

H O R U S

Horus Vol.3 No.1

March 2015

JSPS Alumni Association in Egypt



News Letter

Pl.1: Prof. Ibrahim Tantawy, head of organizer, at the greeting (see p.11).



Pl.2: Prof. Abdel-Hamid at the chair



Pl.3 Mr. Yamamoto (Embassy of Japan) at the head quarter at Monouliya University



Pl.4 View of the symposium at Monouliya University

Contents

I. Message from the Chair of the JSPS Alumni Association of Egypt (JSPS-AAE).....p.2	
Prof. Ibrahim Tnatawy	
II. My Experience in Japan through JSPS Bridge Fellowship Program.....p.3	
1. Prof. Adel El-Beltagy	
2. Prof. Ahmed Saleh	
III. Introduction of Members' Activity.....p.5	
1. Prof. Mohamed S. El-Deab	
2. Prof. AdelA.-H. Abdel-Rahman Nassar	
3. Prof. Moustafa M. Sarhan	
4. Prof. Samir Abdelgaleil	
5. Prof. Hesham R. El-Seedi	
IV. Report of JSPS-AAE Activities during 2014-2015.....p.10	
1. Report on Renewable Energy Challenges and opportunities in Egypt (RECO, 2014) workshop Prof. Gad el-Qadi	
2. Report on the First Science Forum held in Menoufia University on: "Renewable Energy and Climate Change with Orientation for Study and Research Opportunities in Japan" Prof. Ibrahim Tantawy	
V. Short Essay.....p.12	
1. Prof. Gamal Kamh	
2. Prof. So Hasegawa	
VI. News by JSPS Tokyop.14	
VII. Board Members.....p.15	
VIII. Editorial Note.....p.16	
Prof. Gad el-Qadi	



[Cover Photo] Sarcophagus box of Ramesses III Louvre Museum, New Kingdom period

This is a relief motif represented on the pink granite Sarcophagus box of Ramesses III (1182-1151BC). The outside of the box is engraved with the seventh and eighth chapters of the "Book of Amduat". The ancient Egyptians imagined the sun to travel underground in a boat during the twelve hours of night. The nocturnal sun was represented as a man with a ram's head. During the night-travel, the sun confronts the snake Apophis, the "evil serpent", who tries to stop him on his course. As the pharaoh was associated with the sun god and his perilous journey through the night, the royal tomb featured representations of this recurrent event.

I. Message from the Chair of the JSPS Alumni Association of Egypt (JSPSAAE)

Prof. Dr. Ibrahim Tnatawy

Chirr of JSPSAAE, Prof., Dr. of Chemistry, Menoufiya Univ.



It is our pleasure to publish the third issue of JSPSAAE). Newsletter, which was established as a result of the efforts of the former JSPS Fellows. On behalf of JSPS, I wish to express my appreciation to the association's founders and members and to the current JSPS fellows. Our colleagues who have been doing research in Japan have got formative experience that significantly established lifelong friendships and instituted wide research collaboration. The prime objective of the Alumni Association is to promote scientific exchange between Egypt and Japan and to offer advice and ready networks for young researchers taking up fellowships in Japan. It on the other hand aims to support Japanese researchers working in Egypt. We also want to provide a forum for exchange of information amongst the Association fs members and to keep them in touch with developments in Egypt-Japan scientific collaboration. We hope to become a useful point of contact for those who are generally seeking information on science, technology, society and culture in Japan. For this we are doing our best to maintain a useful website with links and contacts. Activities of this year included a successful launch of an event in May and December 2014 organized in collaboration with Academy of Scientific Research and Technology (ASRT) and Menoufia University. Topic of the event was on renewable energy resources. This was in addition to a regular annual assembly meeting on February 2015. In this last event, the alumni members had the opportunity to present their research fields and to initiate research collaboration and networking. We very much hope that our JSPS Alumni Association will continue to promote scientific and cultural exchange as well as mutual friendship between the Egyptian and Japanese people. (Fig.1,2)



Fig.1: View of the assmly in Feb. 21, 2015



Fig.2: Bannner of JSPSAAE at the assembly

II. My Experience in Japan through JSPS Bridge Fellowship Program

1. Sequence analysis of 16S rRNA Gene and Biological Nitrification Inhibition of Some Soil Bacteria

Prof. Dr. Adel Elbeltagy

Prof of Microbiology and vice dean, Faculty of Agric. Menoufia Univ.



One of the goals of JSPS bridge fellowship is to revive academic relationship with Japanese professors and visit past host institutions, luckily, I could perform my scientific activity with my previous host Dr. Yasuo Ando, the group leader of Biological nitrification Inhibition (BNI) project, Who was, previously, hosting me for two years (2002-2004) at Japan International Research Center for Agricultural sciences (JIRCAS) located in Tsukuba. During this fellowship (45 days), we could discuss, conduct or take part in the following: (Figs.3-5)

1- Our previous project; nitrogen fixation (*nif H*) gene sequencing of endophytic bacterial community residing in the plant and a recent progress in their diversity and distribution in the leaf and sheath of a plant.

2- Ongoing project; Biological Nitrification Inhibition (BNI) project; in this regard, nitrification process is oxidation of ammonium (NH_4^+) to nitrate (NO_3^-) by specific bacteria, and de-nitrification is converting nitrate to some green house gases such as N_2O , NO and N_2 . NH_4^+ is bond with negatively charged soil organic matter, while (NO_3^-) is more mobile and can be easily leached and lost as N fertilizers. Although most plants has the ability to use either (NH_4^+) or (NO_3^-) as their N source, maintaining soil N in NH_4^+ form is advantageous. This can be done by slowing nitrification rate through Biological Nitrification inhibition (BNI) process. To estimate BNI capacity, we extracted DNA from different soil samples and conducted Real Time PCR to detect the activity of ammonia oxidizing bacteria involved in nitrification process through investigating the abundance (Expression) of the (*amoA*) gene encoding a subunit of enzyme ammonia mono-oxygenase.

