



Mind-Body Connections

A Newsletter of the UTMB Biobehavioral and Integrative Medicine Project



Welcome to the Mind-Body Connection!

This publication is designed to bring you up to date with activities on the UTMB campus related to Mind-Body Research. During a recent visit to UTMB for the Nicholson Integrative Medicine Roundtable series Dr. Margaret Chesney, Deputy Director of the NIH's National Center for Complementary and Alternative Medicine identified as areas of priority funding both neuroscience and mind-body medicine

In 2004 UTMB received an R 21 Exploratory and Development Grant to enhance our capacity and environment for high quality research in mind body areas. The title of this funded project is "Psychoneuroimmunology, Stress and Healthy Aging in Hispanics." Awarded through the National Institute of Aging, it fosters studies as described in this publication, to support new research and new researchers in Mind-Body Medicine (MBM). Our intention is to utilize these projects to foster extramural funding and ultimately a center grant related to Mind-Body Medicine.



Victor S. Sierpina, M.D.,
Principal Investigator

Some definitions

Psychoneuroimmunology is an evolution of research on stress. It has evolved into a field (PNI), which brings together research on the mind (psychology), the brain (neurology), and the body's defense system (immunology). Mind body therapies include such practices as meditation, relaxation, tai chi, yoga, biofeedback, cognitive and psychoeducational interventions. Studies of the psychological and biological impact of mind-body therapies are regularly funded by multiple institutes and centers at the NIH at both preclinical and clinical levels..

As an interdisciplinary neuroscience field, PNI can be briefly summarized by 1) what is known about its pathways, and 2) our understanding of the effectiveness of various MBM therapies in harnessing neuroimmunomodulatory pathways in the clinical setting. Cortical and autonomic pathways have been identified which affect the stimulation of lymphoid tissue, stimulate the production and regulation of cytokines and neurotransmitters, and interact with the hypothalamic-pituitary-adrenal axis and its products.

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These systems act to transduce immune signals to and from the CNS with effects on cardiovascular and immunological function. Many factors play defined roles in the signaling pathways that control immune responses, and thereby influence the physiologic response to stress and distress on an immunological level. These factors include lymphocyte activity; immunoregulation by multiple messenger hormones; adrenergic, noradrenergic, cholinergic, and endorphin activity; and leukocyte-derived interleukin and other neuropeptides such as tumor necrosis factor.

Conclusion

Through projects supported by this grant, we expect to favorably impact health care outcomes of our patient population through enhanced understanding of the principles of MBM, PNI, stress and coping mechanisms in healthy aging in older Hispanics. We will also generate new studies in the field of MBM related not only to Geriatrics but also to other populations and age ranges. By helping produce a cadre of interdisciplinary MBM researchers, we expect UTMB to help lead the field in addressing important health care needs and in creating research funding opportunities and infrastructure support for our faculty, and to produce a cadre of interdisciplinary MBM researchers.





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Mind-Body Speakers Series

by Diedra J.A. Walters

As part of this project we regularly bring in speakers on Mind-Body topics. In the last six months we have hosted Dharma Singh Khalsa, M.D., John A. Astin, Ph.D., Margaret A. Chesney, Ph.D., and Lorenzo Cohen, Ph.D.



Dharma Singh Khalsa, M.D. has been working as an expert on the integrative medical approach to overcoming Alzheimer's Disease for 12 years. President and Medical Director of the Alzheimer's Prevention Foundation International in Tucson, Arizona, he is Board Certified in Anesthesiology and Pain Management. Dr. Khalsa founded

the Acupuncture, Stress Medicine and Chronic Pain Program at University of Arizona teaching hospital in Phoenix.

He is the first physician to testify before the United States Congress about an integrative medical program to prevent and reverse memory loss. Dr. Khalsa is the author of medical textbook chapters on this topic, as well as books for the general public, including *Brain Longevity*, *The Pain Cure*, *Meditation as Medicine*, *Food as Medicine*, *The Better Memory Kit*, and *The New Golden Rules* (April '05).

