



SAMUELI INSTITUTE
EXPLORING THE SCIENCE OF HEALING

ANNUAL REPORT 2008

Our Vision is a world in which healing is the formative concept for achieving and maintaining wellness and ameliorating chronic disease

Our Mission is to transform health care through the scientific exploration of healing

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A MESSAGE FROM THE CEO AND BOARD CHAIR

We are proud to report that the Samueli Institute continues to grow and embrace its important mission through research and education, as we strive to meet the goals set forth in our five year strategic plan. This second annual Report to the Community highlights the accomplishments of the Institute during the 2008 fiscal year and describes our programs.

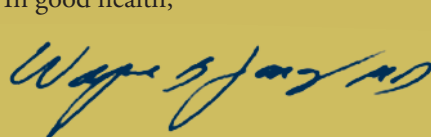
Samueli Institute's founding concept of examining and building the knowledge of the world's healing traditions for the transformation of health care is dramatically gaining acceptance. Across the country, scientists, health care professionals, educators, patients and many others are engaged in conversations about health and health care. The 2008 United States presidential election stimulated a national dialogue on health care reform. The Samueli Institute was able to contribute to these discussions through the creation of a Systems Wellness Advancement Team (SWAT), a group of leading experts in comprehensive self-care, integrative health care, science and health policy who are instrumental in guiding the Institute's development of a Wellness Initiative for the Nation (WIN). WIN is a comprehensive program which focuses on the inclusion of wellness and integrative health care practices in health care policy.

The Institute continues its rigorous scientific investigation of healing and healing practices and has grown in prominence as a non-profit research organization. In 2008, we added significantly to the national awareness and acceptance of validated integrative health care approaches through 47 articles in peer-reviewed journals, six books, 10 book chapters, 57 presentations and eight scientific conferences and meetings. These accomplishments attest to the Institute's aggressive pursuit of science grounded in observation, investigation and analysis and our support of challenging inquiry with systematic, high quality research methods and the peer-reviewed process.

Samueli Institute is pleased to announce the addition of two new members to our Board of Directors. Barbara Dossey, PhD is a pioneer in the holistic nursing movement where she works to advance the practices and philosophies of holistic care. She is an educator, consultant, researcher and author. James Zimble, MD is a retired Navy Admiral and is the 30th Surgeon General of the United States Navy, as well as the former President of the Uniformed Services University of the Health Sciences. We greatly appreciate their service and look forward to their insights on the direction and management of the Institute.

As we continue our pursuits in the scientific exploration of healing, we invite you to join us in conversations about the transformation of health care. The time for change is now, and we are that change.

In good health,



Wayne B. Jonas, MD, CEO and President



Susan Samueli, PhD, Chair, Board of Directors



Wayne B. Jonas, MD



Susan Samueli, PhD



Service to the Public: As a non-profit service organization, the Samueli Institute serves as a facilitator of research—making discoveries, developing relationships, conducting research and building a rigorous science that results in shared knowledge, improved patient care and healthful living.

PROGRAM OVERVIEWS & FEATURED ACCOMPLISHMENTS

Military Medical Research Programs



The Samuelli Institute is rapidly becoming one of the best-known and largest research organizations in the country for research on complementary and alternative medicine (CAM) for military applications. The Department of Defense (DoD) and the Veterans Health Administration (VHA) have a pragmatic focus on improving effective clinical delivery and outcomes, as well as providing resources and “living laboratories” for scientific research.

Our research uses mixed methods, including literature reviews and analyses; state-of-the-science and state-of-the-practice projects; expert panels and workshops; laboratory, *in vitro* and animal studies; clinical research, including observational studies and randomized trials; and health services research, including program evaluations and qualitative research designs.

