

THE NATURAL MEDICINE RESEARCH UNIT (NMRU)

Tel: 972-2-6778372
Fax: 972-2-6429750
E-mail: ssallon@hadassah.org.il

Director: Dr. Sarah Sallon MBBS MRCP (UK)

STAFF

Mind-Body Program: Ms. Debbie Eisner B.A
Research Assistant: Ms. Hila Yaffe B.A

INTRODUCTION

The NMRU was founded in 1994 at the Hadassah Medical Organization (HMO) as an entirely self-funded unit. NMRU has, for the last eight years, created a unique focus for the scientific study of Complementary and Alternative Medicine (CAM) in Israel. Acting as a bridge between conventional and “natural medicine”, NMRU provides, through a wide range of clinical and laboratory research, important evidence of the effectiveness, safety and mechanism of many natural therapies, a much needed catalyst for the integration of safe and effective CAM therapies into patients’ health care.

“New medicines” from natural sources is today a global initiative, with vast resources now dedicated to screening many natural products for activity against a range of diseases. NMRU’s Middle Eastern Medicinal Plant Project (MEMP) is an exciting contribution to this field, focusing on the great diversity of species found in Israel, and their long history of medicinal use.

NMRU has also been active during 2000-2002 in the field of other natural therapies, particularly techniques developed for stress reduction and relaxation. Currently stress is a major problem worldwide, particularly so in Israel, where the recent cycle of violence has had a major impact on all levels of society.

Education is also an integral part of NMRU’s activities with both research on medical student attitudes to integrating Complimentary Alternative Medicine (CAM) into the curriculum as well as provision of workshops on different aspects of CAM.

RESEARCH PROJECTS

I. Traditional Tibetan Medicine

Our research into Traditional Tibetan medicine has been contributing to one of the largest research programs in the world on this ancient tradition. NMRU has investigated the anti-atherosclerotic effect of a traditional Tibetan multi-herbal formula (Padma 28), historically used to treat an overconsumption of meat, fat and alcohol. A clinical double-blind, placebo-controlled trial, in conjunction with Prof. Yakov Berlatzky and the Department of Vascular Surgery at HMO, demonstrated that Padma 28 significantly improved ankle-brachial pressure measurements in patients with Peripheral Atherosclerotic Disease (PAD) compared to controls. An additional study designed by NMRU in conjunction with the University College London Hospital also demonstrated these findings, together with evidence of increased pain free walking ability in patients with claudication. On-going laboratory investigations have provided a growing body of evidence supporting Padma 28 as a potential treatment for Atherosclerotic disease. In-vitro studies by Prof. Isaac Ginsburg and the late Prof. Yakov Matzner have demonstrated that Padma 28 is a powerful antioxidant, capable of effecting a number of steps in the generation of Atherosclerotic plaque, while studies by Profs Israel Vlodovski (HMO) and Penina Brodt (McGill University) have shown that Padma 28 inhibits smooth muscle proliferation and IGF 1 receptors.

An ongoing study in the Department of Obstetrics and Gynecology's In-Vitro Fertilization Unit with Prof. Abe Lewin has already shown some evidence that Padma 28 may have a positive impact on fertility in women by potentially increasing ovarian and uterine blood flow.

Studies on Padmalax for Constipation-Predominant Irritable Bowel: Padmalax is a Tibetan formula used traditionally as a bowel tonic and regulator. A clinical trial designed and run by NMRU for the treatment of Irritable Bowel Syndrome (IBS), in conjunction with Prof. Moshe Ligumski of the Department of Gastroenterology at HMO, demonstrated for the first time that Padmalax was significantly more effective than a placebo in the treatment of Constipation-Predominant Irritable Bowel Syndrome (CP-IBS), was associated with relatively few mild side-effects, and showed no evidence of causing either tolerance or dependence, a common occurrence with many laxatives used in the treatment of CP-IBS.

Keywords: traditional Tibetan medicine, Padma 28, anti-atherosclerotic, Padmalax, IBS.

2. Traditional Chinese Medicine

In 2001, NMRU began its first exploration of Traditional Chinese Medicine (TCM), a system extending back over 5,000 years.

