CAM AT THE NIH
FOCUS ON COMPLEMENTARY AND ALTERNATIVE MEDICINE
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International Team Studies South African Plant for HIV/AIDS

Courtesy of Kathleen Goggin

A group of contributors to the Sutherlandia study met in September 2007 in Pietermaritzburg, KwaZulu-Natal, South Africa. Left to right: Douglas Wilson, James Syce, Kevin Rudeen, Laurie Ben-yair, Tilly Pillay, Makhosi Msomi, Thulani Hlongwa, Baba Shange, Baba Thabethe, Elliot Makhathini, Bill Folk, Makhosi Xaba, Deborah Hayes, and Makhosi Dlamini. The photo's setting is a shop for supplies for traditional *inyanga* healing.

INSIDE

NCCAM
NATIONAL CENTER FOR COMPLEMENTARY AND ALTERNATIVE MEDICINE

NATIONAL INSTITUTES OF HEALTH

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

"It's just overwhelming. It feels like anything you do is a drop in a huge, huge bucket. But, you drop a drop, and it causes a ripple, and that causes a lot of change. Sometimes you have to be a drop, because that's all you've got."

So Kathleen Goggin, Ph.D., describes part of what draws her to co-lead a groundbreaking study of an African traditional medicine. A plant called Sutherlandia is being examined for its potential to help patients with HIV infection. The study is being cosponsored by NCCAM and NIH's Office of AIDS Research, Office of Dietary Supplements, and Fogarty International Center.

According to the joint United Nations program on HIV/AIDS, or UNAIDS, about 33.2 million people worldwide have HIV infection. AIDS is among the leading causes of death worldwide.

South Africa is one of the countries that have been hardest hit by HIV/AIDS. While changes in South Africa have been taking place (including a new national strategic plan for AIDS) to help prevent transmission of the virus and to treat those who are infected, the challenges are large in scale. UNAIDS states that in South Africa by the end of 2006:

- About 5½ million people (or one in nine) were living with HIV infection. Almost one-quarter million of them were children under 15 years old.
- More than 360,000 people were taking antiretroviral therapy (ART).
- For every person in South Africa who begins taking ART, three more become infected with HIV.

Could a Plant Be Helpful?

Working to create a ripple in the pandemic's bucket are an international team of Western-trained clinicians and researchers from both the United States and South Africa (see box on pg. 2) as well as South African traditional healers. The plant they are studying, Sutherlandia, is a member of the pea family, uniquely native to South Africa, and wild-growing in places there. Its scientific name is *Lessertia frutescens*; some of its popular names are Insisa, Unwele, Phetola, and cancer bush.

Walk into any South African traditional medicine market, and there it is—

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International Team Studies South African Plant for HIV/AIDS

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alongside the other herbs, barks, pieces of wood, animal bones and teeth, and other products sold and traded for medicinal purposes. Sutherlandia is used to make traditional medicine believed to be helpful for many health problems—such as infections (including HIV), inflammation, depression, cancer, and stress effects—and as a wellness tonic. It is also available in South African drugstores and in some other countries such as the United States, where it is sold as a dietary supplement.

William Curtis (1792), courtesy of the Missouri Botanical Garden

Lessertia frutescens **(Sutherlandia)**

This randomized, placebo-controlled study is looking at Sutherlandia's safety in a group of 124 volunteers who are at an early stage of HIV infection and do not qualify for government-sponsored ART. The researchers will also collect data that could shed light on the plant's usefulness in treating some of the symptoms of HIV infection. The participants who receive Sutherlandia will take by mouth a preparation made from ground leaves and specially formulated for the study. The study will be conducted at Edendale Hospital, a large county hospital located in Pietermaritzburg, KwaZulu-Natal, South Africa, and affiliated with the Nelson R. Mandela School of Medicine.

Jack Killen, M.D., Acting Deputy Director of NCCAM and Director of NCCAM's Office of International Health Research, said, "Many people are using this plant in South Africa, where it originated, and where traditional healers are commonly the first and/or the only medical care option." He added, "Not much is known yet about Sutherlandia scientifically, including whether and how it works. We hope to learn a good deal from this study about Sutherlandia specifically and about the best practices for rigorous research on traditional medicines more generally."

Centers That Study Traditional/Indigenous Therapies

The Sutherlandia study is a key project of one of NCCAM's Centers for International Research on CAM: The International Center for Indigenous Phytotherapy Studies (TICIPS) on HIV/AIDS, Secondary Infections, and Immune Modulation. This center is a partnership between many institutions:

United States
University of Missouri, Columbia
University of Missouri, Kansas City
Missouri Botanical Garden
Georgetown University
University of Texas Medical Branch at Galveston

South Africa
University of the Western Cape
University of Cape Town
University of KwaZulu-Natal
Medical Research Council of South Africa

TICIPS also plans to study African wormwood (*Artemisia afra*), another traditional South African medicine, for its potential usefulness against tuberculosis and cervical cancer.