3- Sequencing analysis of 16S rRNA gene of some bacteria and algae isolated from Egyptian soils.

Moreover, I have got a great chance to attend the annual meeting of soil science and plant nutrition (Sep. 9-11, 2014) held in Tokyo.

It was a pleasure to get an opportunity to visit Tohoku university (Sendai city) and meet my Ph.D host professor, Dr. Tsutomu Hattori and JSPS host Prof. Dr. K. Minamisawa

Finally, I am very thankful to JSPS Cairo office for their continuous support to their alumni members.

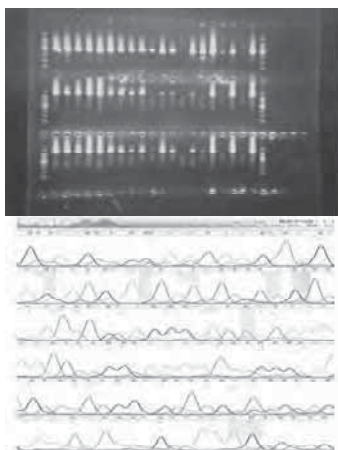


Fig. 3: PCR amplification of 16S rRNA gene

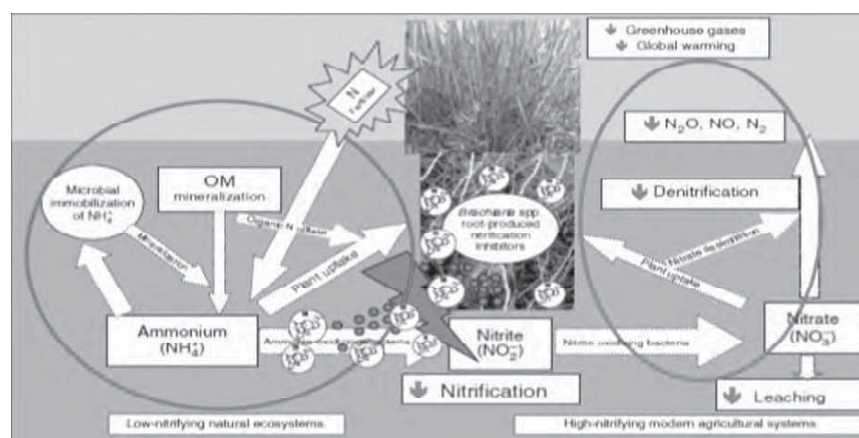


Fig.4: Nucleotide sequence

Fig.5: Biological Nitrification Inhibition (BNI)

2. Paleomagnetism of Egyptian Basalt

Prof. Dr. Ahmed Saleh

National Research Institute for Astronomy and Geophysics



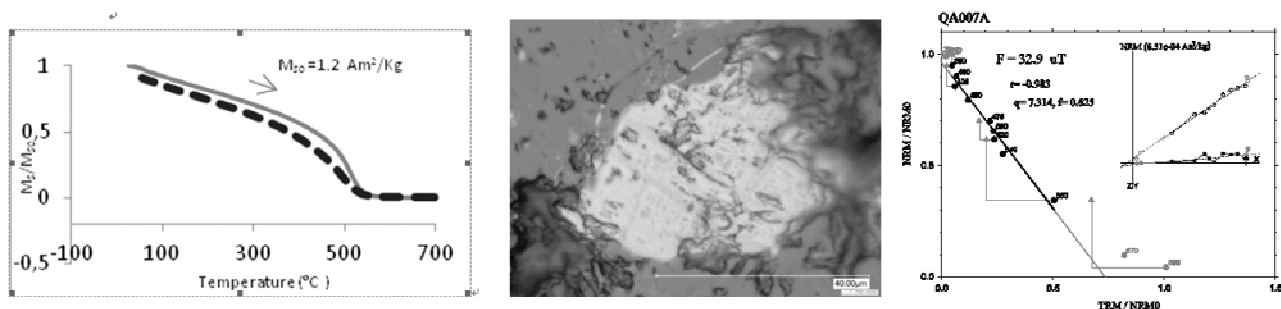
Paleomagnetic studies published over the last 45 years have provided important data about the evolution of the Earth's magnetic field in the past, and therefore information about the working of the geodynamo and the conditions at the core-mantle boundary. Most of these studies, however, are only based on the directional changes of the field, and very few focus on changes of the intensity of the magnetic field vector. The reason is that, while it is usually relatively easy to retrieve field directions from paleomagnetic studies, it is much more delicate, and often not even possible, to obtain reliable estimates of the intensity of the ancient field from rocks.

My research is focusing on the topic "paleointensity determination of Egyptian basalt" which was initiated through JSPS bridge fellowship in the year 2014 in cooperation with Dr. Yuhji Yamamoto, Kochi University. As most samples carried only one component of magnetization, they were tested for paleointensity Thellier method with IZZI protocol. To further assess the suitability of the Thellier procedure as a tool for sample selection, some samples were in addition submitted to the LTD-DHT Shaw experiments. The agreement between both routines is very good and LTD-DHT Shaw method is much suitable than Thellier experiments. Paleointensity results obtained as well from the North Egypt area than from Sinai are extremely promising, with values lower than the actual field. This preliminary study emphasizes clearly the need of a detailed sampling of Jurassic and Cenozoic basalts from Egypt for directional and paleointensity purposes. I have published several research international papers (see for example 1-5).