TCM, still used extensively in China, and in many Asian communities worldwide, has begun to attract the attention of Western researchers who are searching Oriental traditions for cures of many debilitating diseases.

NMRU's programs on TCM focus on the effectiveness of a multi-herbal formula for symptoms of menopause. Currently, conventional medicine offers Hormone Replacement Therapy (HRT) as the treatment of choice for this often distressing condition; however, many women who are unable or unwilling to take HRT due to a pre-existing or earlier condition, or who are concerned by evidence of increasing risks as well as unpleasant side-effects, are frequently switching to natural and alternative therapies as a means of treatment.

In 2001, NMRU formed a joint collaboration with Ms. Aliza Adar-Levene, a leading herbalist in Israel, whose Etz Haim Clinic in Jerusalem treats many women, frequently referred by local doctors and gynecologists. The herbal formulas devised by Ms. Adar Levene, often contain as many as 20 plants, are based on traditional Chinese medicine principles of diagnosis, and use only natural ingredients approved by the Ministry of Health of the State of Israel.

In the current study, patients with menopausal symptoms attending the Gynecological outpatient clinics at the two branches of Hadassah Hospital, and at two individual health centers in Jerusalem, were randomly selected, following their approval, to receive either a Chinese formula for menopause, containing 18 individual herbs, or a non-active placebo, with neither the physicians nor the patients aware of which medicine they were receiving. This investigation was fully approved by the Hadassah Hospital's Ethics Committee, and the Ministry of Health of the State of Israel.

This research is to continue until 2003, but preliminary results have demonstrated a significant improvement in women taking the Chinese herbal formula with a decrease in hot flushes, night sweats, and several other menopausal symptoms, as well as laboratory improvements in serum levels of the hormones, estrogen and FSH.

Keywords: Traditional Chinese Medicine, Herbs, Menopause

3. Middle Eastern Medicinal Plants Project (MEMP)

In 1995, the NMRU initiated this innovative program in order to fully assess the rich legacy of medicinal plant use in Israel, and to focus on their conservation for further research and development. The aims of MEMP are to;

1. Preserve a unique and valuable tradition of medicinal plant use common to both Jewish and Arab communities in Israel.
2. Cultivate medicinal plants, particularly those which are endangered or are rare species.
3. Research selected medicinal plants by assessing their biological activity in focused scientific screening models.
4. Develop medicinal plants as commercial natural products or as a basis for potential new drugs.

An ethno-botanical database was constructed by NMRU, in conjunction with the National Herbarium of Israel, enabling the traditional uses of local medicinal plants to be evaluated together with a modern diagnostic assessment. This unique database includes information on every aspect of the plant's historical use, and details of its preparation, cultivation, harvesting, part of the plant used, etc., as well as Biblical references and information on closely related species in European, Asian and North American traditional systems. Therefore, the database's updated symptom and disease-oriented clinical classification provides a valuable source of ethno-botanical / ethno-medical information on medicinal plants in Israel.

The MEMP Program also includes a cultivation project at Kibbutz Ketura in the Arava Region where, for the first time, many wild species are being cultivated and domesticated in order to provide superior genotypes for scientific evaluation. In order to scientifically investigate local medicinal plants in Israel for bio-activity, the NMRU program utilizes a wide range of in-vitro (non-animal) screening models at HMO and HHUMS, including focus screening for anti-infective, immuno-stimulant, cardiac, and anti-aging activity. Data obtained from these studies will provide scientific evidence for the therapeutic use of medicinal plants, and as such, may significantly increase their commercial potential as natural herbal products. In addition, assessment of a plant's bio-activity can also provide the basis for its further research and development as a new pharmaceutical.

Keywords: medicinal plants, conservation, cultivation, traditional use, focus screening

4. The Seaweed and Marine Organism Project (SEAMOP)

Seaweeds have been used and cultivated for centuries particularly in the Orient, due to their nutritional and medicinal properties. The Seaweed and Marine Organism project (SEAMOP), a joint Israeli-Canadian project, was initiated by NMRU in 1995, with a pilot study originally funded by the Canadian-Israeli Industrial Research Foundation (CIIRF).