NCCAM's international centers are designed to examine complementary, alternative, and traditional medical therapies in the environments where they originated and have the longest tradition

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Meet a Member of NACCAM

Carlo Calabrese, N.D., M.P.H.

Carlo Calabrese, N.D., M.P.H., has been a member of NCCAM's National Advisory Council for Complementary and Alternative Medicine (NACCAM) since 2004. He is senior investigator at Helfgott Research Institute, National College of Natural Medicine (NCNM), Portland, Oregon, and clinical assistant professor of neurology at Oregon Health and Science University (OHSU), Portland. Dr. Calabrese is also associate director of the CAM: Expectancy and Outcome (CAMEO) center, an NCCAM developmental research center that focuses, in several disease contexts, on patient expectation and other factors in patient-provider interaction that may produce desired biological effects. CAMEO is a collaboration between OHSU, NCNM, Oregon College of Oriental Medicine, and Western States Chiropractic College.

Dr. Calabrese received his Doctor of Naturopathic Medicine degree from NCNM and his Master of Public Health degree from the University of Washington. He has developed methods for researching CAM and conducted studies on nutrients, botanicals, and CAM practices.

How did you become interested in naturopathy? [*Editor's note:* For more on this system of medicine, see NCCAM's Backgrounder, *An Introduction to Naturopathy*.]

I was seeking an approach to health maintenance and improvement that would be ecologically and economically sustainable. I came across naturopathic medicine 30 years ago while seeking a practitioner to attend the home birth of our son.

Do you think the practice of naturopathic health care is changing? If so, why?

Yes, naturopathy has been changing since its beginning. Our profession is growing fast; the number of licensed naturopathic doctors (NDs) doubled from 2001 to 2006. NDs and naturopathic medicine change, as MDs do, under the influence of emerging experience. NDs are now contributing to the biomedical research literature, of which they were always strong consumers. The reorganization and definition of the profession in the 1980s was a new beginning. Also, NCCAM has provided an avenue of funding that is helping to train scientifically talented people, retain them in research careers, improve the evidence base, and articulate and evaluate our practice. This will ultimately have benefits for patients.

Based on your clinical experience, what are a few aspects of naturopathic medicine that you think can be especially helpful to people?

There are many therapies that NDs provide to address specific diseases and that are either well supported or very promising. However, the best payoff, in my opinion, comes from applying the basics of diet, exercise, and stress management with a goal of overall wellness for every patient, in combination with disease-specific naturopathic treatments.

One suggestion at NCCAM's recent Stakeholder Dialogue was for NCCAM to develop new research methodologies to study whole medical systems. Do you have any specific ideas on this?

Many research methods would be appropriate. One of my favorites is closer study of the experiment of CAM that has been going on in everyday care. As some CAM practitioners (such as NDs, chiropractors, and acupuncturists) become integrated into the health system, studies of their practices with regard to broad outcomes in health, safety, and cost become easier. Such studies can reveal the outcomes of policies and personal choices.

What has your experience been as a member of NCCAM's advisory council? How can other CAM professionals contribute?

My experience has been delightful. I would encourage CAM professionals to contribute by attending NCCAM public meetings, keeping abreast of the Center's activities, and supporting its work. I would also encourage CAM clinicians to help build the evidence base behind natural-medicine therapies by linking with other researchers, collecting data from clinical practice, and working toward building research networks. Ultimately, we must have the means to examine our practices.

The next meeting of NACCAM will be held on February 1, 2008, at the Neuroscience Center Building, 6001 Executive Blvd., Rockville, Maryland; see nccam.nih.gov/about/advisory/naccam/.

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Nondrug Therapies Included in the ACP/APS Guideline

Acupuncture—Defined in NCCAM's publication *Acupuncture*

Back schools—Group programs that offer education, skills, and exercise therapy and are led by a professional

Psychological therapies—A category including biofeedback, progressive relaxation, cognitive-behavioral therapy, and operant therapy

Exercise therapy—A supervised exercise program or home fitness regimen

Functional restoration—For injured workers, testing intended to improve job performance and job fitness and performed in a supervised environment

Interdisciplinary therapy—Therapy with physical, vocational, and behavioral components, provided by multiple professionals from different disciplines

