sleep, concentration, and mood.

The authors recommend that Manuka honey be considered a potential treatment for patients with rhinosinusitis for whom alternative treatments have been ineffective. The sinus center is conducting further research, using double-blind studies, of chronic sinusitis, allergic fungal rhinosinusitis, and postoperative cystic fibrosis patients.

Source: D. Wong, T. Alandejani, and A.R. Javer, "Evaluation of Manuka honey in management of allergic fungal rhinosinusitis: A case report," *Journal of Otolaryngology-Head and Neck Surgery*, Vol. 40, No. 2 (April 2011), pp. E19-21.

BVT for chemotherapy-induced peripheral neuropathy

Scientists at a hospital in Korea that uses complementary therapies for cancer patients have found that sweet bee venom pharmacopuncture, or melittin, may be a valid therapy for chemotherapy-induced peripheral neuropathy.

At the East West Cancer Center, Dunsan Oriental Hospital, Daejeon University, Republic of Korea, five consecutive patients with chemotherapy-induced peripheral neuropathy grade 2 or more were treated with melittin for three treatment sessions for a week. All patients were closely examined for any allergenic responses following each treatment session.

One patient discontinued treatment after the first session, and four patients completed the full treatment. Marked improvement of pain and physical functioning were seen in three of the four. No related adverse side effects were observed.

The investigators recommend further studies in a larger trial for it to develop into a way to manage neuropathy symptoms. This study will be extended to a dose-response evaluation to further establish safety and response, prior to a randomized trial.

Source: Jae-Woo Park, OMD, et al., "Effects of sweet bee venom pharmacopuncture treatment for chemotherapy-induced peripheral neuropathy: A case series," *Integrative Cancer Therapies*, 28 June 2011.



CC POLLEN CO
HIGH DESERT BEEHIVE PRODUCTS

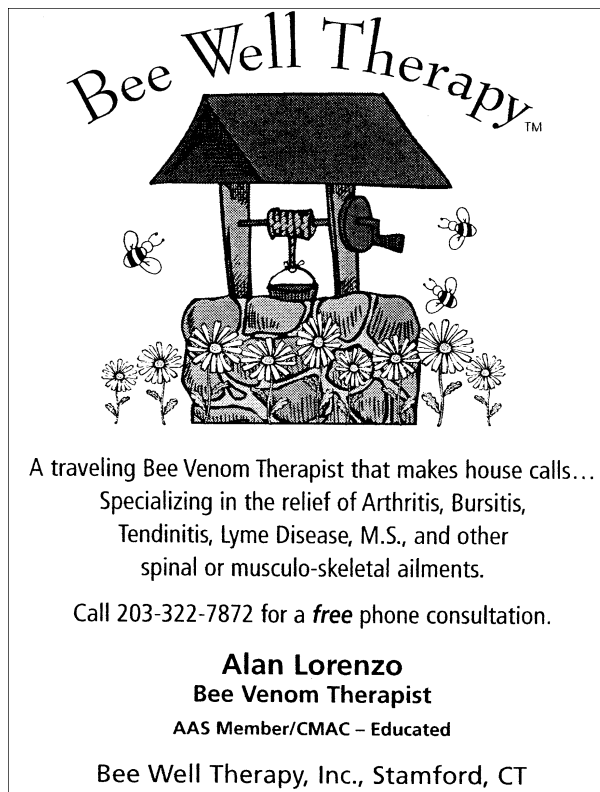
**BEE POLLEN PROPOLIS
ROYAL JELLY HONEY**

PRODUCTS OF THE DEEPEST NATURE

**WHAT YOU NEED IN
TODAYS DEPLETED WORLD**

Http://www.ccpollen.com
BEEEMAIL1@CCPOLLEN.COM
1-800-875-0096 or 602-957-0096

"WHILE HEALTH
ISN'T EVERYTHING,
WITHOUT HEALTH,
NOTHING ELSE MATTERS!"
ROYDEN BROWN



Bee Well Therapy™

A traveling Bee Venom Therapist that makes house calls...
Specializing in the relief of Arthritis, Bursitis,
Tendinitis, Lyme Disease, M.S., and other
spinal or musculo-skeletal ailments.

Call 203-322-7872 for a *free* phone consultation.

