

## Editorial

It must have been some time earlier this year when I was approached by Hala Mouhtasib of IBSAR's outreach team to join in. I tend to give these matters little thought before I would say yes, simply because it could be fun! IBSAR's task is not an easy one, I am discovering. A marriage between researchers each with their own interests and way of thinking, but with a defined purpose in mind: the development of medicinal products from local plant extracts. Trained in classical microbiology, I ought to be keen on simply screening plant extracts for antimicrobial properties, and then arguing till kingdom come with the other members of IBSAR that we should use our energy and funds to develop the extract of parsley (for example!) as a commercial product for the treatment of wounds. However, the recent endeavor funded by Mr Jameel dictates that IBSAR is focused on the development of the most productive and promising line of research, be it microbiological or not.



Fall in Ammik by Khaled Sleem

A potentially beneficial contribution to IBSAR's activities is the use of microbes as model systems to address biological questions of wider interest, on the assumption that bioactive compounds can easily display activity(ies) across a broad range of organisms and cell culture models.

Indeed, the toxicity of a given antimicrobial agent to the infected host being treated is an example of this, albeit one with undesirable outcomes. The Gram-negative organism *Escherichia coli* is a model unicellular organism which helped biologists develop much of our basic understanding of genetics and molecular biology. I, therefore, see my contribution during this period of activity in IBSAR in the following areas: (1) screening new plant extracts for antimicrobial activities, and (2) using *E. coli* as a model system to demonstrate the nature of the bioaction of plant extracts, for even if an extract demonstrates bioactivity in a culture model of a higher organism, it may yet display a parallel kind of activity in bacteria which are easier to handle and manipulate. The use of *E. coli* as a model system could provide supportive findings to other research activities in IBSAR, and in doing so would fit in with how I understand the aims of the current phase in the group.

But perhaps the most satisfactory part of IBSAR's activity so far was the retreat we had in the old observatory at the beginning of this Fall semester. An informal gathering to discuss

and evaluate the activities proposed by various sub-groups of IBSAR, in a communicative setting that capitalized on the good will of participants and sidelined most of the defensive attitudes that so often plague our culture. One hopes that this will continue to the benefit of IBSAR, research and development at AUB.

By Dr. Medhat Khattar

For your precious contribution to this invaluable newsletter ....., including the editorial section contact M. Daouk at [me11@aub.edu.lb](mailto:me11@aub.edu.lb)  
Submission deadlines 20<sup>th</sup> of each month.

## Meetings, contacts & Seminars

### Retreat September 27, 28 and 30 September 2004

A three-day retreat (3 hours each) was held to discuss research strategies and expected outcomes for "the Bioprospecting in the Middle East" project. During the retreat each group presented a detailed plan of work including a review of completed work.

Presentations were followed by a discussion of methodology and expected results. The next retreat for the project team is scheduled for the 17<sup>th</sup> and 18<sup>th</sup> of January 2005 (Attendance: K. Badr, E. Barbour, K. Bouhadir, M. El Sabban, F. Homaidan, N. Hwalla M. Khattar, H. Mohtaseb, N. Rubeiz, B. Saab, N. Saliba, R. Shehadi, R. Talhouk, S. Talhouk.)

### Workshops

#### The 35<sup>th</sup> International Symposium on Essential Oils: Collection of thoughts and ideas, Italy, Sept 29-2 Oct 2004

N. Saliba and M. Ghosn (research assistant, chemistry) attended the thirty-fifth International Symposium on Essential Oils (ISEO 2004) held at the Naxos beach hotel, Giardini Naxos, Messina, Italy between September 29 and October 2 of 2004.