Programs are funded through Congressional appropriations for joint research among the Institute and various military and civilian entities, and by direct contracts with DoD agencies to meet research requirements. Through our research programs, we identify, describe and define practices of potential benefit; assess how they work in real-life settings, including military medical centers and civilian environments; and evaluate their effectiveness as adjunctive or complementary methods. Our current research portfolio includes the following programs:

- ◆ CAM Research for Military Operations and Health Care (MILCAM)
- ◆ Metabolic Defense (METDEF)
- ◆ Integrative Medicine, Communication, Compassion and Chronic Care (IC4)
- ◆ Brain Injury Disease Management Initiative (BIDMI)
- ◆ Center for Research on Integrative Medicine in the Military (CRIMM)
- ◆ CAM Research for Military Operations and Health Care and Integrative Healing Practices for Veterans (MILVET)

BATTLEFIELD ACUPUNCTURE

The United States Air Force and the Samuelli Institute developed the first known training program to teach military primary care physicians a simple acupuncture procedure called the Auricular Stimulation Procedure (ASP), also known as “Battlefield Acupuncture.” The development of this training program was prompted by two studies that examined the effectiveness of a modified version of the ASP and produced significant findings, including pain

relief and improved quality of life. The training program brought ASP into primary care, where it can be used as a first-line treatment to quickly and conveniently deliver relief to patients presenting with acute and chronic pain. If expanded, the ASP training program can also equip medics with a procedure that delivers immediate relief from acute pain without the need for high doses of medication. Following the physician training program, we are planning to examine the feasibility of integrating ASP into the current pain management treatment plan administered during the aeromedical evacuation from Ramstein Air Base in Germany to Andrews Air Force Base (AFB) in Maryland. ◆



ASP (a.k.a. “Battlefield Acupuncture”) was developed by Air Force doctor Col. Richard Niemtow with the ultimate goal of providing a cost-effective, field-deployable treatment for pain on the battlefield.

2008 HIGHLIGHTS

- ◆ Co-funded an Institute of Medicine (IOM) report on dietary supplements in the U.S. military
- ◆ Conducted a survey on dietary supplement use in the U.S. military
- ◆ Completed a survey of CAM use in the U.S. military
- ◆ Coordinated a RAND/Samuelli Expert Panel on Regulation of Dietary Supplements in the Military
- ◆ Published a study on measures in chiropractic research



Optimal Healing Environments Program

The Optimal Healing Environments (OHE) Program was launched in the spring of 2005 to determine how theory about healing and healing environments translates into real world practice. In order to describe and assess how OHEs look when implemented in health care settings, our program developed a unifying concept and research framework.

While there are many innovative programs working to transform health care organizations in the U.S. into environments that promote healing, efforts to date consist mainly of isolated initiatives. The OHE Program is building the knowledge base and serving as a catalyst to speeding the flow of information on healing environments from research to health care practice. The OHE Program has two key goals:

1. Develop and validate a business case for OHE to facilitate widespread adoption by innovative health care leaders and their organizations
2. Translate relevant knowledge on optimal healing environments into practical, usable tools for health care organizations and transfer this information through multiple venues

The Samuelli Institute's aim is to articulate a complete framework of actionable practices and evaluation methods that, if implemented, would lead to more cost-effective, efficient organizations that facilitate healing and where care providers are fully supported to reconnect to the mission at their professional roots—the goal of caring and health.

EVALUATION OF LIVING LABORATORIES

The OHE staff conducted a series of six focus groups at The Children's Inn (TCI) at the National Institutes of Health, a private, nonprofit, family-oriented residence for pediatric outpatients at NIH. This hospital hospitality home provides a residential "place like home" for sick children, who are receiving groundbreaking medical treatments at the NIH. Focus groups of children and their families, who were staying at the Inn, were held to gather their perceptions about the physical space, programs, staff and volunteers at the Inn. In follow-up, an executive report and a summary report with recommendations of the focus groups were provided to TCI.

The Institute was also engaged to measure the impact of the Integrative Healing Arts Program (IHAP), a four-part certificate program for nurses conducted by the BirchTree Center at



REPRINTED COURTESY OF MERCY GILBERT MEDICAL CENTER, GILBERT, AZ

Mercy Gilbert Medical Center in Gilbert, Arizona, created a true "healing environment" by fostering a culture of compassion and building a healing space, as evidenced by the hospital's exterior (top) and their pediatric department (bottom).