Also I have visited Graduate School of Science and Technology, Department of Earth and Environmental Sciences, Kumamoto University and Department of Environmental Systems Science, Doshisha University in Kyoto. (Pl.7, Fig.6-8)

References

- (1) A. Saleh and Y. Yamamoto (2015): New Paleointensity results deduced for the Tertiary period from north Egypt basalt, Egypt, and the dipolar nature of the flow, *Geophysical Journal International* (submitted).
- (2) A. Saleh and Y. Yamamoto (2014): Cenozoic basalts from Egypt: Implications for the fidelity of Egyptian Paleointensity data base, *J. Afric. Earth Science* (In press).
- (3) A. Saleh (2012): The effect of uniaxial compression in the behaviour of remanent and induced magnetization of some basaltic rocks from western Sinai Peninsula, Egypt, *Arabian Journal of Geosciences*.5: pp. 1175-1184.
- (4) R. Leonhardt, A. Saleh and A. Ferk (2010): Archaeomagnetic field intensity during the Roman period at Siwa and Bahryn oasis, Egypt: Implications for the fidelity of the archaeomagnetic data base., *Archaeometry*, Blackwell, 52, 3, pp. 502-516.
- (5) M. Perrin, A. Saleh and L. Alva Valdivia (2009): Cenozoic and Mesozoic basalt from Egypt: A preliminary survey with a view to paleointensity, *Earth Planet Space*. Vol. 61 (No.1) pp. 51-60.



Figs. 6–8: Rock magnetic and Microscopic studies as well as Paleointensity measurements of basalt

III. Introduction of Members' Activity

1. Electrocatalysis by Nanoparticles

Prof. Dr. Mohamed S. El-Deab

Professor of Physical Chemistry, Cairo University



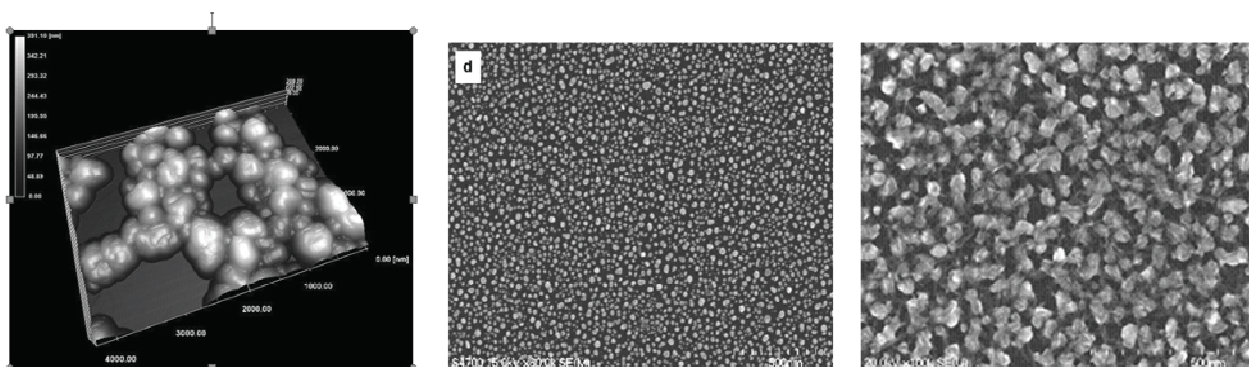
Nanostructures have received tremendous interest and attention in recent years due to their novel physical properties, e.g., light emission, quantum confinement effects as well as their potential applications in nano- and opto-electronic devices, and biosensors. Furthermore, the outstanding catalytic and electro-catalytic properties of nanomaterials render them a promising candidate in several energy conversion applications.

My research is mainly oriented on the topic of "Nanoparticles and their Applications in Energy Conversion Systems" which was initiated several years ago through two JSPS fellowships in cooperation with Prof. Takeo Ohsaka, Tokyo Institute of Technology.

Our research results showed that the use of metal nanoparticles (e.g., gold and platinum) and metal oxide nanoparticles (e.g., manganese oxide) is a promising candidate electrocatalyst for several reactions of direct relevance to fuel cells applications, e.g., for the oxygen reduction reaction (ORR) and the oxygen evolution reaction (OER) together with formic acid oxidation (FAO) as well as methanol oxidation reaction (MOR). I have published more than 65 Research papers in reputed international [see for example 1-4]. One of them reported the superiority of gold nanoparticles as a catalyst for the ORR [1], which has received more than 220 citations during the last few years implying its scientific significance and importance in the field of "Electrocatalysis by Gold Nanoparticles". (Figs.9-11)

References:

- [1] M. S. El-Deab and T. Ohsaka, *Electrochem. Commun.*, 4 (2002) 288.
- [2] M. S. El-Deab and T. Ohsaka, *Angew. Chem. Int. Ed.*, 45 (36) (2006) 5963.
- [3] M. S. El-Deab, T. Ohsaka, *J. Electrochem. Soc.*, 155 (2008) D14.
- [4] M. S. El-Deab, F. Kitamura, T. Ohsaka, *J. Power Sources*, 229 (2013) 65.