Alan Lorenzo
Bee Venom Therapist
AAS Member/CMAC – Educated

Bee Well Therapy, Inc., Stamford, CT

NOTES FROM THE FIELD

Using an outline Apitherapy integrator for the treatment of fibromyalgia

Fibromyalgia is a disease characterized by hyperalgesia (exacerbation of pain sensitivity) and generalized allodynia (pain caused by a stimulus that normally does not have such an effect). In developed countries fibromyalgia has a prevalence of 2 to 4 percent, and it mostly affects women.

Many patients also exhibit gastrointestinal symptoms: most commonly spastic colon but also constipation, dyspepsia, and flatulence. The disease is usually associated with neuropsychological symptoms like depression, severe headaches, sleep disturbances, and dizziness. Psychologically speaking, patients often represent the “Type A” personality: demanding at work and at home. Pain and fatigue, the two most common symptoms, also have the most limiting effect on patients’ activities. A debate exists over whether these symptoms produce depression or whether depression originates in the development of the disease.

Fibromyalgia is a complex disease. Its diagnosis is clinical; there are no paraclinical studies to confirm it. The major diagnostic criterion, according to American College of Rheumatology, developed in 1990 and recognized by World Health Organization, is the finding of at least 11 points, called “Tender Points.” They are located in 18 key positions on the body, around the spine, neck, back, elbows, knees, and hips. A proper diagnosis comes from a cornerstone of good medicine: listening carefully to the patient.

Conventional medicine does not yet have a highly effective treatment, much less true healing. It is common for patients to consult various specialists in conventional medicine and complementary medicine before being properly diagnosed. They often suffer from iatrogenic (physician-induced) disorders; one patient underwent surgery for an erroneously diagnosed herniated disc.

We employ a three-step treatment; first, medical pharmacology; second, physiological and occupational therapy; and third (a crucial component), psychological therapy. Although there is no complete cure, it is possible to substantially improve the quality of life for fibromyalgia patients.

First, the patient is informed about the nature of the disease. The integrative therapeutic regimen applied in our clinic consists of dietary and hygienic measures plus treatment with bee venom and bee pollen. However, in our model of integrative medicine, we also use conventional-medicine drugs if necessary. Patients benefit from aerobic physical activity, so we encourage them to engage in sports like swimming or walking, 30

minutes a day. As part of our concept of integration, we also recommend that patients practice yoga or tai chi.

Treatment also includes weekly injections of subcutaneous bee venom, starting with a low dose and gradually increasing it. The active ingredients of bee venom offer analgesic properties at central and peripheral locations. We complement this treatment with the consumption of pollen, which provides phytonutrients like zinc, magnesium, and fiber that are useful in treating fibromyalgia. Pollen also furnishes the amino acid L-tryptophan, the precursor for serotonin and melatonin production.

In treating fibromyalgia patients since 1995, we have found that more than 85% experienced rapid remission of symptoms (pain, headaches, and migraines), usually after two to three weeks of treatment. In addition, patients report having more energy and an increased pain threshold and experiencing improved sleep and memory.

Although the products of the hive have many nutritional and therapeutic properties, we cannot ignore a crucial fact: the interaction between body and mind. We assign great value to communication with patients, based on listening to them and understanding their emotions. In considering patients’ biological, psychological, and social characteristics, we note that the disease can be an indication of unresolved underlying problems.

Walter Fierro Morales, M.D.

Montevideo, Uruguay

wfierro@mednet.org.uy

www.apiterapiamedicinaintegral.com.uy

Studying bee venom for the treatment of Parkinson’s disease

In March, scientists in France launched a double-blind study of 40 patients 40 years and older to evaluate the effectiveness of repeated monthly injections of bee venom on the motor symptoms of Parkinson’s disease over a one-year period, as well as the progression of their disease. Saline injections will be employed as a placebo. The intervention will consist of 12 monthly injections of 100 micrograms (in 1 milliliter of NaCl 0.9%) of bee venom s.c.

The study, “Evaluation of the Symptomatic and Neuroprotective Effects of Bee Venom for the Treatment of Parkinson Disease,” is being carried out at the Centre d’Investigation Clinique ICM, in Paris, under the direction of Andreas Hartmann, M.D. It is expected to conclude in November 2013.