Massage—See NCCAM's publication *Massage Therapy as CAM*

Physical therapies—Interferential therapy, low-level laser therapy, lumbar supports, short-wave diathermy, superficial heat, traction, transcutaneous electrical nerve stimulation, and ultrasonography

Yoga—The use of specific body positions and breathing techniques, with an emphasis on mental focus

Definitions, where provided, are condensed from the full ACP/APS articles. ❖

Low-Back Pain: NACCAM Symposium Features Two Researchers

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If you have struggled with a painful back, you are not alone. Back pain is one of the most common medical problems in the United States, affecting 8 out of 10 people at some time in their lives. Low-back pain (LBP) costs the nation an estimated $50 billion each year and is also the most common cause of job-related disability. In the great majority of cases of LBP (85 percent, according to one estimate), the cause is unknown.

Back pain and other back problems are the number-one reason that Americans use CAM therapies, according to a large national survey. Do they work for this purpose? What goes on in the body when one of these therapies, spinal manipulation (see box on pg. 6), is given? Two researchers spoke on these topics at the September 2007 meeting of the National Advisory Council for Complementary and Alternative Medicine (NACCAM). The symposium was also open to the public. Partap S. Khalsa, D.C., Ph.D., D.A.B.C.O., a program officer at NCCAM, served as moderator.

Toward a Better Understanding of Spinal Manipulation

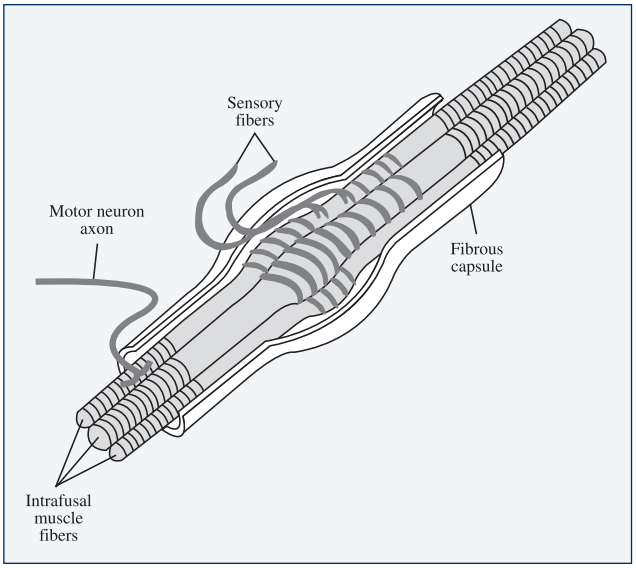
Joel Pickar, D.C., Ph.D., is a professor at the Palmer Center for Chiropractic Research, Palmer Chiropractic University, Davenport, Iowa. A member of NACCAM, he is trained in both neuroscience (scientific study of the nervous system) and chiropractic.

Dr. Pickar is the lead investigator at NCCAM's Developmental Center for the Study of Mechanisms and Effects of Chiropractic Manipulation—a multi-institution, multidisciplinary center that is administered at Palmer and builds on work by an earlier developmental center there. The center's research focus is

- The structures and tissues in and near the spine, especially the lower back
- Their properties related to function, the nervous system, and mechanical forces
- What happens in them when forces mimicking those of chiropractic spinal manipulation are applied.

Speakers Joel Pickar, D.C., Ph.D., and Daniel Cherkin, Ph.D., with Partap Khalsa, D.C., Ph.D., of NCCAM

Why study this therapy? "We know that 10 percent of Americans seek chiropractic care," Dr. Pickar says, "a figure that rises to 20 to 40 percent of Americans who have back pain. Spinal manipulation is a core practice in chiropractic care. There have been positive results from over 40 studies on spinal manipulation for low-back pain, but many have had consistency or quality issues. In short, there are reasons to recommend spinal manipulation for low-back pain, but there's also a lot we don't know about this therapy."



Inside a muscle spindle are specialized muscle fibers that receive inputs from motor neurons

Versatile Muscle Spindles

Dr. Pickar first explained how the bony segments of the spine (vertebrae) must work with each other, under muscle control, and with the nervous system so that people can maintain an upright, stable posture and can move. The vertebrae couldn't do these things without muscle spindles—long, narrow structures in the muscles made up of smaller muscle fibers and sensory receptors. They monitor muscle length and send signals to the nervous system about the positioning of a person's joints.

Dr. Pickar and his colleagues have developed an animal model and, with the aid of sophisticated technology, they are studying how muscle spindles and other tissues and structures in the low back respond when manipulation-like forces are applied. They have designed these forces to be similar to the most common type in chiropractic—high-velocity, low-amplitude manipulation.

Which Therapies Seem To Help LBP? Do Expectations Play a Part?