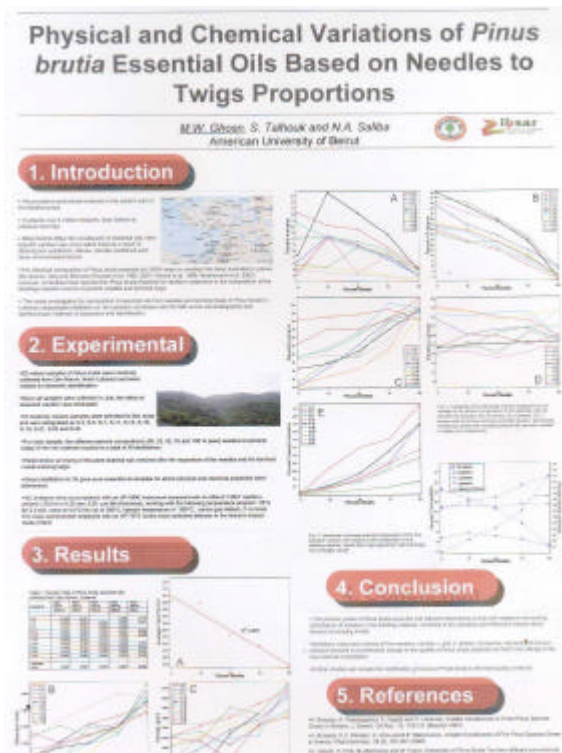
A poster prepared by N. Saliba, S. Talhouk and M. Ghosn entitled "Physical and Chemical Variations of *Pinus brutia* Essential Oils Based on Needles to Twigs Proportions" was presented at the symposium.

Different topics were covered at the meeting including issues such as:

- The need for new analytical techniques
- The chemistry of essential oils which included the organic synthesis of compounds, and the biochemistry of special compounds as they develop in the plant
- The biological activities of essential oil
- Taxonomy and breeding of plants

IBSAR should focus on the following:

- Emphasize on the biological (antimicrobial, anti-inflammatory) activities of essential oils since a direct application in aromatherapy and culinary market could be found
- Investigate the importance and value of pinene (alpha and beta) in participating in industrial synthetic processes
- Look into data analysis through clustering of the populations by their main components and set samples into different populations
- Initiation of a forum-Essenzia-Lebanon similar to that of the forum-Essenzia organization in Germany ([www.forum-essenzia.com](http://www.forum-essenzia.com)) to connect all experts of aromatherapy together.



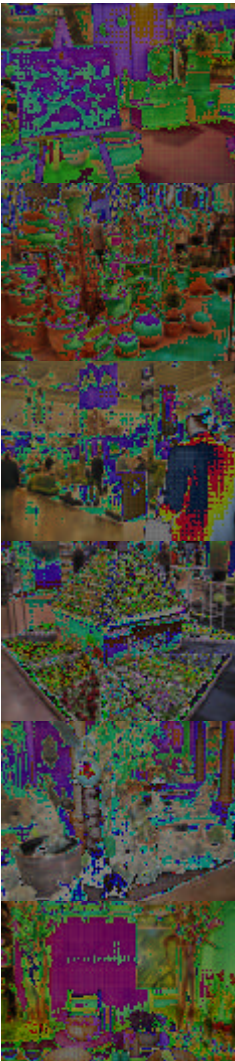
Poster presented by IBSAR at the 35<sup>th</sup> International Symposium on Essential Oils Collection of thoughts and ideas

forum-Essenzia organization in Germany ([www.forum-essenzia.com](http://www.forum-essenzia.com)) to connect all experts of aromatherapy together.

- Ensure quality control of essential oils produced in Lebanon as follow
- Availability
- Good documentation
- Genuine and authentic essential oil maintaining constant chemotypes)
- Transparency through a certification



## **IBSAR student attends International Plant Mess in German**



In January 2004, I attended one of the biggest international plant fairs worldwide, which I considered to be a great experience. The international plant mess (IPM) is based at Messe Essen in Germany every year around the same time for a period of four days. Every year over 1,350 exhibitors from at least 40 countries participate. Over 60,000 trade visitors attended the show this year.

I saw many stands for different companies in Germany, The Netherlands, Spain, USA, Italy, Australia, Denmark, France, Tunisia, etc.. A wide range of companies from tree nurseries, florists, plastic pots, artifacts, home gardens, home decoration, etc...