John A. Astin, Ph.D. received his Doctorate in Health Psychology from the University of California, Irvine. He has served as the director of mind-body research at the University of Maryland School of Medicine and in 2002 he took a position as Research Scientist at the California Pacific Medical Center in San Francisco. His research and clinical work has focused on several related areas:



- The use of mind-body therapies, particularly mindfulness meditation, to treat various health-related problems
- Psychosocial factors associated with use of complementary and alternative medical therapies
- The psychological construct of control and its relationship to mental and physical health
- The role of spirituality in healthcare

His research has appeared in such journals as Archives of Internal Medicine, JAMA, and the Annals of Internal Medicine. He is the co-author (with Deane Shapiro) of the book: *Control therapy: An integrated approach to psychotherapy, health, and healing* and the author of *Too Intimate for Words*, a book of contemplative poetry and prose. Along with his scholarly pursuits, Dr. Astin is also an accomplished singer, songwriter and recording artist.

Margaret A. Chesney, Ph.D., is NCCAM's first Deputy Director and leads the Center's Division of Extramural Research and Training. Dr. Chesney partners with NCCAM's Director in planning, directing, and managing the programs and resources of the Center. She helps formulate, guide, and oversee the management of all NCCAM-funded extramural centers, investigator-initiated research, research contracts, fellowships, and training and career awards.



Prior to joining NCCAM, Dr. Chesney was professor of medicine and epidemiology at the School of Medicine, University of California, San Francisco (UCSF), where she was co-director of the Center for AIDS Prevention Studies and director of the behavioral medicine and epidemiology core of the UCSF Center for AIDS Research. Most recently, she was also a senior visiting scientist in the NIH Office of Women's Health, in the Office of the Director.

Throughout her career, Dr. Chesney has designed and conducted original research on the relationship between behavior and chronic illness, and on behavioral factors in clinical trials, including issues of recruitment, adherence, and retention. She also worked on the development and evaluation of psychosocial and behavioral interventions for health promotion, illness prevention, and treatment.

An author and coauthor of over 240 scholarly research papers and publications, Dr. Chesney is Associate Editor of Psychology, Health and Medicine and serves on a number of editorial boards, including those for Psychosomatic Medicine, the British Journal of Health Psychology, and the Journal of Acquired Immune Deficiency Syndromes.

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R21 Exploratory and Development Grant Research Projects

The following are the four core projects this grant will address:

Project 1: The Role of Music Therapy in Alleviating Stress in Hip Surgery Patients

Co-investigators: Jamal Islam, M.D., M.S. and Arny Ferrando, Ph.D. Additional collaboration from the UTMB Department of Surgery, Michael J. Grecula, M.D., Kelly W. Stephenson, M.D., and Christine M. Tuden, M.S.

This study examines the effects of stress in the perioperative period of patients receiving hip replacement. We will introduce music therapy administered through the perioperative period in order to mitigate this stress. It is known that cortisol release under operative stress increases protein catabolism, which can affect recovery time. Additionally, we will examine and characterize the role of two cytokines, IL-6 and IL-10 in this population.

Project 2: Elderly Mexican Americans and Perceived Stress of Living Near a Petrochemical Complex

Co-investigator: Malcolm Cutchin, Ph.D. Additional collaboration from Eric Smith, Ph.D.

A study of stress and health in a multi-ethnic sample in a community that lives near a petrochemical complex. Our MBM Program will allow measurement of additional biological stress markers, IL-10 in particular, and in the future, seek ways to translate results into practical methods for stress reduction. The investigators will select a sample of Hispanic and non-Hispanic older adults from the population with either high or low stress profiles. Blood samples from members of the sample group will be analyzed for IL-10 to examine its association with ethnicity and stress.

Project 3: Stress Response to Admission to a Nursing Home or Assisted Care Facility

Co-investigator: Diane Heliker, R.N., Ph.D. and Malcolm Cutchin, Ph.D.

To date, the co-investigators have primarily engaged in qualitative studies to improve the quality of life and sense of community for nursing home and assisted living residents. This research will be enhanced through the MBM Program by the addition of an intervention intended to help older adults transition to their new place of residence: peer coaching. New quantitative measures of stress, coping, and integration in a new environment, as well as the addition of stress biomarkers in the subject population and a control group are being added in this pilot to understand how the intervention works to improved the transition to assisted living for new residents.

Project 4: Barriers to Translation of Mind-Body Therapies to Training and Practice in Family Medicine and Psychiatry

Co-investigators: Victor S. Sierpina, MD and Ruth Levine, MD. Consultation and collaboration from John Astin, PhD

This project will identify what physicians know about the degree of evidence-based medicine support for mind-body medicine and to determine their level of interest in incorporating mind-body techniques in their practices. Utilizing an abbreviated form of a survey generated by Dr. Astin as part of an R01 project examining this question, we will survey residents and faculty at UTMB in family medicine and psychiatry. We will also introduce mind-body skills groups and training into both residencies here. Further, we will survey outside family medicine and psychiatry residency program directors and chief residents as well.