Many CAM therapies are among those claimed to help LBP. Does the evidence from studies indicate that CAM is effective for this purpose? How does someone choose among treatment options? Daniel C. Cherkin, Ph.D., summed up one group of experts' efforts to answer these and some related questions. Dr. Cherkin is associate director for research and senior investigator at the Group Health Center for Health Studies, in Seattle, Washington. He has developed methods for the rigorous study of CAM and has studied a number of CAM therapies for LBP.

Dr. Cherkin first discussed a new guideline for clinicians on the diagnosis and treatment of low-back pain, sponsored by the American College of Physicians (ACP) and the American Pain Society (APS) and published in October 2007. Dr. Cherkin served on an expert panel for selecting therapies to be reviewed (including from CAM) for this guideline and evaluating the evidence. One part of this project was to determine whether nonpharmacological (nondrug) treatment options offered any benefit. The nondrug therapies the panel selected are in the left-hand column of pg. 4.

As one of the guideline's seven recommendations, the authors conclude that for patients whose LBP does not improve with conventional medications, education, and self-care, clinicians should consider adding "nonpharmacologic

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News for Researchers

NIH requires that grant applications be submitted via the Web portal Grants.gov (www.grants.gov) using Form 424 (Research and Related, or R&R, application). To find out more, go to era.nih.gov/electronicreceipt. For more information on the funding opportunities below and others, go to nccam.nih.gov/cgi-bin/grants/funding.pl.

NOT-AT-08-001: Availability of Data from the 2002 and 2007 National Health Interview Survey (NHIS): Public Use of Complementary and Alternative Medicine

Sponsors: NCCAM and NIH. Data from a supplement on CAM use in the 2007 edition of the NHIS, a national study conducted by the National Center for Health Statistics (part of the Centers for Disease Control and Prevention), is expected to be released in Summer 2008. Data from the 2002 edition of this survey are currently available. NCCAM and other NIH institutes are accepting research grant applications for secondary analyses of this information.

NOT-AT-07-005: Administrative Supplements for CAM Practitioner Research Experiences (see box on pg. 11)

PA-07-393: Biology of Manual Therapies

Sponsors: NCCAM, the National Institute of Biomedical Imaging

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Low-Back Pain: NACCAM Symposium Features Two Researchers

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therapies with proven benefits." They identify those therapies as the following (CAM therapies are in **bold**):

ACUTE LBP:	**spinal manipulation**
CHRONIC LBP:	intensive interdisciplinary rehabilitation, exercise therapy, **acupuncture**, **massage therapy**, **spinal manipulation**, **yoga,** cognitive-behavioral therapy, and progressive relaxation.

Dr. Cherkin said that it is an "enormous change from the past for so many CAM treatments to be recommended by a major review of this nature." He described the quality of the available evidence as generally fair, and stronger for spinal manipulation. "The authors are not saying that any of these are 'fabulous' or first-line treatments for LBP," he said, "but that they are reasonable to try when usual care—such as medications, back care information, and self-care—has not resolved the problem. There is now fair-to-good evidence that [some] popular CAM therapies have a moderate effect on chronic low-back pain."

Other Recent Work by Dr. Cherkin

Dr. Cherkin also discussed several NCCAM-supported studies by his group. A clinical trial published in 2005 found that 12 sessions of a type of yoga called viniyoga reduced back pain more than an exercise program or a self-care book. Another, nearing completion, compares the effects, on outcomes and costs, of:

- Acupuncture added to usual care, versus usual care alone
- True acupuncture versus sham acupuncture (delivered via a toothpick in a tube that stimulates the skin but does not penetrate it)
- Individualized acupuncture versus standardized acupuncture. In the individualized approach, a diagnostician selects points on each person for LBP treatment; in the standardized approach, a practitioner treats the points identified as most effective for LBP from the literature and practitioner surveys.

This randomized study was conducted with 640 participants who had had chronic LBP for at least 3 months and had never had acupuncture. Dr. Cherkin gave a preview of some findings:

- Acupuncture added to usual care was superior to usual care.
- Individualized acupuncture was not more effective than standardized acupuncture.
- Real acupuncture was not more effective than sham acupuncture.

He commented that it appears acupuncture is effective for LBP, but not from the insertion of needles, and that it is possible that acupuncture's observed benefits arise from the stimulation alone of points and/or from nonspecific effects such as beliefs and expectations.

Currently, Dr. Cherkin's team is recruiting for a study that will compare, as treatments for chronic low-back pain, relaxation massage (also called Swedish massage) and focused structural massage, both with each other and with usual care. Another study will examine yoga compared with usual care and exercise therapy.

