

## Editorial

### **IBSAR and Clinical Research**

If IBSAR's mission includes development of therapeutic approaches for human diseases based on traditional remedies, then clinical research is unavoidable. Only through clinical research can the efficacy and safety of new treatments be tested. Can we at the AUB Medical Center interphase with this effort? Should we do so?

The challenge posed by alternative medicine to traditional medicine is not one that can be ignored, nor should it be. In the United States, the National Institutes of Health (NIH) has dedicated an entire institute, and considerable resources, to alternative medicine. This was a result of public pressure transmitted through Congress. I imagine these innovations did not occur without some resistance on the part of the scientists at the NIH. Such is the power of traditional therapies in the minds of the public, however, and the need to make some sense of the ever expanding list of 'cures' and 'potions' to which the public is being exposed, and which it is consuming in astounding amounts. The multiplicity of products, and of molecules within each, added to the difficulty in conducting double blind placebo-controlled studies on herbs or their extracts, renders classical clinical research in herbal and natural products particularly challenging. Nevertheless, this is a challenge we in the Department of Medicine, have chosen to embrace. This is why we have invited IBSAR collaborators at the Faculty of Medicine to utilize the resources of the department, in particular its Clinical Research Unit, to advance their studies.

What benefit do we derive at the medical school from IBSAR-initiated clinical research? The reward is participation, in partnership with colleagues in the faculties of Agriculture and Food Sciences and Arts and Sciences, in a new adventure in the art of healing. After all, this is our mission as physicians. As in all our endeavors, however, we must constantly seek to preserve the first principal of Hippocrates: *First, do no harm.*

# Workshops

## Beiatouna Beitouna Workshops

The second phase of the “Beiatouna Baitouna” project, a biodiversity awareness project, was completed with the second workshop that was held on Saturday, April 2, 2005 in the Faculty of Agricultural and Food Sciences. A Step Away (ASA), a group of artists, moderated the workshop whereby they introduced the participating students from Marjeoun, Jezzine, Saïda, Khiyara, Halba and Hasbaya to Eco-art.

The workshop was divided into two sessions. The first session introduced participating students to new and diverse forms of artistic expression which aimed at helping them understand the social and cultural value of Eco-art. The second session provided trainees with methodological tools to help them plan and formulate an artistic environmental project based on the needs and problems identified in the respective regions. The needs and problems were identified by conducting extensive surveys in the regions. Survey forms were designed by IBSAR in a way to identify the needs for effective nature conservation through local perception. Completed surveys were analyzed by the Office of Institutional Research and Assessment (OIRA) at AUB. The day was wrapped up by having students propose ideas of artistic projects for their regions using brain storming. Afterwards they were asked to chose one idea for advanced analysis using Strength, Weaknesses, Opportunities and Threats (SWOT) analysis scheme and a list of creativity and added value criteria in order to explore the feasibility and the potential impact of their proposed projects and themes.

As a follow up to this workshop, ASA trainers visited all groups in their regions and held one-day meetings with each group to help them refine and develop their projects.



*Marjayoun students developing concepts for their art project*



*General audience from the five participating schools in the workshop at FAFS*



*Omar Al-Mukhtar school students working on an exercise given by A Step Away*



*Fadi from A Step Away explaining Eco-Art to students*

As a closure to the five-month project a ceremony was held in the UNESCO palace to announce the winner of the best artistic expression on the theme of biodiversity and commemorated the International Day for Biological Diversity (May 22) and the World Environment Day (June 5). The ceremony, which took place on June 4, 2005 gathered ten environmental NGOs.



*The Makassed School of Saïda receiving their award at the UNESCO palace*

ENG. ZEINA EL HAJJ

Natural food tasting was presented by food NGOs (Healthy kitchen project, rural cooperative of Irsal, and Chouf cooperative) coming from different Lebanese regions where local women prepared traditional foods with endemic herbs and organic fruits, vegetables, flour, cracked wheat, molasses, and jams.