In an initial Feasibility Report (1997), in conjunction with Oceans Ltd. of St. Johns, Newfoundland, seaweed resources were extensively surveyed in Israel and Canada for their potential commercial uses, including medicines, foods, nutritional supplements and cosmetics. In addition, an assessment of techniques developed in Israel for growing seaweeds using land-based aquaculture facilities, were also assessed by NMRU, together with the Oceanographic and Limnological Institute in Haifa.

In 2000-2001, land- and sea-based aquaculture facilities in St. Johns, NF, were further assessed by NMRU in conjunction with Oceans Ltd., to determine how technology developed in Israel for aquaculture could be applied to the commercial development of seaweeds in Newfoundland, with particular reference to those species possessing both medicinal and nutritional properties, and common to Israeli and N. Eastern Canadian coasts.

Keywords: Seaweeds, medicinal and nutritional properties

5. Stress Reduction Programs

At the beginning of the 21st century, stress has become a major worldwide problem associated with anxiety, depression, loss of work and increasingly recognized as a major factor in many diseases. Stress, however, is also an aspect of life from which there is often no obvious escape, a fact particularly so in Israel where an ongoing conflict affects every segment of society. Hospital staff faced daily with the casualties of an increasingly violent situation, are particularly prone to stress, and as a result, tend to suffer from a higher incidence of exhaustion, burnout and psychological problems than the general population.

NMRU initiated its first Stress Reduction Programs in 1996, and since then, has been providing a range of programs for the staff at Hadassah Hospital, including yoga courses, on-site massage and Shiatsu techniques for midwives.

In November 2000, NMRU began a new and important program in Stress Reduction Techniques (SRT), aimed at nurses at Hadassah Hospital. The overall aim of this program is to create for the first time at HMO a core group of nurses trained in SRT, who will act as a resource for stress management skills in the hospital, using their own experience to benefit themselves, as well as other staff members and patients.

At the end of the first year of the course in June 2001, an initial program assessment demonstrated a number of significant positive changes among nurses who had participated in the workshops compared to colleagues who had not. Perceived stress decreased, while general health, well being, and symptoms that included low back pain, headaches, anxiety, depression, fatigue and poor sleeping, were all improved. Following the success of this course, a 2nd program was initiated in 2001 with a further 23 participants. As a result of the successful stress reduction programs for the staff at HMO, and in response to requests from physicians at HMO, NMRU prepared courses aimed specifically for patients. The first of these programs was initiated in May 2002 with an open workshop held in conjunction with the Dept. of Gastroenterology, HMO, for patients with Inflammatory Bowel Disease (IBD). Future initiatives planned are aimed at assessing the effects of stress reduction courses in patients with cardiac, colitis and post-traumatic stress disorders.

Keywords: stress reduction, perceived stress, well-being, general health

6. Education

NMRU's research into educational aspects of Complementary Alternative Medicine (CAM) has involved an extensive survey on the attitudes of fourth, fifth and sixth year medical students at HHUMS, regarding the introduction of an elective course in CAM as part of the medical curriculum. The survey carried out on 143 participants revealed that over 93 percent of students surveyed were in favor of introducing a CAM course into their curriculum with a high number favoring information on herbal medicine, traditional Chinese medicine, homeopathy and mind-body techniques.

RECENT PUBLICATIONS

Treatment of Constipation predominant Irritable bowel syndrome IBS using Padma Lax, a Traditional Tibetan Formula. (2002). Sallon S, Ligumski M, Shapiro H, Ben Arie E, Davidson R, Ginsburg. *Digestion* vol. 65/3

Padma 28, a herbal preparation used as an anti-atherosclerotic agent against blocks, cellular response to bFGF and IGFF-11. (2002). Aingorn H, Navab R, Fallaudlita L., Sallon S., Mechoulam R., Vlodosky I., Brodt P. (submitted to *J Vasc Biology*).

Attitudes of medical students to alternative complimentary medicine (October 2001) Shahr T, Sallon S, Harefuah.