"We hope that these studies will clarify the value of these CAM therapeutic approaches for treating LBP, one of the most common, challenging, and expensive health problems that plague developed countries," he told *CAM at the NIH*. "As in our other studies, we also hope that the findings will help physicians to make informed and confident referrals, consumers and insurers to make safe and cost-effective choices, and schools that train practitioners to make responsible curriculum decisions." ❖

First Transagency Fellowship in Cancer CAM Awarded

Scott Miller, M.D.

Scott Miller, M.D., of Iowa City, Iowa, is the first recipient of a new fellowship in medical oncology and CAM jointly sponsored by NCCAM, the National Cancer Institute (NCI), the NIH Clinical Center, and the U.S. Food and Drug Administration (FDA). The 3-year fellowship is designed to help new researchers gain expertise in CAM and cancer research, policy and regulatory affairs, and clinical investigation.

"Cancer patients have a high rate of CAM use," said Patrick Mansky, M.D., Director of NCCAM's Complementary and Integrative Medicine Consult Service at the NIH Clinical Center. "This fellowship provides physicians the opportunity to study CAM approaches in oncology. Dr. Miller brings an excellent degree of training and experience to this position."

Dr. Miller graduated from the University of Iowa College of Medicine. He completed a residency in family medicine at Loma Linda University Medical Center, Loma Linda, California; served 2½ years as a physician with the Indian Health Service in Kotzebue, Alaska; and completed a 1-year oncology fellowship at Iowa.

Dr. Miller's training included experience at a clinic whose focus was cancer patients and CAM. A major challenge in patient care, he said, came from "unsafe duplication. Some clinic patients were using multiple products, up to 15 or 20 at once. [Also,] some preparations such as 'tonics' have multiple ingredients. I recall one patient who was taking a group of combination products; five contained selenium that, when added together, exceeded recommended levels. Our clinicians would review all of a patient's products, attempt to produce a rational strategy (if possible), and try to avoid these duplications." Another challenge was the fact that some herbs, such as St. John's wort, can interfere with chemotherapy.

Some of Dr. Miller's areas of concentration in the CAM oncology fellowship will be to:

- Learn about and gain experience in the use of CAM in cancer pain, symptom management, and rehabilitation
- Perform patient evaluation and patient care as part of a team
- Learn about regulatory issues pertinent to the use of CAM therapies, especially botanicals, through a rotation at the FDA
- Participate in NCI's Best Case Series Program, reviewing documents submitted about patients treated with CAM approaches in order to determine whether NIH support for further investigation is warranted
- Learn about clinical trials methodology and design and carry out an original research project.

© Bob Stockfield

Tai chi is one of the CAM therapies available at the NIH Clinical Center

At the NIH Clinical Center, Dr. Miller's experience will include rotations at the Rehabilitation Medicine Department and the Pain and Palliative Care Service. Dr. Miller will also work with the Complementary and Integrative Medicine Consult Service (recently established by NCCAM), which coordinates the resources of these existing efforts and develops programs and services in clinical, research, and education areas. ❖

News for Researchers

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and Bioengineering, and two components of the Canadian Institutes of Health Research. This initiative will fund basic, mechanistic, and preclinical studies focused on the possible mechanisms of action underlying the effects of manual therapies such as spinal manipulation, mobilization, and massage therapy. These therapies are often used for musculoskeletal conditions such as low-back pain and neck pain.

PAR-07-378: Omics and Variable Responses to CAM: Secondary Analysis of CAM Clinical Trials

Sponsors: NCCAM and the National Cancer Institute. Recipients of these grants will study genomic, proteomic, metabolomic, and other omic variations in individuals' responses to CAM therapies and to biologically active food components that could be of benefit in cancer, such as in prevention and treatment and the management of symptoms.

PAR-07-384: Ruth L. Kirschstein National Research Service Awards for Individual Predoctoral Fellowship Training in Complementary and Alternative Medicine

Sponsor: NCCAM. These awards are intended to help develop a diverse pool of highly trained scientists to study CAM. ❖

University of Missouri School of Medicine

Dr. Bill Folk (left) and Dr. Quinton Johnson

TICIPS and Study Leaders

Key personnel include **William Folk, Ph.D.,** principal investigator and TICIPS co-director, who is professor of biochemistry at the University of Missouri, Columbia, and associate dean for research at its school of medicine. **Quinton Johnson, Ph.D.,** is TICIPS co-director and director of the South African Herbal Science and Medicine Institute at the University of the Western Cape. Co-leaders of the Sutherlandia study are **Kathleen Goggin, Ph.D.,** associate professor of psychology at the University of Missouri, Kansas City, and **Douglas Wilson, M.B.Ch.B., F.C.P.,** head of the Department of Medicine at Edendale Hospital. **Nceba Gqaleni, Ph.D.,** is the Department of Science and Technology/National Research Foundation Research Chair on Indigenous Health Care Systems, Nelson R. Mandela School of Medicine, University of KwaZulu-Natal. **James Syce, Ph.D.,** is professor of pharmacy at the University of the Western Cape. ❖

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of use. In South Africa, that environment is "one of the most botanically diverse and rich regions in the world," says Dr. Folk. South Africa has over 20,000 indigenous species of plants, several thousand of which are used for health purposes by traditional healers.