At 5:00 pm opening speeches for the award ceremony were given by Mr. Edgard Chehab, UNDP program manager; Dr. Berj Hatjian, MOE general director; and Dr. Salma Talhouk, IBSAR director.

Certificates of participation were distributed to all participants and the winning team was announced and presented with a gold-plated award.

# Meetings, Contacts and Seminars

## Summary of Wild Edible Plants Project Meetings

An AUB team headed by Dr. Batal launched the wild edible plants project on March 12, 2005 in the center for developmental services in the Ministry of Social Affairs in Hermel. During this meeting, a presentation of the project was given to individuals representing the community on a PowerPoint projector followed by a discussion of the project where the AUB team collected the comments of the community.

The AUB team also launched the project in a similar meeting in Irsal on March 24, 2005 in the Rural Developmental Cooperative of Irsal. In order to collect wild edible plants recipes and promote them, a cooking festival was held in Irsal on April 7, 2005.



*Launching of wild edible plant project in hermel*



Women chopping wild edible plants during a cooking festival in Irsal



Baking Bread on Tannour in Irsal

An AUB team along with a Future TV team took pictures, shot scenes and interviewed women who cooked recipes with wild edible plants. The bread that was eaten during the cooking festival was freshly baked in a "tannour" close to the Rural Developmental Cooperative Center.



Cooking festival in Koueikh with a variety of wild edible plants

A cooking festival was also held in Koueikh-Hermel on April 9, 2005 to meet with potential assistant cooks for the healthy kitchen component of the project. The event was similar to the one held in Irsal: a group of women from the village cooked dishes from wild edible plants and an AUB team collected the recipes and the names of the plants.



Taking photographs of individual wild plants to be used in a booklet during the cooking festival in Koueikh



Fahimet Al-Hak showing dishes made with different wild edible plants



Madiha Al-Hak showing Shumra Omelet and Shumra Salad

The future steps include the launching of the wild edible plants project in High Chouf, setting up pilot plants in Burj el Barajni and Koueikh as well as surveying community members on health and nutrition status.

DR. MALEK BATAL

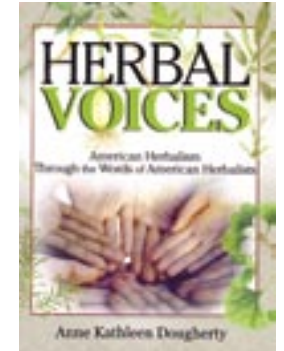
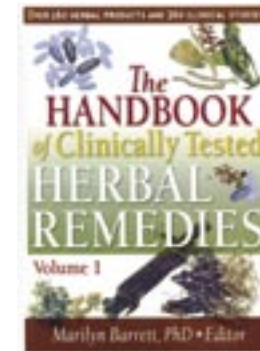
## News

### IBSAR Research Assistant

The selection committee of the German Academic Exchange Service (DAAD) has approved the application of Ms. Wafica Itani for a research scholarship to spend 6 months at the Otto-von-Guericke University of Magdeburg. Wafica was the only recipient of this award among a group of 7 applicants for a research exchange program in the year 2005. The award entails a monthly stipend of 715 Euros and a subsidy of 500 Euros for travel expenses.

### New Additions to IBSAR Library

The following books are now available at IBSAR library (Faculty III, Room 203 cw, ext: 4416):



- Barrett, M. 2004. *THE HANDBOOK OF CLINICALLY TESTED HERBAL REMEDIES*. 2 vols. The Haworth Press Inc. 1435 pages.
- Dougherty, A.K. 2005. *HERBAL VOICES*. The Haworth Press Inc. 369 pages.