Figs.9-11: SEM images of gold nanoparticle with controllable size and morphology

2. Cyclic and Acyclic Nucleosides As Antiviral and Antimicrobial Agents

Prof. Dr. Adel A.-H. Abdel-Rahman Nassar

Head of Chemistry Department, Faculty of Science, Menoufia University



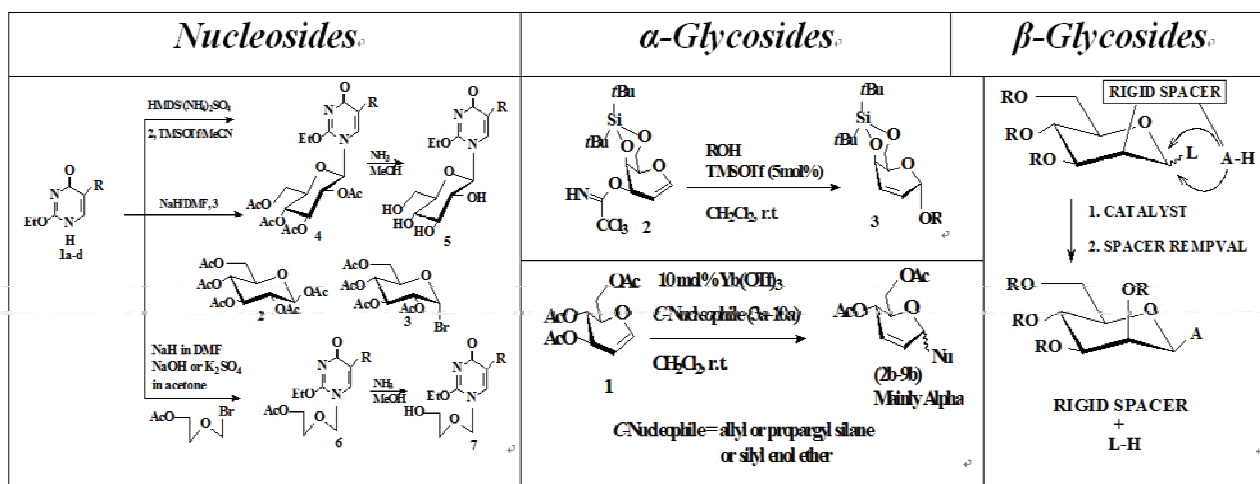
Since the discovery of Human Immuno-deficiency Virus (HIV) as the causative agents of AIDS, intense effort was developed to find drugs that can be selectively inhibit the replication of HIV.

In order to obtain an improved selectivity, many nucleoside analogues have been designed and synthesized including modification of the carbohydrate moiety as well as of the base.

Pseudogalactals can be synthesized by using trichloroacetimidate as a leaving group at C-3 position and TMSOTf as a catalyst to produce structurally diverse α -O-pseudogalactal glycosides.

The synthesis of C-glycosides has been the subject of intense study for various reasons: a) The discovery of naturally occurring C-nucleosides with important pharmacological properties. b) The synthesis of biologically significant macromolecules which requires C-glycosides as chiral building blocks. c) C-Glycosides are potential inhibitors of carbohydrate processing enzymes and they are stable analogues of glycons involved in important intra- and intercellular processes.

The β -D-mannopyranosides are of great interest because of their presence as structural elements in glycoproteins and O-antigenic lipopolysaccharids. Recently intramolecular investigations have been reported to improve the stereo- or regioselectivity of glycosylation reactions. (Figs.12-14)



Figs.12-14: Structures of Nucleosides and Glycosides (α and γ)

3. Virocidal activity of Egyptian Scorpion Venoms against Hepatitis C Virus

Dr. Moustafa M. Sarhan

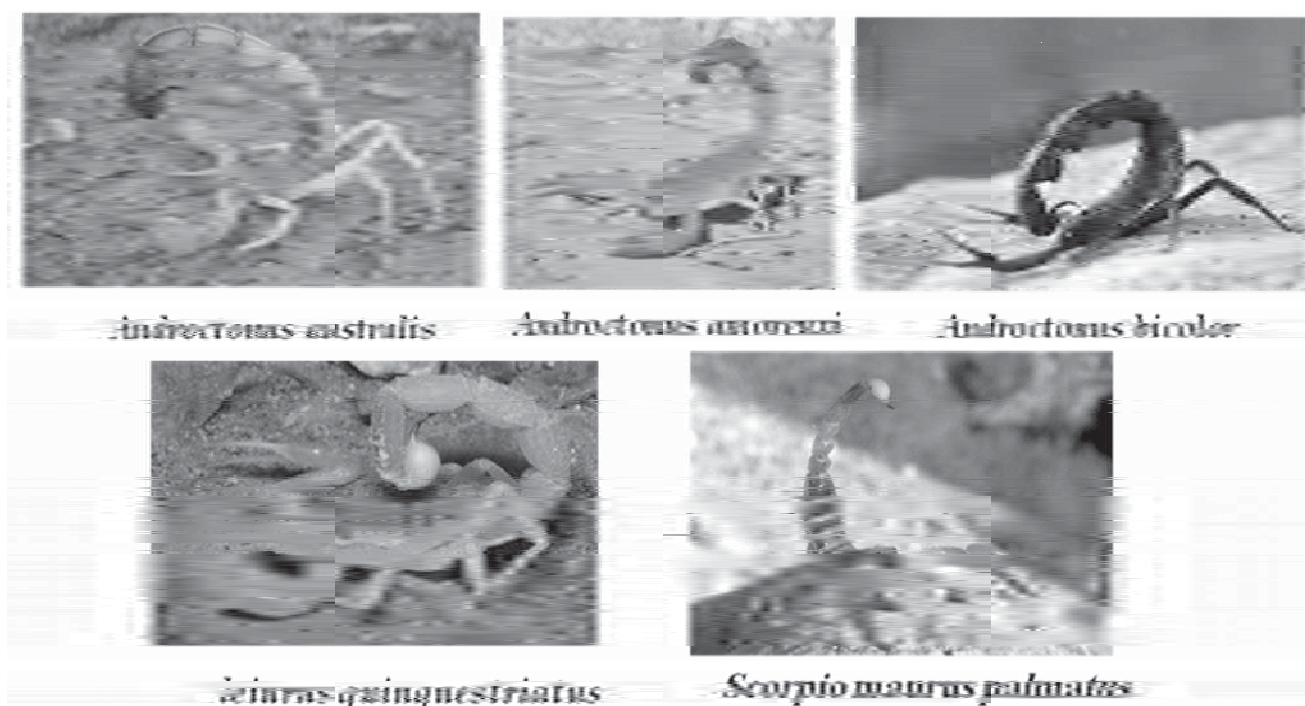
Lecturer of Molecular biology, Al Azhar Universit



Hepatitis C virus (HCV) is a major global health problem, causing chronic hepatitis, liver cirrhosis and hepatocellular carcinoma. Developmet of well-tolerated regimens with high cure rates and fewer side effects is still much needed. Recently, natura antimicrobial peptides (AMPs) are attracting more attention as biological compounds and can be a good template to develop therapeutic agents, including antiviral agents against a variety of viruses.