St. John Hospital (SJH) in Detroit, Michigan. We sought to understand how nurses perceive the program, their jobs, and the work-life interface. The initial objective was to assess the feasibility of using focus groups. The focus group methods were shown to require further refinement before being used in future studies of the effect of the IHAP program. In addition, the Samuelli team also conducted a statistical assessment of the IHAP Evaluation Tool. This pilot study of a proposed survey instrument evaluated levels of and changes in job satisfaction, self-care, healing presence and other outcomes of the IHAP and tested the questionnaire for ease of administration, validity and reliability. We concluded that the instrument is satisfactory for future studies of the effect of the IHAP program at SJH and can be effectively used to measure perceptions of self-care, therapeutic presence, job satisfaction and quality of life. ♦

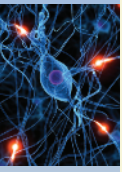
2008 HIGHLIGHTS

- ◆ Conducted a regional pilot survey of OHE practices in hospitals
- ◆ Received an increased number of requests for information input and advice on integrative medicine and OHE at the national policy level
- ◆ Completed a pilot study evaluating a holistic nursing intervention strategy and corresponding evaluation tool
- ◆ Completed an evaluation of the Children's Inn at the National Institutes of Health



Scientific exploration: The Samuelli Institute supports science grounded in observation, investigation and analysis and has the courage to ask challenging questions within a framework of systematic, high-quality research methods and the peer-review process.

Center for Brain-Mind & Healing Research



2008 HIGHLIGHTS

- ◆ Developed taxonomy of spiritual and exceptional experiences and their relationship with health and distress through a joint collaboration of Brain-Mind and Healing scientists and colleagues at the University of Munich, Georgetown University and the University of Tennessee
- ◆ Built an objective measure of mindfulness—the bi-stable images test
- ◆ Began development of a neuro-feedback device for real-time monitoring of state changes in the brain during meditation
- ◆ Discovered a dietary supplement (Triacetin) effective in the treatment of traumatic brain injury in an animal model

There is a longstanding history of healing practices that compels the detailed study of the roles of the brain, mind and consciousness in health and illness. The growing body of basic and clinical scientific evidence supports the premise that a number of mind-body effects may be evoked by various spiritual practices, experiences within the clinical encounter of medicine and interactions with the environment. Researchers in our basic sciences laboratories are committed to employing state-of-the-art developments in biosciences, coupled with innovative strategies and methods to study the outcomes, mechanisms and applications of novel approaches to health and healing. By employing a translational research approach oriented toward advancing basic research to impact patient care and public health policy, this work is designed to implement an agenda of research applications “from bench to boardroom to bedside.”

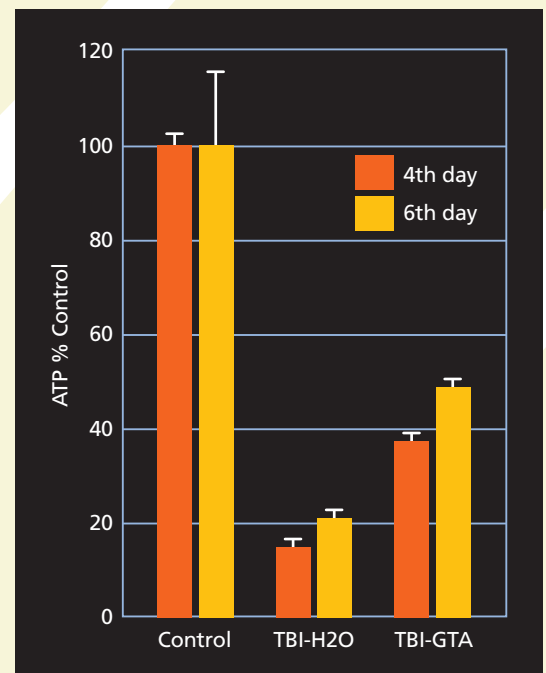
SPECIFIC OBJECTIVES

- ◆ Further clinical research on consciousness and mindfulness on health, illness and healing processes
- ◆ Develop a research program to study complexity, emergence, non-locality and causality within the brain and mind
- ◆ Build a research program to study the outcomes, mechanisms and utilization of placebo effects and responses in healing paradigms
- ◆ Create research programs to study the role and impact of spirituality on health