You can access the names of the companies and the countries they represent from the website [www.ipm-messe.de](http://www.ipm-messe.de). At each stand, there were representatives from each company accompanied by translators who communicate mainly in Deutsch and English. The stands were extremely well organized and designed, brochures and catalogues of each company were distributed by every stand for every passing visitor.

My main interest was to get an idea about the tree industry in Europe. At the IPM, I felt amazed by the ambiguity of the nursery industry especially in Europe. I learned that Italy is one of the best countries in growing plant material and the biggest exporter of ornamental

plants to other European countries such as Germany, France, Denmark and Holland. A huge hall was only reserved for the Italian nurseries. When I looked at their catalogues, I was impressed by the enormity of the nurseries and their operations. Some of the Spanish and French nurseries were also interesting. I liked one of the French nurseries, which specializes in dwarf ornamental fruit trees for apples, cherries and others. Also I learned about other international plant fairs that happen every year in the same location and about the same time such as "Glee" in Birmingham, (England), "four oaks trade show" in England and "Iberflora" in Spain.

In my opinion, the IPM provides a great opportunity to learn about the latest technology and innovations, the new plant varieties, to develop new business ideas, and build new contacts. Therefore, as a way of contributing to the nursery industry in Lebanon, delegates every year should attend this show. The 23<sup>rd</sup> international plant fair will be staged in Essen on January 27-30, 2005.

*By Hala Zahreddine, PhD student, Ohio state University.  
Hala's research focuses on the domestication of native Lebanese trees with ornamental properties*

### **Laboratory Visit to Germany**

Dr. H. Mohtaseb trip to Germany (Otto-von-Guericke University of Magdeburg, to visit the lab. of Dr. R. Schneider-Stock) during the month of August was funded by the DFG grant. The purpose of the trip was to present the results that she have obtained on Thymoquinone testing in the colon cancer mouse model and to prepare an application for the renewal of the DFG project, which will be submitted in November 2004.

### **IBSAR participates in "World Food day"**

The World Food Day, organized this year under the theme "Biodiversity for Food Security", was celebrated on 11 October, 2004, in the Syndicate of Engineers in Beirut, under the High Patronage of His Excellency, the President of the Republic of Lebanon, General Emile Lahoud. The ceremony started by the inauguration of an agricultural fair, then by a workshop on biodiversity and food security in the Lebanese context. During the ceremony, the FAO/Ministry of Agriculture launched a Telefood contest: NGOs and Cooperatives were invited to provide FAO with a Telefood Project concept. Six months later, a designated jury will choose the best three projects, which will be applied by FAO as a reward.

The workshop included the following topics: agricultural biodiversity in Lebanon; the International Convention for Biodiversity & the Cartagena Protocol; biodiversity's influence on nutritional habits. A lecture was given by Dr. Malek Batal representing IBSAR on the relationship between biodiversity, dietary diversity, and health. The talk focused on the importance of wild plants in promoting dietary diversity and their potential in improving dietary adequacy and public health. The topic generated a great deal of interest and discussion.

### **IBSAR Members attend and chair a Regional Workshop on Biotechnology in Cairo on Sept 29 – 30, 2004**

Biotechnology, in the past decade, had made noticeable strides that has no doubt impacted the fields of agriculture, health and environment, and has already re-shaped the future directions of such fields in the developed world. The developing world has not been an active participant in this process and has not yet fully embraced biotechnology and hence finds itself at a critical junction whether to recognize biotechnology as a contributor to its socio-economic development plans or not. No doubt, embracing



biotechnology in developing countries will pose fundamental political, financial, institutional, social, and cultural challenges, such as: who has access and who doesn't? Will marginalized groups (the poor, women, ethnic groups, etc.) also benefit from these technological developments? What are the possible implications of biotechnology on the environment (biosafety) and on people's health (food safety)? How does corporate control of the technology affect access and benefit sharing?