Various AMPs have been characterized from the venom of different venomous animals including scorpions.

In this study the possible antiviral activities of crude venoms obtained from five Egyptian scorpion species (*Leiurus quinquestriatus*, *Androctonus amoreuxi*, *A. australis*, *A. bicolor* and *Scorpio maurus palmatus*) were evaluated by a cell culture method using Huh7.5 cells and the J6/JFH1-P47 strain of HCV in corporation with Prof. Hak Ha, Kobe University Graduate School of Medicine and his team. Our research results showed that *S. maurus palmatus* venom is considered as a good natural source for characterization and development of novel anti-HCV agents targeting the entry step. This research may open a new approach towards discovering antiviral compounds derived from scorpion venoms. (Figs.15-18)



Figs.15-18: Five Egyptian scorpion species which their crude venoms were collected and examined against HCV virus

4. Biologically Active Terpenoids from Egyptian Plants

Prof. Dr. Samir Abdelgaleil

Faculty of Agriculture, Alexandria University



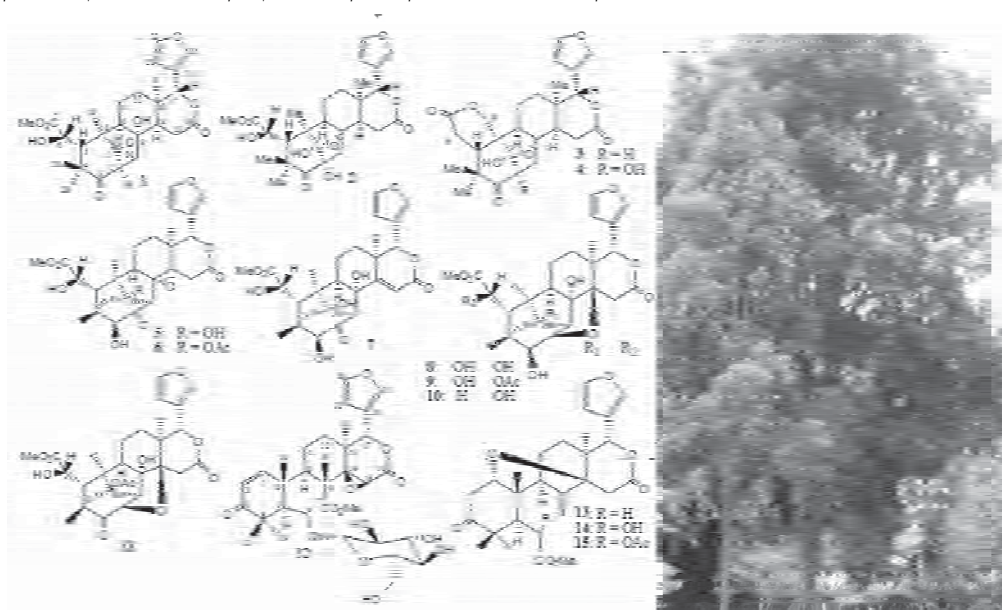
Higher plants have enormous potential to inspire and influence modern chemical research of agriculture and medicine. The increasing interest in the possible application of secondary metabolites to pest management has directed the investigation toward search for new sources of biologically active natural products with low mammalian toxicity, lack of neurotoxic mode of action, low persistence in the environment, and biodegradability, as well as to avoid the development of pest resistance.¹ One more advantage of using plant natural products in pest control is that these chemicals can be applicable in integrated pest management programmes (IPM) which is a universal approach in pest control nowadays.

Our research aims are to find new plant natural products from Egyptian plants that can be used for pest and pathogen management. I have started this research in early 1999 with collaboration of Professors Munehiro Nakatani, Fumio Hashinaga Toshihiko Suganuma of Kagoshima University and with support of JSPS.

Our joint research with Japanese counterparts has led to investigate the chemistry of 45 plants and isolate 96 compounds in which 34 were new and 62 were known.²⁻⁵ Furthermore, the essential oils of 32 plants were isolated and identified. The bioactivity of the isolated compounds and oils were evaluated against several economic agricultural and public health pests and pathogens. Some of isolated compounds showed promising biological activities and may be used as safe and environment friendly pest control agents in integrated pest management programmes and organic farming systems. (Figs.19-20)

References

1. Arnason et al., 1989. Insecticides of Plant Origin. ACS Symp. Ser. 387. Am. Chem. Soc., Washington, D.C. 213
2. Abdelgaleil, S. A. M., Doe, M., Nakatani, M., 2013. Phytochemistry 96, 312-317.
3. Abdelgaleil, S. A. M.; Okamura, H.; Iwagawa, T.; Sato, A.; Miyahara, I.; Doe, M.; Nakatani, M., 2001. Tetrahedron 57, 119-126.
4. Abdelgaleil, S. A. M.; Nakatani, M., 2003. J. Appl. Entomol. 127, 236-239.
5. Abdelgaleil, S. A. M; Abdel-Razeek, N.; Soliman, S. A., 2009. Weed Sci. 57, 6-9.