ClinicalTrials.gov/ct2/show/NCT01341431

AAS NEWS BRIEFS

New members

Australia
Simon Chatburn

Canada
Alexander Demerson

Guatemala
Luis Leon-Solares

Libya
Suse Saad

Malaysia
Ahmad Supian

Mexico
Jorge Villarreal

Saudi Arabia
Rafat Alrassan

California
Estelee Daley
Jerome Draper
Norman Harrison
Ellie Lobel
Courtnie Maryatt
Jennifer Middleton
Marie Moguel
Tracey Stirling

Colorado
Stacie Ashley

Connecticut
Edris Berg
Andres Colon

Florida
Fabunmi Akinwale
Scott Cunningham
Oscar Pena

Georgia
Jessica Hull
Manette Messenger

Illinois
Leone Bicchieri

Maine
William Heinz
Jennifer Moore
Lawrence Peiffer

Maryland
Shelley Warren

Michigan
Michael Dent
Kinga Osz-Kemp

Montana
Savannah Barnes

New Hampshire
Patricia Grier
Richard Hough

New Mexico
Conrad Bookout
Bernadette Simons

New Jersey
Laryssa Beohnke
Kaela Walsh

New York
Stephanie Liner
Willow Zielenski

North Carolina
Yelena Clark
Sarah Huff

Ohio
Marian Medvec

Oklahoma
James Chaplin

Pennsylvania
Ralph Ferro
Jacki Folwell
Luca Sbrizzi

Texas
Jill Willis

Utah
Susan Sterner-Howe

Vermont
Katrina Rationale

Virginia
Hodgie Holgersen
William Lynh

Wyoming
Leslie Waggener

Board member profile

Craig Byer



As an owner of a large Long Island pest control operation (Suburban Pest Management LLC) that was turning away all honeybee calls, in 2008 Craig Byer felt a responsibility to entertain the hobby-profession of beekeeping. This belief was strengthened by his concern about colony collapse disorder.

Once Craig started beekeeping—with three packages of bees—he began to understand that there was more to being a beekeeper than pollination and honey. There was a whole other side: Apitherapy.

While working with the bees, Craig got stung on his leg, accidentally. It was then that he first experienced the benefits of bee venom therapy. The area stung was a calf that had been cramping up for most of the day. In half an hour the cramp was gone. Now, he says, each time this happens “it is fascinating to feel the BVT really working for me.”

Previously Craig was a bartender, taught tennis, and worked with children with special needs. At college (the University of Miami and C.W. Post, on Long Island), he concentrated on psychology but ultimately majored in theater. The proud father to four-year-old daughter Sophia, he enjoys slalom skiing, snowboarding, and motorcycling.

Craig was elected to the AAS board earlier this year. Between his office and his home yard, he keeps a total of 15 colonies, and he performs hive removals and swarm captures. With plans to become an Apitherapist and a Master Beekeeper, he hopes to attract more people to “this beautiful activity of keeping and utilizing bees and all they produce.”

Recent donors

Dr. Theodore Cherbuliez
and Susan Cherbuliez
Maine

Craig Byer
New York

Fountain Odom
North Carolina



Preliminary program
Charles Mraz Apitherapy Course and Conference (CMACC)

November 4-6, 2011 *The Inn on Bourbon, New Orleans, LA, U.S.A.*

Friday, November 4

Course, Level 1

(For those who are new to Apitherapy or want a basic review)

General view of Apitherapy
Honey
Propolis
Pollen
Bee venom
Royal jelly
Bee venom technique and EpiPen
Informed consent and legal issues
Treatment procedures
BVT reactions*
BVT workshop*

Course, Level 2

(For those who are experienced and want more advanced information)

Green medicine
Autoimmune diseases
The patient and the apitherapist
Practical BVT: strategy and technique
Practical BVT workshop
Bee venom vs. Apitoxin
Protocol for MS
Apipuncture
Case studies
BVT reactions*
BVT workshop*

*Levels 1 and 2 together

Saturday, November 5

Exam, Levels 1 and 2

Exam and correction

Conference

Treating wounds with honey
Apitherapy for pain
Propolis and cancer
Lyme disease
Veterinary Apitherapy
Uses of Apitoxin
AAS Annual meeting and raffle/auction

Sunday, November 6

Conference, continued

Apis mellifica action and indications
Ointment workshop
Bee products with essential oils
Products of the hive: practical applications
Question-and-answer period
Evaluation

AAS FACULTY plus 2 NEW PRESENTERS

For "EARLY BEE" CMACC price, register before October 3