

## **The Medicinal Herb Network: Groundbreaking Developments in Herb Quality Assessment**

By Mercy Yule, LAc

Herbal practitioners frequently wonder about the ability of current herb quality assessment techniques to reflect an herb specimen's functional properties. Chemical analysis pinpoints constituents, but lacks the broader view of the actual plant that we use medicinally.

We need look no further than the controversial and very useful Western botanical, St. John's wort, to find reasons to seek a more comprehensive evaluation tool.\*

Following is an interview with members of the Medicinal Herb Network, a partnership of herb growers, Chinese medicine practitioners and a professor of food science, who have developed a technique for analyzing traditional whole herbs.

- Renne Soberg has been growing medicinal herbs organically for over 10 years in Lakeville, MN. He leads the Medicinal Herb Network's initiatives on field trials and feasibility studies of domestic medicinal herb production.
- Craig A. Hassel, PhD, is an associate professor and extension specialist in food and nutrition in the Department of Food Science and Nutrition at the University of Minnesota in St. Paul, MN. His current research interests include cross-cultural understandings of food as medicine.
- Chris Hafner, BA, LAc, has over 20 years experience as a licensed practitioner of traditional Chinese medicine, and now practices with Crocus Hill Oriental Medicine in St. Paul, MN. He is an expert herbalist wildcrafter and leads the Network's initiative in investigating medicinal herb quality.

**Mercy Yule (MY):** Good afternoon to all of you. Perhaps you could begin by telling us a little bit about how the Medicinal Herb Network got started.

**Craig Hassel (CR):** We've been meeting as a network since 1998. It came about through a number of areas of interest. Growers were interested (in growing herbal products) but had no way to understand qualities that were in demand. At the same time, practitioners were very concerned about the qualities of imported herbs, and interested in the possibility of locally grown alternatives.

**Chris Hafner (CH):** Not to give the impression that imported herbs were of poor quality, but that we didn't have a meaningful way to talk about quality of herbs from anywhere, domestic or imported. The qualities of the whole herb as they are understood in classical Chinese medicine are connected to clinical outcomes.

**MY:** Have these herbs been grown in North America before?

**Renne Soberg (RS):** Domestic growing has been going on for a while. I've grown thousands of pounds of herbs, but I had no way to speak to the consumers to find out if they were getting what they wanted and I was concerned about that. So we formed the group to address the issue of quality. Now practitioners can tell growers what they need in terms of plant material.

**MY:** Tell us about the evaluation method that you have developed.

**CR:** Our method is grounded in Chinese medicine but brings in descriptive sensory analysis from a sub-discipline of food science. Initially, this was a way of determining consumer acceptance of foods. Individual aroma and flavor notes were teased out and described. Now we are applying these procedures to medicinal herbs.

**MY:** How does descriptive sensory analysis relate to traditional herb assessment?

**CH:** It has been hidden in plain sight ... of course, the Chinese have been assessing herb quality through taste for thousands of years. Descriptive sensory analysis quantifies this kind of herb evaluation in a specific, reproducible format. Last year we presented this technique to acupuncturists at the Three Rivers Conference, sort of an informal run of our experiment.

**MY:** How did you present your method?

**CR:** First, seasoned practitioners from China deemed some herb samples as superior quality for medicinal use. Then, food science graduate students deciphered the "attributes" or "notes" of various herbs using descriptive sensory analysis and these were correlated to the high quality herbs. When practitioners used

these descriptors to rate the samples, they were able to choose the high quality herbs.

**CH:** There was a lot of excitement about that. The human palate can develop this skill with a modicum of training. It reinforces an important part of being human - trusting our senses.

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The Medicinal Herb Network will present its evaluation technique at the upcoming AOM Alliance annual conference in Hollywood, Calif., April 30 - May 2.

\* Consider this interesting statement about the active chemical constituents of St. John's wort, hypericum. "The NIH trial will be double-blinded, and patients diagnosed as moderately depressed will be randomized into three groups that receive Zoloft, a placebo, or IL-160, the most-studied extract of hypericum. IL-160 is standardized on 0.3 percent content of the active ingredient, hypericin. However, hypericum may have up to 10 active constituents, and Doraiswamy says there is limited evidence that at least one of them, hyperforin (related to hop bitters), could be more active than hypericin." *The Scientist* Feb. 1, 1999;13[3]:10.



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