Figs.19-20: New Limonoids from *Khaya senegalensis*

5. Secondary Metabolism is Still Largely Unclear (Lessons from Nature)

Prof. Dr. Hesham R. El-Seedi

Professor of Natural Products Chemistry, Menoufiya University



Secondary metabolism: Refers to the functions of an organism yielding products that are not necessary for the essential biochemical events. Secondary metabolites are thus compounds which are often species dependent. The actual role of secondary metabolites is still largely unclear. For example, the recent change of chemosystematic significance will be introduced by demonstrating the isolation of cyclopeptide alkaloid (1) from *Heisteria nitida* (El-Seedi et al., 2005b). It was discovered in the family Olacaceae for the first time (El-Seedi et al., 1999).

Also our discovery of mescaline (2) from peyote. The isolated compound displayed psychotropic properties and peyote samples appear to be the oldest plant drug ever to yield a major bioactive compound i.e. as long as 5700 years ago (Bruhn et al. 2002).

After this we will discuss the possible applications including anti-microbial, anti-schistosomiasis, and anti-inflammatory activities. For instance, triterpene glycoside (3) from the Egyptian medicinal plant *Asparagus stipularis* was recently evaluated as anti-schistosomiasis agent. It resulted in a retardation of worm growth and locomotion at the first day and showed a significant activity of egg-laying suppression at 200 $\mu\text{g/mL}$ concentration (El-Seedi et al., 2012). (Figs.21-23)

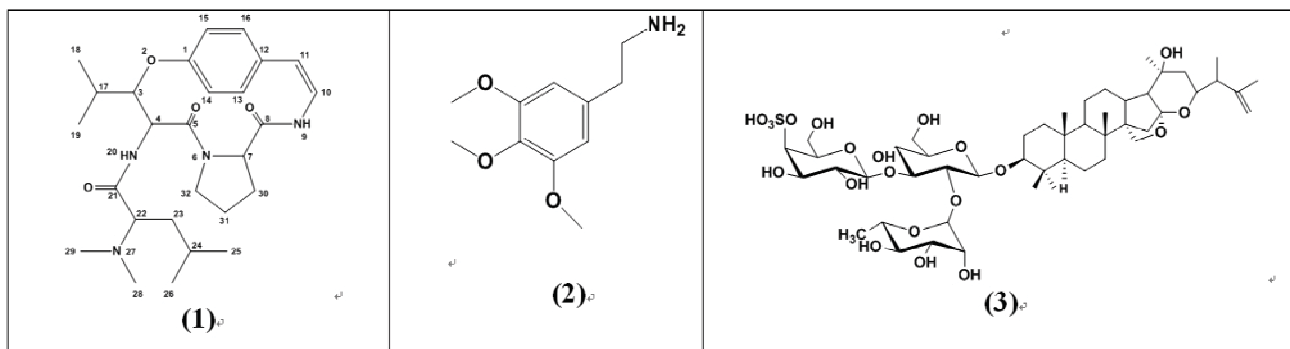
References:

Bruhn, J.G., et al. (2002): Mescaline uses for 5700 years. *The Lancet* 359, 1866-1867.

El-Seedi, H.R., et al. (1999): Cyclopeptide alkaloids from *Heisteria nitida*. *Phytochemistry* 52, 1739-1744.

El-Seedi, H.R., et al. (2005b): Chemosystematic value of cyclopeptide alkaloids from *Heisteria nitida* (Olacaceae). *Biochemical Systematics and Ecology* 33, 831-839.

El-Seedi, H.R., et al. (2012): Anti-schistosomiasis triterpene glycoside from the Egyptian medicinal plant *Asparagus stipularis*. *Brazilian Journal of Pharmacognosy* 22, 314-318.



Figs. 21-23: Structures of cyclopeptide alkaloid, mescaline and triterpene glycoside

IV. Report of JSPS-AAE Activities during 2014-2015

1. Report on Renewable Energy Challenges and opportunities in Egypt (RECO, 2014) workshop

Prof. Dr. Gad El-Qady

National Research Institute of Astronomy and Geophysics (NRIAG), Helwan, Cairo.



Under the umbrella of the Academy of Scientific Research and Technology of Egypt (ASRT), the workshop under the title “Renewable Energy challenges and opportunities in Egypt (RECO 2014)” was held on May10, 2014 at premises of ASRT, Cairo. Other Egyptian institution had join the partnership of organization, these are: Egypt-Japan university of science and Technology (E-JUST), National Research institute of Astronomy and Geophysics (NRIAG), American University at Cairo (AUC), Al Ahram center for strategic studies and the Japan Society for promotion of Science and its alumni association in Cairo (JSPS, JSPSAAE). The Participants were 46 persons while 19 presentations out of 21 abstracts were presented during the one day workshop from 10:00 till 17:30. In addition representative from Japanese Embassy in Cairo and JETRO were attended the full day.

The presenters and audiences have showed high potentiality of Renewable energy in Egypt. That was very clear from some successful stories that presented. On the other hand, research related to material science, fabrications of solar cells are very promising.

At the end, a closing session was made to wrap up the workshop, where the conclusion was as follow:

1-Establishing institute for renewable energy in Egypt to be a focal point in this domain and shall has access and representatives from all universities and research centers in Egypt.

2-Establishing a working group (or society) for renewable energy in Egypt.

3-Establishing a database for all people involved. I already made a mailing list on yahoo groups called (RECO_Egypt@yahoogroups.com) and will add people very soon.

4- It is highly recommended to make internal cooperation between members of the universities and res. institutions in Egypt working in this domain and relevant issues. I believe that the newly established working group can play such rule.