- ◆ Foster research paradigms that study and affect public perception of spirituality in health care
- ◆ Advance clinical research on selected mind-body approaches (i.e., yoga, meditation, hypnosis, tai chi) to enhance healing

MINDFULNESS & SPIRITUALITY

Two Samueli Fellows, Niko Kohls, PhD and Harald Walach, PhD, who are based at our European offices, developed innovative questionnaires to assess different aspects of mindfulness and spirituality—the belief in something bigger than the self. The questionnaires, the Freiburg Mindfulness Inventory (FMI) and the Exceptional Experiences Questionnaire (EEQ), have since been used in studies on mindfulness and spirituality. To collate and scrutinize the data, the studies were collected and became part of a data warehouse project headed by Kohls and Walach. Over the past year they completed a psychometric analysis of the collected data and were able to show that exceptional experiences and mindfulness correlate with health and distress parameters. From this analysis, it appears some forms of spiritual practice, such as meditation or yoga, can be used as a preventive method to both maintain mental health and decrease distress and tension. Furthermore, spiritual techniques and mindfulness practices have the potential to be easily and effectively integrated with conventional intervention methods. ◆



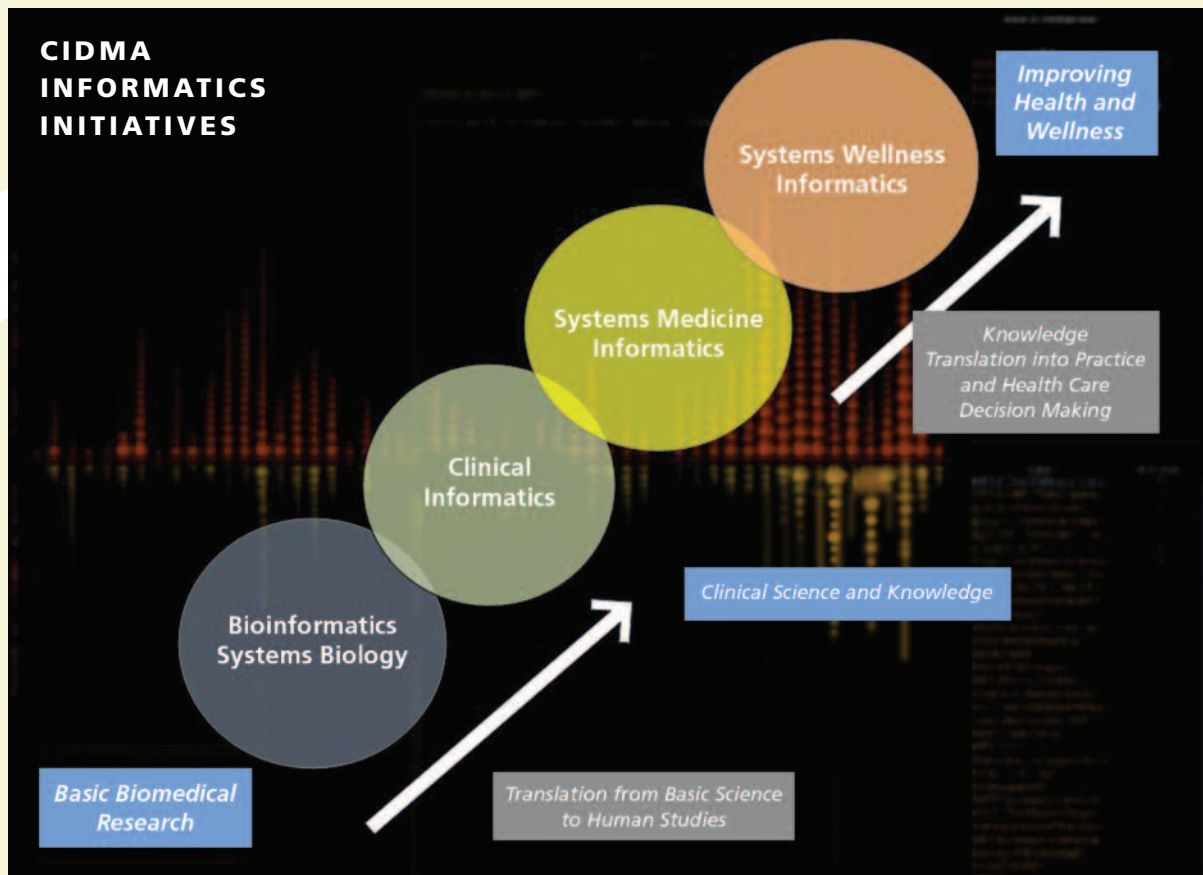
This figure shows the significant increase in ATP—the universal energy molecule of living systems—seen when animals with traumatic brain injury (TBI) are given a dietary supplement Triacetin (GTA). By day six ATP has recovered 50% of control (uninjured) animals. Whereas, animals given water with no supplements (H2O) show no significant improvement.