Mind-Body Scholars Funded Projects

The Mind-Body Research Scholars Grant Program has established an intramural funding mechanism to provide seed grants to help foster interdisciplinary mind-body research through mentoring, training in research tools, techniques and writing skills. This program offers seed grants in the amount of \$5000-7500 to successful applicants for the period of 1 year. Approximately 4-6 researchers will be awarded annually. UTMB tenure and non-tenure track faculty at the assistant professor level or above are eligible to apply. Preference is given to junior faculty and investigators entering mind-body research as a new field. The program also strongly encourages applications from UTMB investigators gathering pilot data for new multidisciplinary projects in the area of stress and coping behaviors addressing the needs of Hispanic patients and the elderly.

For more information about the program, please visit the UTMB Complementary and Alternative Medicine Project website at <http://cam.utmb.edu/research.asp>.

The Executive Committee is pleased to announce the following awardees of the February 2005 Mind-Body Scholars Grant Program:

Michael M. Olson, Ph.D.,

in collaboration with Dorothy Trevino, Ph.D. and Larry Denner, Ph.D.

Project: The Association of Expressed Emotion With Cortisol, Proinflammatory Cytokines, HbA1C in Adult Patients with Type 2 Diabetes

Qian Li, Ph.D.,

in collaboration with Eric M. Smith, Ph.D.

Project: Effects of Stress on Immunological Functions of Serotonin Transporter Knockout Mice

Jay Pasricha, M.D.,

in collaboration with Nonko Pehlivanov, M.D. and Jeff Baker, Ph.D.

Project: Effect of Relaxation Training in Irritable Bowel Syndrome Therapy

Terry McNearney, M.D.,

in collaboration with Jiande DZ Chen, Ph.D., Hanaa Sallam, M.D., and Sonya Hunnicutt, M.S., M.A.

Project: Electroacupuncture and Mind-Body Interactions in Scleroderma Gastric Dysmotility

Call for Proposals

The round two deadline for the Mind-Body Research Scholars Program is **September 1, 2005**. The program encourages applications from UTMB investigators gathering pilot data for new multidisciplinary projects in the area of stress and coping behaviors, **particularly those addressing the needs of Hispanic patients and the elderly**. Review of applications will be done between mid September and early October. Successful applicants will be announced and funds available by December 2005.

For more information, please visit <http://cam.utmb.edu/research.asp>



Upcoming Conferences

Conference	Dates	Location	More Information
The Healing Power of Stories: A Workshop for All Health Professionals	July 7-9, 2005	Mill Valley, CA	http://www.rachelremen.com/workshop.html
Highlighting Massage Therapy in CAM Research	September 25-27, 2005	Albuquerque, NM	http://www.massagetherapy-foundation.org
True North 2005 Annual Conference The Complex Patient: Biology, Relationships & Healing	October 19-22, 2005	Scarborough, ME	http://www.truenorthhealth-center.org
Reclaiming the Heart and Soul of Medicine: A CME Workshop for Physicians	October 21-22, 2005	Mill Valley, CA	http://www.rachelremen.com/workshop.html

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Lorenzo Cohen, Ph.D. holds a primary appointment in the Department of Behavioral Science. He also is Director of the Integrative Medicine Program, Division of Cancer Medicine; and Section Chief of Integrative Medicine, Department of Palliative Care & Rehabilitation Medicine.



Dr. Cohen currently is conducting a number of National Institutes of Health-funded and non-funded randomized controlled clinical trials examining the biobehavioral effects of psychosocial interventions aimed at reducing the negative aspects of cancer treatment and improving quality of life (e.g., meditation, stress management, emotional writing, yoga, music therapy). He is particularly interested in examining different types of complementary programs that can be easily incorporated into conventional treatment to decrease the psychophysiological sequelae associated with treatment. Dr. Cohen has worked and published in the areas of psychosocial

oncology, quality of life, stress and psychoneuroimmunology.

For more information on Dr. Cohen, please visit the M.D. Anderson Integrative Medicine Program websites at <http://www.mdanderson.org/departments/intmedprogram>

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