International organizations such as ESCWA, FAO, and IDRC among others have recently taken noted interest in assessing the status of biotechnology in the developed world and in identifying issues being debated in the region. Whether such organizations will look into support of biotech-related programs directed towards capacity building, policy-making, and strategy development in developing countries remains to be seen. For that purpose, the International Development Research Center (IDRC) has organized a regional workshop on biotechnology, held in Cairo, Egypt on September 29 – 30, for the Middle East and North Africa (MENA) countries to explore the links between biotechnology and development and to:

1. Clarify the issues being debated on biotech in the region in agriculture and health (bio-safety, food safety, precautionary principles, resource poor farmers vs. large scale farmers, organic farming vs. genetically modified farming, economic and political issues. etc.).
2. Identify a set of priority research questions around the most significant arguments, concerns and issues for research, national policy, and local grassroots actions.
3. Identify active partners / donors in the region in the research domain identified from the workshop discussions.

A total of 40 participants from academia, research centers, governmental bodies, private sectors and NGO's representing 14 countries (Algeria, Egypt, Iran, Iraq, Jordan, Kingdom of Saudi Arabia, Lebanon, Morocco, Syria, Tunisia, Yemen, from MENA, and Canada, the Netherlands, and USA) contributed to the success of the workshop.

The first day of the workshop consisted of two plenary sessions followed by discussion sessions. The first session was entitled "Agricultural Biotechnology in the MENA Countries: Potentials and Risks" delivered by Dr. Michael Baum from the International Center for Agricultural Research in the Dry Areas (ICARDA). The second session was entitled "Health Biotechnology in the MENA Region" by Dr. Dahmani Fathallah from the "Institute Pasteur de Tunis". On the second day of the workshop participants were divided into 4 work groups, and each group, chaired by a noted expert in the field, discussed a topic of significant concern to MENA countries and suggested possible areas of research. The four discussion groups addressed issues as 1) GMOs and Agriculture (Chaired by Dr. Haniaya El-Itriby - Egypt), 2) Biotechnology and Health (Chaired by Dr. Refaat Chaabouni - Tunisia), 3) Biosafety and policy (Co-chaired by Dr. Bassam El-Safadi - Syria, and Mr. Walid Nasser - Lebanon), and 4) Social, gender, economic, and ethical issues (Chaired by Ms. Maryam Rahmani - Iran).

IBSAR was there during the workshop. Dr. Rabih Talhouk, Biology Dept - AUB, IBSAR member, chaired the 2day workshop and coordinated the ongoing events. Mr. Walid Nasser, Attorney at Law and IBSAR member, co-chaired the discussion group on biosafety and policy as noted above, and Dr. Elsa Sattout, the Lebanese National Biosafety Project Coordinator and member of IBSAR, was also an active participant. In a questionnaire distributed at the end of the workshop, and from side discussions, the participants hailed the meeting as a success and invited international organizations and NGO's for a more active role in exploring links between biotechnology and development.

Lastly, it is worth noting that ESCWA and FAO will be holding a joint Expert Group Meeting on "Modern Biotechnology: Technical and Policy implications in the Near East and North Africa Region". The meeting will be held in the United Nations House, Beirut, Lebanon on December 14-16, 2004.

*By Dr. Rabih Talhouk*

#### **Award to H. Mohtaseb**

H. Mohtaseb have been awarded the Abdul Hameed Shoman for Young Arab Researchers prize for the year 2003 (medical sciences field). The Abdul Hameed Shoman prize for Young Arab Researchers established in 1982 in Amman awards every year young researcher who had provided scientific services to the community a prize of 10,000USD.

Among the 9 awardees (chosen from 99 applicants), H. Mohtaseb was the only female and the only Lebanese!! The news appeared in Friday's papers (15 October 2004). Drs. Makhlof Haddadin and Fady Geara had nominated H. Mohtaseb for the award. H. Mohtaseb is grateful for both of them for taking the time to write the letters.

#### **Thesis Seminars**

S. Dakdouki (an Msc student, Major: chemistry; Advisor: Dr. Najat Saliba) gave a presentation entitled: **The way to a natural bioactive compound extracted from an endemic Lebanese plant**".

#### **Publications from IBSAR**

S. Dakdouki, Msc thesis: " **The way to a natural bioactive compound extracted from an endemic Lebanese plant** ".

Formatted