Center for Informatics, Data, Management & Analysis

2008 HIGHLIGHTS

- ◆ Implemented new electronic data collection (EDC) capability for patient-entered data for Samueli Institute clinical studies
- ◆ Began to execute the Brain Injury Disease Management Initiative (BIDMI), a system prototype for incorporating a Systems Wellness (SWS) approach to evaluating and treating brain injury
- ◆ Developed and deployed Institute Intranet for managing research projects
- ◆ Developed IT architecture to support virtualization capabilities

CIDMA INFORMATICS INITIATIVES



Systems Wellness Informatics is focused on the design, deployment and evaluation of technological solutions to promote and manage wellness, prevent disease and enhance health and well-being.

The Center for Informatics, Data, Management and Analysis (CIDMA) is dedicated to providing vital informatics, data management, connectivity and information technologies to support all of the Institute's research initiatives. Further, we are currently building both the informatics tools and methodologies to support an innovative biopsychosocial model for evaluating health, healing and wellness. CIDMA backs data management services including "end to end" study-based statistical assistance for supported research projects and is responsible for implementing quality control procedures, managing safety and monitoring activities. Research partners include Georgetown University and the RAND Corporation.

WEB-BASED DATA CAPTURE SYSTEM

CIDMA is developing information technologies and tools that have promise in supporting the BIDMI program goals. The primary focus of BIDMI is the application of screening and supporting therapy tools in an interactive web-based environment. The study will assess

the technical application of on-line cognitive testing, and the clinical relevance of data collected via this web-based mode. Further, the study will focus on identifying and implementing a screening device to diagnose cognitive, emotional, somatic and other symptoms secondary to neurological insult, and will then track these symptoms longitudinally. ◆



Integrity in all we do: The Samueli Institute acts with the highest respect for the public it serves by ensuring transparency, responsible management and ethical practices from bench to boardroom to bedside.

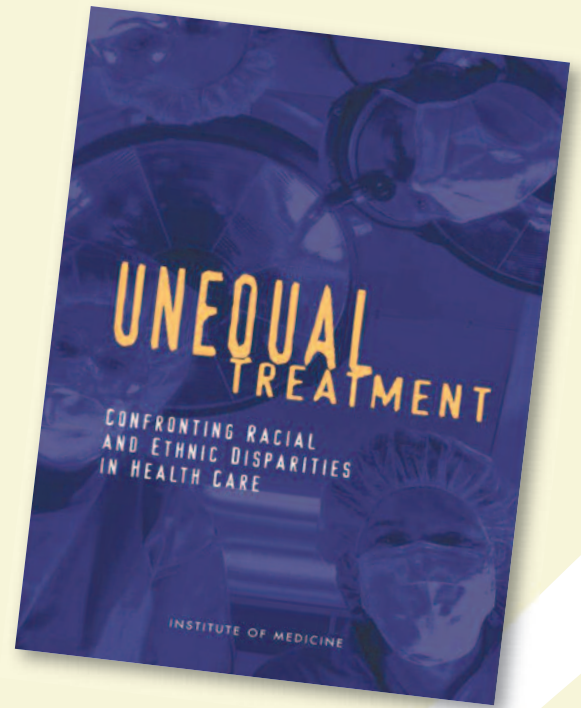


Special Projects from the Innovation Fund

The Institute designates part of its core funding to the pursuit of innovative projects with high potential for impact on our mission of transforming health care through the scientific exploration of healing. Many of these projects focus on underserved populations domestically and internationally, a majority of which use traditional medical systems as their primary source of medical care. The integration of evidence-based CAM practices, which are often derived from traditional medical systems, with allopathic approaches may improve health outcomes and quality of life for these underserved populations by making care more accessible, culturally appropriate and affordable.