For an updated list please follow the link

<http://staff.aub.edu.lb/~webibsar/information/library1.htm>

### Landmark Victory in World's First Case Against Biopiracy! European Patent Office Upholds Decision To Revoke Neem Patent

MUNICH, MARCH 8, 2005. IN A LANDMARK DECISION, THE EUROPEAN PATENT

Office upheld a decision to revoke in its entirety a patent on a fungicidal product derived from seeds of the Neem, a tree indigenous to the Indian subcontinent. The Neem tree had been public knowledge in India for many centuries. The historic action resulted from a legal challenge mounted ten years ago by three women who successfully argued this case against the might of the US administration and its corporate allies, legally represented throughout the ten year battle by Dr. Fritz Dolder, professor of Intellectual Property with the Faculty of Law at the University of Basel, in Switzerland. The three women were: Vandana Shiva, founder of the Research Foundation for Science, Technology and Ecology in Dehra Dun, India, Linda Bullard, former president of the International Federation of Organic

Agriculture Movements (IFOAM) and Magda Aelvoet, Belgian Minister of State and former health and environment minister. This was the world's first legal challenge to a biopiracy patent.

PRESS RELEASE  
RECOMMENDED BY DR.  
SALMA TALHOUK.

For more information: <http://www.grain.org/bio-ipr/?id=435>

### New York Times – February 24, 2005 Medical Companies Joining Offshore Trend, Too

By Andrew Pollack

This article reports on the growing trend for firms in the medical technology sector to move jobs overseas. At one point, it describes this trend as “worrisome.” It goes on to assert that because of the technology and skills involved in the industry, “it is viewed as an economic growth engine and source of new jobs.”

RECOMMENDED BY DR.  
NADER KABBANI

For more information: <http://www.corpwatch.org/article.php?id=11898>

### Starting a New Season

#### GREENHOUSE MATERIAL RENOVATION

By the beginning of the 2005 production season, our production facilities in the greenhouse area at the AUB campus were reduced because of removing one greenhouse previously used for seedling production in order to facilitate the work in the new building in the greenhouse area. At the same time the glasshouse built at AREC is fully functional and is expected to afford a space for producing domesticated plants. Following the necessity of keeping the production units as efficient as possible, new technologies were integrated in the production system (gutter greenhouse at AUB campus) in order to optimize plant growth and hygiene. In this context, the production units were disinfected at the beginning of the season in parallel to ordering plug trays for seedling production. Additionally, new mist sprayers (Tornado mist sprayer) were installed with an anti-drip device that has the following advantages:

- Preventing dripping of inverted nozzles
- Opening only at efficient working pressure (10.5 psi)
- Preventing damage caused by the drip to sensitive plants



Anti-drip device with mist sprayers

#### PRODUCTION OF PLANT MATERIAL

After the meetings held with several IBSAR members involved in the issue of plant extract effect and importance in terms of medicinal value, the production and domestication division have decided based on the quantities of plant material requested and seed stock availability the following:

- To collect the maximum possible of plant material from wild habitat in the spring season
- Plant additional 2 dunums of irrigated field at AREC to cope with needs
- To collect plant material from domesticated field plots at AREC from annual species by the coming July
- To keep IBSAR personnel updated regarding any emerging problem concerning material availability



ST seedlings grown in the production units of IBSAR prior to field planting

A list of species to be planted at AREC is represented in the following table:

SPECIES	TOTAL
Ep/AD	900
Wp/ALDp	125
Ip/AHP	900
L1f/AS1f	900
Tf/CAf	600
VI/OCf/OC1	900
OE	1050
OS	975
Mp/RMp	600
ST	1200

IBRAHIM EL-SALIBY

(THE NEW YORK TIMES; Thursday, January 27, 2005)

# The war on malaria escalates

By Donald G. McNeil Jr.

**L**ast month, the Bill and Melinda Gates Foundation pledged \$43 million to efforts by a California biochemist to genetically re-engineer bacteria to grow a malaria drug normally grown in six-foot-tall plants in Asia.

Also recently, the Medicines for Malaria Venture, a public-private partnership in Geneva, said the leading candidate among 21 next-generation drugs it was testing was a synthetic triazine known for the moment as QZ277, or just "Qz."

The search for new cures for malaria is never-ending.

"This is quite an exciting time for malaria drug development," said Dyan Wirth, an infectious disease specialist who heads the Harvard Malaria Initiative. "The sequencing of the genome means we can look for dozens of potential targets."

But the search is also quite difficult. Many chemicals can kill malaria parasites, but picking the right one in which to invest millions of dollars in the hope that it will one day save millions of lives is an intense struggle for scientists, public health experts and donors.

