

HEALTHIER RESPECT FOR HERBS

By Chris Kraul, Times Staff Writer
October 30, 2006

WHENEVER her son's arthritis becomes unbearable, Mery Aguilar heads to a stall in the Seventh of August farmers market, where she buys a big bag of flowers.

Then she boils the petals and buds of the borrachero and ruda plants, which grow wild in the Andes, and adds the brew to a hot bath that is her son's only salvation from debilitating pain.

"Sometimes," Aguilar said, "grandmothers' secrets are better than the doctors'."

The treatment for Aguilar's 29-year-old son was just one of dozens "prescribed" by Pilar Hernandez in her stall at the market on a recent overcast day. All involved plants from Colombia's rich array of native flora, among the most diverse in the world.

For customer Marlene Chaparra, who wanted to lose a few pounds, she recommended thrice-daily portions of wild artichoke leaves and a soup made with a gnarly green squash called poor man's potato. For Olga Solis, who has diabetes, she urged that she chew balsamina leaves. For Marina Lopez, whose husband has prostate cancer, she recommended the velvety agave-like leaves of the viravira plant.

Not long ago, such cures would have been laughed off as witchcraft or old wives' tales by the government and the medical establishment. But now Colombian officials, long wary of foreign "bio-prospecting" of the country's rich natural resources, are starting to take claims of herbal powers seriously.

New efforts are underway to catalog and test the medicinal plants, which may number 2,000 or more, that are bought every day by people such as Aguilar and Solis. And the door that has been long closed to foreign drug companies has been opened, even if just a crack.

Officials say the government's heightened interest in commercializing traditional remedies is based on the hope that they may provide a new source of economic growth, improved medical treatment and alternative crops for poor farmers who now grow illegal coca leaves or opium poppies.

The success of other countries in bringing nature-based remedies to market may also be a factor. Over the last decade or so, major cancer drugs have been developed from the yew tree in the United States and from periwinkle flowers in Madagascar. In the late 1990s, a Swiss pharmaceutical firm derived an agent useful in DNA analysis from a microbe growing in Yellowstone National Park hot springs.

The U.S. government and the United Nations have both underwritten biodiversity-based drug projects in developing countries, trying to play down fears of bio-piracy with promises to return some share of whatever profits result to biodiversity stewards, the poor or indigenous people who have preserved the plants.

ALTHOUGH drug developers have always stolen from nature — aspirin, for example, was first isolated from the bark of an Amazonian tree — the pace has quickened in recent years with improved analyses of natural substances and the slowing of synthetic drug development.

Countries such as Costa Rica and Brazil long ago embraced bio-prospecting, often financed by multinational companies. In the early 1990s, Costa Rica signed a \$1-million deal with Merck giving it access to all naturally occurring substances found in that country's plant life.

But a similar deal in Mexico's Chiapas state broke down in the early 1990s after indigenous tribes protested over possible bio-piracy.

Similar fears have made Colombia keep such prospectors, foreign and domestic, at arm's length. The nation's approved list of natural therapeutic substances is small and the legal framework for product development is deliberately vague, said Jose Andres Diaz, an official at the Bogota-based Alexander von Humboldt Institute, a nonprofit research organization dedicated to promoting "sustainable bio-commerce."

"The legal framework here has been a disincentive," Diaz said.

The closed-door policy has been supported by Colombia's federation of Indian tribes, which fears foreign investment in plant research will lead to the genetic patrimony being "stolen," leaving tribes that have preserved the remedies for centuries receiving nothing, said Luis Evelys Andrade, president of the Colombian National Indigenous Organization.

But the attitudes toward natural remedies are slowly changing. Recently, a private medical insurance network called SaludCoop approved the use of a dozen herbal remedies by doctors in its system. The Bogota mayor's office and USAID are underwriting a cooperative called Farmaverde that has been charged with promoting and broadening the use of scores of traditional remedies in dozens of public health clinics in the capital.

"The goal is now to widen the use and knowledge of these plants and deliver them safely to the people," said Jeaneth Solano, a Health Ministry official who is helping direct studies of 30 traditional remedies with the goal of adding them to the approved list for product development. Only 14 of the thousands of native plant species with medicinal potential have been given government clearance for product development so far.

Edgar Linares, a botanist at National University of Colombia, is three years into a project to catalog all the plants sold as traditional remedies in Bogota's markets. He says he's encountered plants that not even he, the former curator of the national herbarium, knew existed. And many of those finds worry him because of their toxicity.

"There are many useful plants and many that are dangerous because people don't know how to use them. For example, enebro, a tree seed used for weight loss. It does seem to work, but it can also kill you if you take too much by causing cardiac arrest," Linares said. "This is the sort of thing we need to clean up."

THE mainstreaming of nature-based remedies by domestic companies has lagged because of the lack of research funds and the reluctance of the medical establishment to switch from the synthetic pills and precise dosages its members are accustomed to prescribing, said Yann-Olivier Hay, a French biochemist who directs the Farmaverde project.

"One of our biggest jobs is to make doctors less skeptical, that medicinal plants are tools, not witchcraft," Hay said.

But Gregory A. Thompson, professor of clinical pharmacy at USC, said the reluctance to switch from prescribing pills to leafs, roots and teas was understandable.

"It's nice to know if you take a pill you're getting 10 milligrams of something for your heart condition, whereas when you chew a digitalis leaf, you may get 20 milligrams with one leaf one day and 5 the next," Thompson said. "That's the prejudice against a leaf."

That resistance may slowly be breaking down as more folk remedies are shown to have medicinal value, and as local companies structure deals that ensure peasants and indigenous peoples who are keepers of the traditions a share in the benefits, said Antonio Mejia, a biologist at Juan N. Corpas University and Clinic, which has a laboratory dedicated to investigating traditional remedies.

Doctors long looked disparagingly at Aguilar's borrachero leaves, for example, as of little use except as a source of scopolamine, a drug that thieves slip into drinks or food to put their victims to sleep.

But Mejia says studies of the plant show it may have value as a muscle relaxant and as an anti-inflammatory agent to relieve all sorts of muscle pains. The wild artichokes that Chaparra bought for weight loss are known to improve the function of the bile duct, which cuts cholesterol.

Elsewhere in Colombia, rumors of a nature-based "magic bullet" against cancer are circulating. Clinical medical studies being carried out at Javeriana University here show a native plant called anamu has the power to shrink cancerous tumors.

"Preliminary results are very positive," Mejia said.

Back at the Seventh of August market, Hernandez was wrapping up a plant called albahaca for a vapor treatment she recommended to customer Jorge Velez, a chain smoker with congested lungs.

After handing it over to Velez, she said: "We've got plants that can do anything but make you happy. Nothing guarantees you that."

chris.kraul@latimes.com