INTEGRATIVE MEDICINE & HEALTH DISPARITIES

The Institute convened a one-day meeting in April 2008 on Integrative Medicine and Health Disparities to explore how to create greater awareness of integrative medicine in low income and underserved populations. This forum also explored how the Community Health Center (CHC) network can incorporate the integration of CAM into the quality improvement of outpatient primary health care. The inclusion of evidence-based CAM therapies—many of which have important cultural, historic and ethnic ties to underserved populations—may reduce health disparities by making care more culturally appropriate and affordable, and may also provide a vehicle for education about self-care, wellness and prevention in underserved communities.



In its landmark report, the Institute of Medicine (IOM) stated unequivocally that “Racial and ethnic disparities in health care exist and, because they are associated with worse outcomes in many cases, are unacceptable.” The Samueli Institute’s efforts in this area build on the recommendations from this report, including the IOM’s formal recommendation to support the use of community health workers to serve as liaisons between patients and providers, provide patient education, and help to increase the use of preventive and primary care services.

Over 30 representatives from federal agencies, non-profit organizations, CHCs and academic institutions discussed challenges and opportunities for integrating CAM into the CHC network.

Also discussed were research and evaluation needs and strategies for cultivating partnerships to improve processes and outcomes. The group concluded that a systems-level approach for addressing health disparities must incorporate the natural overlap between integrative medicine and CHCs; the potential therapeutic impact of a relationship between care provider and patient; the context of family and culture; care delivery trends (i.e. shortages of primary care providers); and innovative, team-based delivery approaches. A full report of this meeting has been published in *Explore: The Journal of Science and Healing*. ♦

2008 HIGHLIGHTS

◆ Systems Wellness and Health Reform

Convened a Systems Wellness Advancement Team (SWAT) comprised of leaders in health policy, health promotion, lifestyle-based chronic disease prevention and management, and integrative health care practices to highlight wellness, prevention, self-care and integrative health in the current health reform agenda

◆ Traditional Medicine Research

Published a literature review on the use of Traditional Indian Medicine and Homeopathy (TIMH) approaches for the management of HIV/AIDS and began a pilot study in India on patterns and prevalence of TIMH usage for HIV/AIDS



RESEARCH PARTNERS

Partnerships are essential in creating change in the delivery of health care. We are privileged to work with some of the nation's top academic and military institutions.

Our federal government and military research partners include:

- ◆ Walter Reed, Brooke and William Beaumont Army Medical Centers (AMC)
- ◆ Malcolm Grow Air Force Medical Center
- ◆ National Naval Medical Center
- ◆ Uniformed Services University of the Health Sciences (USUHS)
- ◆ Veterans Health Administration (VHA)
- ◆ National Academy of Sciences' Institute of Medicine (IOM)