5- Arrangements for future specified Workshop or conference including all related session is required. (Figs.24, 25)



Figs.24,25: Views of the workshop

2. Report on the First Science Forum held in Menoufia University on:

“Renewable Energy and Climate Change with Orientation for Study and Research Opportunities in Japan”

Prof. Dr. Ibrahim Tantawy, Menoufeia University

In line with our ongoing support for Renewable Energy and Energy Efficiency in Egypt, and after the success of the previous ASRT workshop on Renewable Energy Resources, on December 15, 2014 the JSPSAAE in collaboration with Menoufia University organized the first Science forum on: "Renewable Energy and Climate Change with Orientation for Study and Research Opportunities in Japan". The meeting was attended by JSPSAAE members, Japanese embassy delegates, Menoufia University Staff , postgraduate- and undergraduate students . Distinguished elite of specialists in solar energy and climate change are presented a number of interesting lectures in the field. This meeting was held under the auspices of JSPSAAE and Menoufia University President Prof. Dr. Meawad Mohammed Elkholy and Vice President for Community Affairs and Environmental Development Prof. Dr. Atef El-Sayed Abou Alazem. After the greetings at the opening session of the forum, the first speaker, Prof. Dr. Hamdy El Ghetany (Head, Solar Energy Department, National Research Centre) enlightened the audience about Utilizations of Solar Energy in Sustainable Development in Egypt and Egypt es solar energy potential, emphasizing the need for establishing a culture of quality in education and research on renewable energy in Egypt. After this inspiring presentation, speaker and participants had a chance to share ideas. The following speakers Prof. Mohamed Elzaidia and Prof. Ahmed Elhamalawy (Menoufia Univ.) presented their research activities on solar energy and solar cells from LORE Lab and stressed on Egypt fs solar energy future and possible scenarios for integrating solar energy into conventional thermal power stations. The next speaker in this session Prof. Wael Abdel Moez, Minia University presented the concept of the solar energy and technology transfer from Lab. to Market for building a high-quality solar energy market in Egypt. In another conference theme related to climate change Prof. Prof. Kaoru Kashima, Kyushu University, Japan Presented an interesting lecture on the effect of climate change on the Eastern mediterranean coastal area.

Also in this forum, Mr. Yamamoto Hideaki and Ms. Akie Hoshino from the Japanese Embassy in Cairo presented the opportunities for Study & Research in Japan through the Japanese government scholarships programmes In addition, Prof. So Hasegawa, (Director, JSPS Office, Cairo) presented the JSPS postdoctoral programmes as well as the collaborative research projects supported jointly by JSPS and STDF. (Pls.1-4, Figs. 26, 27)



Fig.26: Members in the bus



Fig.27: Prof. Abu Elhassan at the chair

V. Short Essay

1. The Desert That You Don't Know

Prof. Gamal Kamh

Faculty of Science, Menoufiya University



The desert is a place with rare or no life features. In the Middle East, the desert is almost with yellow sand forming ripples or dunes with amazing natural outlook. But the desert with clear white chalky landforms is not common. It is well represented in Farafra Oasis (Natural Protected Area) in the Western Desert of Egypt as chalk is naturally carved almost by wind carrying sand forming brilliant prefecture as Lion, Horse, Ghost Tables, Chicken, Ice Cream, Rabbit, Elephant form....etc. A pioneer master degree supervised by Prof Dr. Gamal Kamh, Prof Dr. M. Abu Eh-Hassan at this White Desert is currently progressing aiming to preserve such features and quantify its damage for developing this area for Tourism. Some work will be supported by laboratory analysis of Saitama Univ. in Japan with their latest techniques. I invite all of you to visit and enjoy with a trip to this White Desert and contact Prof Dr. Gamal Kamh (gkamh2013@yahoo.com) for more details. (Pl.9, Figs.28-33)



Fig. 28: Uce-Cream Form



Fig. 29: Ghost Table and Ripples



Fig. 30: Lion Form



Fig. 31: Rabbit Form



Fig. 32: Chicken Form



Form 33: Elephant Form

2. Archaeological Survey in West Delta
Prof. So Hasegawa
Director of JSPS Cairo Research Station



Here I introduce the topic on my archaeological survey to the south of Lake Idku, Buhaira. In the history of classical archaeology of Alexandria, the hinterland area has been neglected so far. Though the area was covered by the advancing sea during the period around 6000-5000 BC, many Hellenistic archaeological sites are distributed in this area. Therefore we have chosen one site among them and we are trying to recover the ancient daily life at the lake waterfront. First of all, we created a fine topographical map of two hills each with 50cm contours. The top of the south hill is 9m higher than the foothill, and the area covers more than 250mx250m(=15 feddan). In September, 2014, a surface survey using three sorts of equipment including GPR, magnetic wave and electro-magnetic wave was carried out, by the team of Doshisha University from Japan with the help of an Egyptian expert of the geophysical survey, Prof. Dr. Gad el-Qady, our Alumni member. We brought the scientific data to the lodging at Damanhur and discussed the understanding of the results every day. It was the magnetic survey that showed the most remarkable image of the mud-brick settlement, which is thought to be dated to the Roman period (AD1-3 Century). In addition, the possibility of the multi-layered construction of the sites during the period from the late pharaonic to Byzantine periods were suggested by the analysis. The detail will be confirmed in the coming seasons of the excavations, and we expect more support from the Alumni members. (Pl.8, Figs.34-35)



Fig. 34, 35: Views of Archaeological Survey in West Delta

VI. News

Nobel Prize Dialogue Tokyo 2015



On 1 March, Nobel Prize Dialogue Tokyo 2015 was held in the conference hall at the Tokyo International Forum. Cosponsored by JSPS and Nobel Media, this was the first time for this publically open-forum to be held outside of Sweden. At this whole-day event, a vibrant constellation of seven Nobel laureates, including Drs. Shinya Yamanaka, Koichi Tanaka and Hiroshi Amano from Japan, and world-leading scientists delivered lectures on science at the frontiers of their respective fields and participated in panel discussions.