A Traditional System That Millions Rely Upon

South African traditional medicine dates back to ancient times. It has been recognized by the South African government as a key part of that country's health care system. It is estimated that in South Africa, there are about 200,000 traditional healers, and about 80 percent of the population (which numbers about 48 million, with 18 languages and many cultures) uses these healers for their primary health care.

African traditional medicine is too complex to describe fully in this article, but a few of its aspects include:

- The approach is holistic, focusing on the whole person rather than on particular organs or disorders.
- Body, spirit, and environment are all taken into consideration.
- Many traditional healers use rituals, herbs and other naturally derived medicines, divination (obtaining information through what is believed to be supernatural means), offerings, faith healing, and purgative approaches such as enemas and incisions.
- The different types of traditional healers include *inyangas*, who are especially skilled in natural medicines; *sangomas*, spiritualists who counsel and heal through communication with ancestral spirits; traditional birth attendants; and traditional surgeons.

Western medicine is also available in South Africa, including at Edendale Hospital, but it can be challenging to obtain for many reasons, including distance (close to 50 percent of South Africa's population lives in nonurban areas) and a shortage of Western-trained doctors, nurses, and other health staff. In the district of Mount Frere, for example, there is one Western doctor for every 30,000 residents.

A Carefully Designed Research Collaboration

Traditional healers in South Africa are collaborating in research with allopathic team members at every stage of the Sutherlandia study—from developing the research questions through analyzing, interpreting, and sharing the results. This reflects not only a level of commitment but the use of, and training in, a research strategy called community-based participatory research.

Dr. Goggin says, "The traditional health providers are helping us in so many ways. They have helped give legitimacy to the study. They partnered with us in translation and in developing outcome measures. They will be helping us with patient retention. Above all, they are willing to try. For 1,000 years, people have taken things from their traditional and indigenous medicine—stolen [them] and walked away. Our colleagues are trusting that we are not going to do that and we will work hand in hand." The study is designed to ensure compliance with U.S. and South African regulations on the conduct of research, financial disclosure, conflict of interest, and international property rights.

Adapting for Culture

Dr. Goggin recalls a key aspect of the study in which all the members of the team, as well as additional groups of traditional

healers, offered their expertise to adapt tools for the study.

They were going to need quantifiable outcome measures—including for perceived stress, symptoms of depression, and quality of life, all of which have cultural associations. The U.S. researchers began with some standard scales and the 10 "good practice" steps developed by the International Society for Pharmacoeconomics and Outcomes Research. How would these translate in the context of Zulu South Africa?

Dr. Goggin says, "We did focus groups with traditional healers who are culturally Zulu and speak isiZulu. Many also speak English, but isiZulu is their primary language and the one they use when treating clients and seeing patients. They helped us to figure out what our measures should be."

She continues, "There was no easy translation for any of the items on the depression measure, for example. There's no single word for depression in isiZulu. So, when we talked about the concept of depression, we asked, 'When someone is having a lot of worries and stress and is not feeling well, what is that called?' They came to consensus on a term, *umoya uphansi*.

"Then we asked, 'What would those people look like and be like?' And they came up with every single symptom of depression. We used the CES-D [one of the screening tests for depression, developed by the Center for Epidemiologic Studies, National Institute of Mental Health], which does not include an item on sexual dysfunction. The traditional healers added sexual dysfunction on their own."

When it came to a term for quality of life, the traditional healers agreed on *izinga/iqophelo lempilo*, which Dr. Goggin says means "spirit of life... It's very, very close to our concept, but they don't think of quality of life as a thing. It's something that somebody strives for at all times. Everyone would want 'quality of life.'"

There were many steps by the team members to review and revise questionnaires to be used in the study. For example, the versions of isiZulu spoken in two cities that are 45 minutes apart, Pietermaritzburg and Durban, turned out to be significantly different.