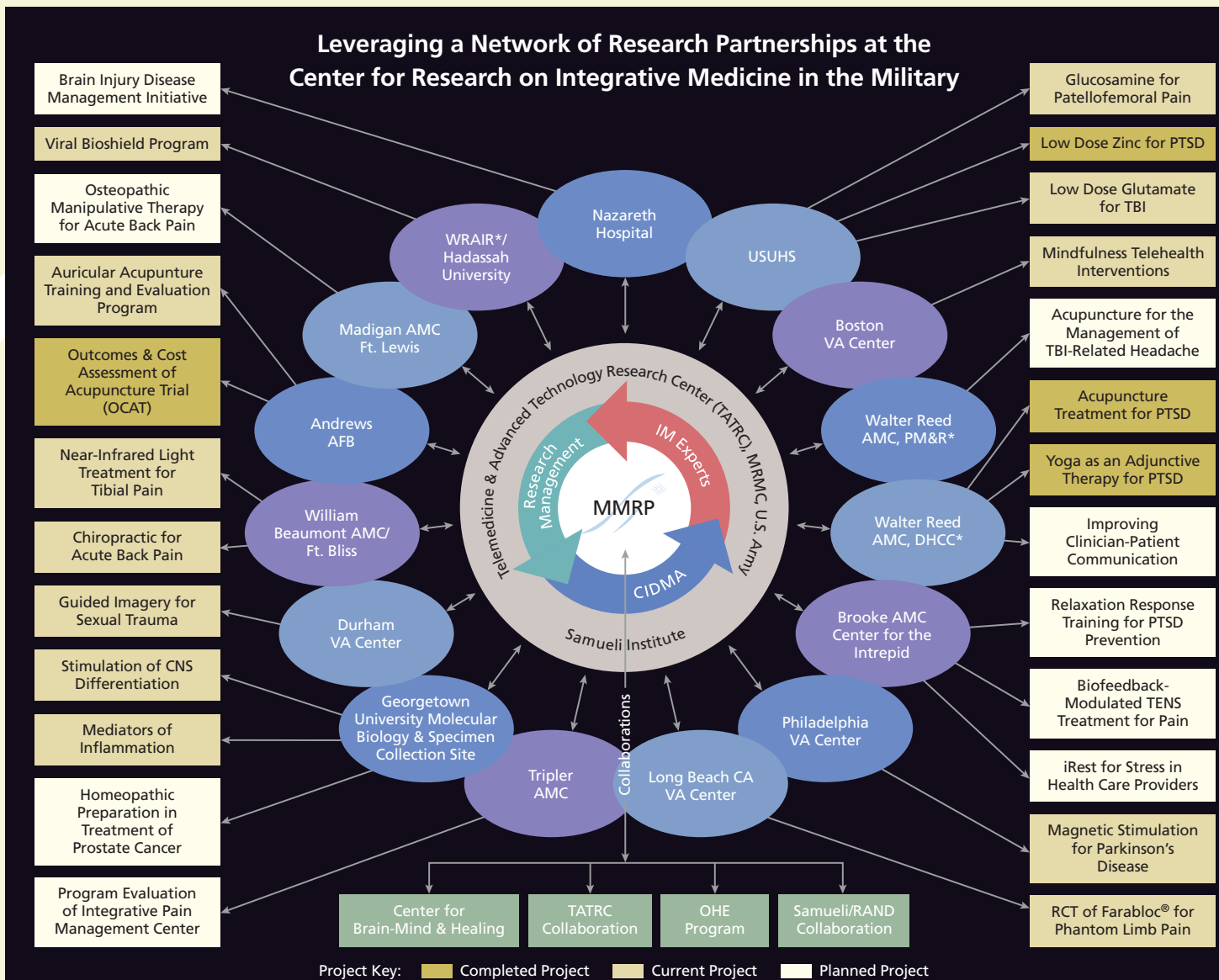
Our academic research partners include:

- ◆ RAND Corporation
- ◆ Harvard, Georgetown, Johns Hopkins, Indiana and Duke Universities
- ◆ Universities of Pennsylvania, Virginia and California-Irvine

Our international research partners include:

- ◆ Ludwig-Maximilians Universitäts in Munich and the University of Freiburg in Germany
- ◆ Northampton University in the United Kingdom
- ◆ International Clinical Epidemiology Network (INCLEN) in New Delhi, India

As the Institute's civilian research program has grown, the Institute has engaged with various military and veterans health care systems in the investigation of healing systems, optimal function, wellness, and integrative and complementary medicine practices. The Institute has developed strategic partnerships and collaborations with multiple, high-quality and large-volume medical centers and training facilities across the nation. Our military and VA partnerships are depicted graphically in the figure below. ◆



*WRAIR = Walter Reed Army Institute of Research / DHCC = Deployment Health Clinical Center / PM&R = Physical Medicine and Rehabilitation Department