Any candidate drug must be powerful enough to kill a parasite that can twist a capillary-carrying red blood cell into a clotted lump, but still safe enough to give to a malnourished child whose hospital is a mud hut and whose nurse is a fretful mother who cannot read.

The drug has to be able to drill into the brain to smack cerebral malaria, but not destroy the liver, which the parasite uses as a nursery. It should come in a pill rather than an intravenous drip, and must cure quickly because people often quit taking their pills when their fevers stop.

Probably hardest of all, it must also be dirt-cheap. Most of the people in malarial parts of the world live on less than \$1 a day. "If I were growing *Escherichia coli* plasmids for activation," Jay Keasling, the recipient of the Gates grant, said of a \$1,000-a-dose drug for stroke victims, "I could grow it on gold-leaf glucose. In this case, cost is crucial."

Malaria is one of the world's greatest killers. It strikes because up to 500 million times a year rural people without windows or mosquito nets may catch it five or six times each rainy season. It



By Keasling at the Lawrence Berkeley National Laboratory.

kills about one million people a year. Most of its victims are children and pregnant women.

It also keeps mutating to create drug-resistant strains. Chloroquine, the synthetic quinoline exuded as a miracle drug 30 years ago, is now all but useless. But few drug companies see profit in malaria drugs, so the biggest drives of research are ordinary laboratories, donor governments and private foundations.

The Gates Foundation alone has given about \$300 million in the last five years to the Medicines for Malaria Venture, the Malaria Vaccine Initiative and its promising innovators like Keasling's.

Last year, the Vaccine Initiative reported that one of its 15 experimental candidates had protected 30 percent of 1,000 children who received it in Mozambique. Though encouraging, the results made clear that a perfect vaccine is many years off, so drugs, mosquito nets and insecticides are still vital.

World health authorities have recently embraced artemisinin, a 2,000-year-old Chinese herbal extract of Artemisia annua, the sweet wormwood plant, as the most important new anti-malarial. But rising demand created shortages in China and Vietnam, where the plant is harvested, and its price quadrupled this autumn, from

\$15 per pound, or per 0.45 kilograms, to more than \$300.

As a result, Chinese farmers are now rushing to plant more, said Allan Schepers, coordinator of the World Health Organization's Roll Back Malaria campaign, and he expects the price to drop eventually. Nonetheless, the crisis put new urgency into the hunt for alternatives.

Keasling, head of synthetic biology at the University of California's Lawrence Berkeley National Laboratory, received the Gates grant to aid his work trying to transplant genes from wormwood plants and yeast into *E. coli* bacteria and coax them to produce artemisinin. Thus far, he said, his team has produced only amorphous, a precursor. The next step is "not trivial, but it's going to happen," he said.

The goal is to make artemisinin so cheaply that a full course for an adult will cost about 25 cents, he added. Right now, the cheapest alternative, a combination of artemisinin and lumefantrine, is sold by Novartis, the drug's maker, to the World Health Organization at \$2.40 per course, which Novartis says is slightly below its manufacturing cost.

Chloroquine costs only 20 cents a dose, to the dismay of public health experts, it still bought by poor Africans because it is cheap and temporarily lowers fevers, even as it helps spread chloroquine-resistance.

Keasling said he hoped to produce enough of the combination drug to start efficacy tests within five years, though other scientists said they felt that was optimistic.

Another alternative, synthesizing artemisinin in a laboratory, is hard and expensive, because it is a big molecule with multiple carbon rings. Its major component is its "unsymmetrical bridge," a formation that chemists believe interacts with the iron in red blood cells to create toxic free radicals, atoms with extra electrons that rip apart proteins crucial to the parasite's life cycle.

In the new "Or" molecule created at the University of Nebraska, the bridge is protected by a stable adamantane ring rather than the more fragile carbon ones. Difficulties with making a water-soluble version that can be swallowed have been overcome and the drug is being tested in Thailand.

The New York Times

PROVIDED BY DR.  
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