The Experience So Far

Dr. Goggin and her colleagues learned from talking to traditional healers, she says, that "Sutherlandia is a powerful part of their *muthis* [or *mutis*, traditional medicine formulas], and they use it often. They don't use Sutherlandia on its own, but in combinations with other herbs. It is believed to have an impact on gastrointestinal distress, especially in reducing nausea and increasing appetite. That may be true, at least from some of the early studies that have been done in animals and in our previous phase I study [on safety in healthy adults]. With

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Advancing Global Health

In its Strategic Plan for 2005-2009, NCCAM describes its interest in:

- Advancing the understanding of traditional/indigenous medical systems (which may also be used as CAM) through multidisciplinary collaborative studies
- Contributing to the preservation of irreplaceable and valuable knowledge about them
- Enhancing understanding of how best to integrate them with "conventional" medical interventions.

Go to nccam.nih.gov/about/plans/2005/ to view NCCAM's Strategic Plan.

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Conference Focuses on Fascia

Fascia is a widespread sheath of soft tissues that interconnects with muscles, ligaments, bones, and organs. The effort to understand fascia better was the topic of the First International Fascia Research Congress, which took place October 4 and 5, 2007, at Harvard Medical School in Boston. NCCAM and the National Institute of Arthritis and Musculoskeletal and Skin Diseases provided conference grant support.

Partap S. Khalsa, D.C., Ph.D., D.A.B.C.O., a program officer at NCCAM, served as a speaker and panelist. He commented to *CAM at the NIH,* "The conference brought together leading scientists from the disciplines of biomechanics, mechanobiology [an emerging science that combines mechanics, molecular biology, and genetics], neuroscience, biology, and biochemistry with clinicians including osteopaths, chiropractors, physical therapists, massage therapists, and others from the manual therapies. New research was presented on the interactions between fascia and other components of the musculoskeletal system that influence musculoskeletal health and, when they become disordered, can result in pain."

The conference's Web site, at press time, was www.fascia2007.com. ❖

International Team Studies South African Plant for HIV/AIDS

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increased eating, one often sees an increase in mood and in quality of life."

Although Sutherlandia is widely used, Dr. Folk says, previously there was no solid research evidence of its safety and effectiveness, including in HIV/AIDS. He notes there is some preliminary scientific evidence that this herb can help treat infections, such as bronchitis or the common cold—and also some laboratory evidence that Sutherlandia has "significant interactions" with ART drugs (in other words, taking them together could alter the effectiveness or side effects of ART).

Dr. Folk says that he has found it particularly rewarding so far "to assist in the development of the collaboration in research between traditional healers and physicians, which will undoubtedly improve care." Dr. Goggin appreciates "having had the opportunity to work with and learn from my colleagues in South Africa and being part of this historic trial." She adds that she finds South Africa to be "an amazing place. People there are generally just the most warm, open, and inviting people you'll ever meet." ❖

Is Sutherlandia Safe?

The TICIPS team first carried out a small, randomized, double-blind, placebo-controlled safety study of Sutherlandia in a group of 25 healthy volunteers. Dr. Quinton Johnson and his colleagues found it to be well tolerated, with no clinically significant differences in side effects seen between the group who received the Sutherlandia and the group who received a placebo, except that the Sutherlandia group showed indications of an increase in appetite. They noted that in an earlier study in vervet monkeys, Sutherlandia was given at nine times a typical dose and no adverse effects occurred. They suggested that Sutherlandia's potential benefits might be attributed to one or more of the following ingredients: D-pinitol (a simple sugar often found in legumes), GABA (gabba-amino butyric acid, an amino acid and a neurotransmitter), and L-canavanine (an amino acid).

There is very limited information about Sutherlandia's safety and side effects in the peer-reviewed literature. However, among the common points in two evidence-based reviews are that:

- Sutherlandia has a long history in Africa of apparently safe use.
- Its known side effects include mild diarrhea, dry mouth, increased urination, and (in people who have wasting and weakness from disease) dizziness.
- There are indications that Sutherlandia interacts with ART.
- The safety of the ingredient L-canavanine is a controversial area. It may have an association with lupus and a lupus-like syndrome—a concern that appears to be based largely on a case report, and some laboratory and animal studies, on L-canavanine in another legume plant, alfalfa *(Medicago sativa)*. One of the reviews cites a South African reference reporting rare instances of birth defects and induction of abortion from L-canavanine. In short, the safety of L-canavanine is controversial—more high-quality studies are needed.
- Very little is known scientifically about the safety of D-pinitol and GABA. ❖

Creative Ideas for Curriculum Development

Since 1999, NCCAM has sponsored two education grant initiatives supporting projects designed to:

- Refine and expand approaches for including CAM information in medical and nursing school curricula
- Increase the quality and quantity of research-related content in the curricula at schools that train CAM practitioners
- Encourage partnerships between conventional and CAM practitioners and their patients, toward delivering the best possible health care in an integrated medicine environment.