This dialogue on "The Genetic Revolution and Its Future Impact" explored the impacts of life science advances in such fields as genetics and genomics on future society. Over the course of the day, the audience, comprising both Japanese and people from around the world, had engaged in a stimulating dialogue with the eminent lecturers, bringing science and society yet another step closer together. Following the event, a reception was held in the presence of Their Majesties the Emperor and Empress and Their Majesties the Emperor and Empress communed with Nobel Laureates and young researchers. (Figs.36,37) (JSPS Tokyo)

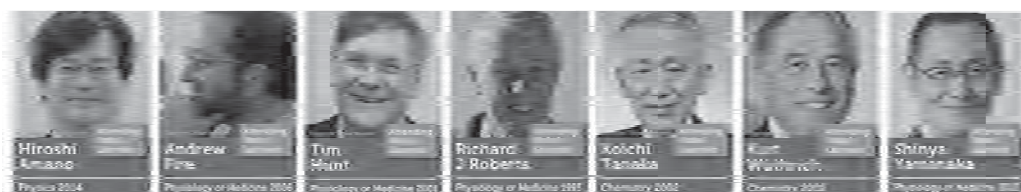


Fig. 36: Seven Nobel laureates



Fig.37: View of the Nobel Prize Dialogue Tokyo 2015

VII. Board Members



Prof. Ibrahim Tantawy
President of JSPSAAE,
Professor of Organic & Medicinal
Chemistry, Faculty of Science El-
Menoufia University.



Prof. Abdel-Hamid Kamel Oman
Prof of Cell and Tissue Biology,
Department of Cytology and
Histology, Faculty of Veterinary
Medicine, Suez Canal University



Prof. Akmet Saleh
Vice President of JSPSAAE
Professor of Applied Geophysics,
National Research Institute for
Astronomy and Geophysics
(NRIAG).



Prof. Gad El-Qady
Editor of JSPSAAE Newsletter
Prof. of Geophysics, International
Relations coordinator of NRIAG



Prof. Adel A.-H. Abdel-Rahman
General Secretary of JSPSAAE
Prof. of Organic Chemistry,
Faculty of Science, El-Menoufia
University



Prof. Mobein Zommara
Professor of Dairy Science,
Faculty of Agriculture,
Kafrelsheikh University



Prof. Mohamed Abouelhasan
Treasurer of JSPSAAE
Prof. of Geology, Vice dean,
Faculty of Science,
El-Menoufia University



Prof. Montazer El-Salmawy
Prof. of Mining and Minerals,
Petroleum Engineering and
Mining, Suez Canal University



Dr. Adel El-Beltagy
Professor of Microbiology,
Faculty Of Agriculture,
El-Menoufia University



Prof. Said Anwar
Prof. of Zoology, faculty of
Science, Kafrelsheikh University

Editorial Boards

Prof. Gad El-Qady, Editor-in-chief
Prof. Ibrahim Tantawy
Prof. Serry Elbulaly
Prof. Ahmed ElSahar
Prof. So Hassan



Dr. Waleed Abou El Hassan
Associate Prof. of Integrated Water
Management in Arid Lands, Water
Management Research Institute,
National Water Research Center,
Egypt.

Fig. 38 Board Members

VIII. Editorial Note

Prof. Gad El-Qady
Editor -in-chief

It is my pleasure to introduce the third issue of Horus, the Newsletter of the JSPS Alumni association in Egypt (JSPSAAE). This time Horus had gain more attraction from JSPSAAE members so that we have many contribution. Nevertheless, the year 2014/2015 had witnessed more activities by the alumni members. This in fact is due to the great efforts and support that JSPSAAE had got from the staff of JSPS Cairo station.

JSPAAAE board is excreting their efforts to enhance the platform and communication among the alumni members through the available platforms of annual meetings, scientific seminars and university visits. In this issue of Horus we find some reports of such activities. In addition, JSPSAAE had established a new page on facebook for JSPSAAE to facilitate communication among the alumni members, this of course in addition to the current mailing list.

Last but not least, I would like to express my sincere gratitude, on behalf of JSPSAAE, to Prof. Hasegawa who is going to finish his post as director for JSPS Cairo station by the end of March for his encouragement, sincere advises, and support to the JSPSAAE. We wish him a very successful future career and good luck. Hope that he will keep in touch with the alumni members.

JSPSAAE on Facebook: <https://www.facebook.com/JSPSAAE>

Update your contact

To all JSPS past fellow in Egypt, we appreciate if you can update your contact information to JSPSAAE as well as JSPS Cairo Resaerch Station for fiture communication.

You can send your information to any of these mails.

jspscairo-secretary@live.com

webmaster@jspscairo.com



<https://www.facebook.com/JSPSAAE>



Fig.39: View of Sakura over Japanese lattice frame



PI.5: 7: Bridge Fellowship reports (see pp.3-4)



PI.8: View of West Delta
Archaeological Project (see p.13)



PI.9: View of Nobel Prizes Dialogue (see p.14)



PI.10: View of
Western Desert
(see p.12)



JSPS

The Japan Society for the Promotion of Science
Cairo Research Station

Address: 9 al-Kamil Muhammad St., Flat 4, Zamalek, Cairo, Egypt

TEL/FAX: 20-2-2736-3752

Email: webmaster@jpscairo.com

Open from Sunday to Thursday 10:00-16:00