STATEMENT OF FINANCIAL POSITION

Samueli Institute for Information Biology/dba/Samueli Institute

Statement of Activities and Change in Net Assets

For the Year Ended September 30, 2008

With Summarized Financial Information for 2007

	Unrestricted	Temporarily Restricted	2008 Total	2007 Total
REVENUE				
Grants and contracts from government agencies	\$ 2,881,676	\$ -	\$ 2,881,676	\$ 1,220,536
Private contributions	7,452,159	1,462,389	8,914,548	137,848
Investment income	102,374	-	102,374	62,506
Other revenue	457,202	-	457,202	54,979
Net assets released from donor restrictions (Note 3)	527,350	(527,350)	-	-
Total revenue	11,420,761	935,039	12,355,800	1,475,869
EXPENSES				
Program services	8,799,991	-	8,799,991	4,429,645
General and administrative	2,219,255	-	2,219,255	1,305,327
Fundraising	132,775	-	132,775	-
Total expenses	11,152,021	-	11,152,021	5,734,972
Change in net assets	268,740	935,039	1,203,779	(4,259,103)
Net assets at beginning of year	1,509,643	320,442	1,830,085	6,089,108
Net assets at end of year	\$ 1,778,383	\$ 1,255,481	\$ 3,033,864	\$ 1,830,085

Statement of Functional Expenses

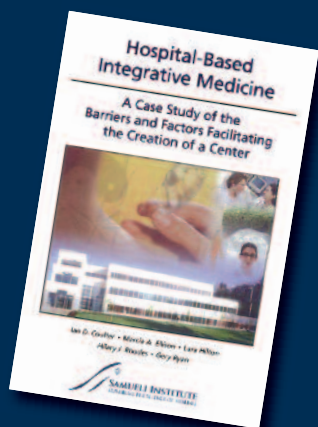
For the Year Ended September 30, 2008

With Summarized Financial Information for 2007

	Program Services	General and Administrative	Fundraising	2008 Total Expenses	2007 Total Expenses
Salaries and wages	\$ 1,640,283	\$ 582,149	\$ 8,906	\$ 2,231,338	\$ 1,492,904
Employee benefits	917,203	329,726	5,044	1,251,973	914,267
Accounting audit	60,115	39,300	601	100,016	125,555
Conferences, meetings and training	53,074	11,142	170	64,386	97,516
Depreciation and amortization	171,249	98,599	1,508	271,356	181,740
Dues and subscriptions	4,709	3,079	47	7,835	7,322
Equipment rental	2,395	1,565	24	3,984	3,930
Insurance	34,429	22,508	344	57,281	12,996
Legal	87,947	57,495	880	146,322	70,452
Lobbying	235,315	-	-	235,315	345,431
Meals and entertainment	34,289	17,945	340	52,574	21,893
Miscellaneous	15,935	129	2	16,066	22,035
Office expense	43,659	28,541	437	72,637	48,890
Gifts/donations	2,069,588	713	11	2,070,312	-
Printing and reproductions	-	-	-	-	46,313
Repairs and maintenance	6,413	4,193	64	10,670	15,769
Rent	643,400	618,020	2,203	1,263,623	508,508
Taxes and licenses	61,484	40,195	615	102,294	13,522
Subcontractors/consultants	2,341,950	190,862	92,708	2,625,520	1,434,974
Telephone and information technology	176,065	75,932	1,162	253,159	247,520
Travel and lodging	193,528	97,162	17,709	308,399	105,179
Supplies	6,961	-	-	6,961	18,256
Total	\$ 8,799,991	\$ 2,219,255	\$ 132,775	\$ 11,152,021	\$ 5,734,972

PUBLICATIONS & PRESENTATIONS

The Samuelli Institute had an impressive Fiscal Year 2008, with over 125 publications and presentations. Our researchers and scientists published 47 peer-reviewed journal articles, 6 books, 10 book chapters, 57 presentations and participated in 8 scientific conferences and meetings. Following is a sample of our journal article publications.



Ananth S. Healthy environment, healthy patient. *Hospitals & Health Networks*. March 25, 2008.

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For the complete list of books, book chapters and journal articles published by the Samuelli Institute, please visit www.samuelliinstitute.org and click on Publications.



SAMUELI INSTITUTE
EXPLORING THE SCIENCE OF HEALING

The Samueli Institute is a non-profit medical research organization supporting the scientific investigation of healing processes and their role in medicine and health care. The Institute's track record includes complementary and integrative medicine, academic and scientific partnerships, and military medical research. It is among an elite group of research organizations in the world that are advancing knowledge and education in the science and processes of healing.

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