The October 2007 issue of *Academic Medicine*, the journal of the Association of American Medical Colleges, features NCCAM's education grant program, including papers by nine author teams who are recipients of these grants (see nccam.nih.gov/research/results/spotlight/102607.htm).

This publication followed the 2007 annual meeting for the principal investigators and senior staff of these projects, which took place June 21-22, 2007, in Bethesda, Maryland. The event attracted 33 attendees from conventional medical and nursing schools, schools that train CAM practitioners, and the American Medical Student Association.

At the annual meeting, researchers' presentations addressed developing, implementing, evaluating, and sustaining curricula; sharing information (for example, curriculum content, learning approaches, and learner outcomes) with a wider audience; and achieving successful partnerships. Often in these projects, professionals from a variety of disciplines work together toward common goals.

Nancy Pearson, Ph.D., NCCAM program officer, said of the meeting, "We at NCCAM were impressed by the degree of cooperation and idea-sharing among the schools and their development of creative ways to sustain their CAM-curricula programs." For more about these projects, see nccam.nih.gov/research/extramural/awards/2006/ and nccam.nih.gov/research/extramural/awards/2005/ (scroll down to project numbers beginning with "R25"). ❖

Examples of Education Grant Approaches

- New CAM modules in required courses
- Elective courses on CAM topics
- Special lectures
- Discussion groups
- Tutorials
- Clinical field experiences
- Internet programs
- Conferences and workshops
- Tutorials and databases on CAM evidence-based literature

Opening Doors To Research Experience

NCCAM has announced a new initiative intended to provide opportunities for CAM practitioners to gain hands-on research experience under the direction of experienced researchers (www.nih.gov/grants/guide/notice-files/NOT-AT-07-005.html). A key goal is for CAM practitioner candidates to become more competitive for NCCAM/NIH research-training fellowships and research grants.

Holders of certain types of NCCAM grants (R01, P01, U19, U01, or P50) are eligible to apply and request support for one specific CAM-practitioner candidate. Eligible CAM practitioners will hold a clinical degree from an accredited institution in a practice that is licensed or certified at the state level, such as licensed chiropractors, naturopathic medicine practitioners, acupuncturists, and massage therapists. A list of grantees willing to consider sponsoring a CAM practitioner candidate is at nccam.nih.gov/research/extramural/awards/support.htm. Grantees have the final authority to accept or reject inquiries. ❖

NCCAM Exhibits

at Upcoming National Meetings

American Academy of Allergy, Asthma, & Immunology, March 14-18, Philadelphia

Association of Chiropractic Colleges, March 14-15, Washington, D.C.

Society of Behavioral Medicine, March 26-29, San Diego

American Association for Cancer Research, April 12-16, San Diego ❖

CAM at the NIH:
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More Information

The following new NCCAM Herbs at a Glance fact sheets are available on the Web and from the NCCAM Clearinghouse: *Bitter Orange, Chamomile, European Elder, Hoodia, Noni, Soy,* and *Thunder God Vine* (nccam.nih.gov/health/herbsataglance.htm).

* * *

The National Cancer Institute's (NCI) **PDQ® summaries** provide a science-based, peer-reviewed information resource on many CAM therapies used in cancer. Among recent new or updated reviews are *Aromatherapy and Essential Oils, Gerson Therapy, Milk Thistle, PC-SPES, Selected Vegetables/Sun's Soup,* and *Spirituality in Cancer Care.* Go to www.cancer.gov/cam/health_pdq.html, or call 1-800-422-6237.

Also, NCI's Office of Cancer Complementary and Alternative Medicine sponsors a **monthly lecture series** for the NCI community, featuring experts in cancer CAM research. These lectures are archived on the Web and available to the public at www.cancer.gov/cam/news/monthly-lecture-series.html.

* * *

You can view **results from many NCCAM-funded studies** by using the resources on the "Research Results" page on NCCAM's Web site, at nccam.nih.gov/research/results/. Among the topics of recent findings are acupuncture's effects on posttraumatic stress disorder and meditation's effects on the mind's ability to process information.


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Reiki

Looking for a photo of a CAM therapy for your noncommercial scientific or educational project? Try the new **NCCAM Image Gallery**, at nccam.nih.gov/gallery/, which offers professional-quality images in high and low resolution. The initial topics are acupuncture, herbs, massage, Reiki, tai chi, and yoga, with more to be added over time. Please note the requirements on the site about use and acknowledgment. ❖

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