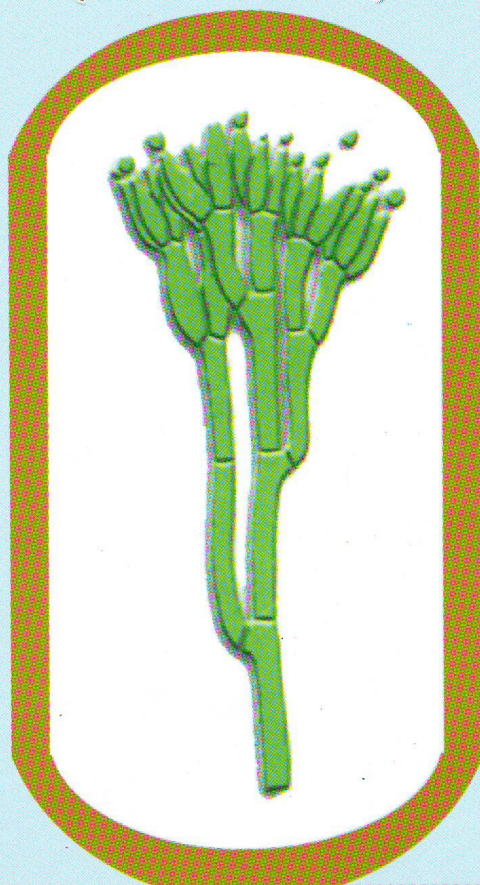




The First International Conference on
Basic and Applied Mycology
(ICBAM-1)



AUMC

Assiut University, Assiut, Egypt
9-11 March 2010

BOOK OF ABSTRACTS

Welcome Address

On behalf of the Organizing Committee, I am privileged to cordially welcome all participants of the First International Conference of Basic and Applied Mycology (ICBAM-1) hosted by Assiut University, Assiut, Egypt, on the occasion of celebration of the tenth anniversary of the Assiut University Mycological Centre (AUMC).

It is a great opportunity for mycologists from many parts of the world to convene, start new friendships and exchange data and ideas; nothing compares with face-to face discussion and exchange of ideas.

I am sure that we all share the opinion that Mycology, in this era, is confronting hard challenges:

- (1) Globalization and its influence for the rapid flow of information through the internet and other means of modern communications, that put a heavy burden on mycologists to keep aware of the enhanced advancement of knowledge.
- (2) Global warming due to increase in environmental disruption, primarily because of human activities, and its adverse consequences on living organisms including fungi.
- (3) Rapid development in molecular biology techniques which stimulates fast flow of initiation of new species, genera and even higher taxa of fungi.
- (4) Growing implementation of fungi in biotechnology for the production of indispensable substances, and the mycologists are urged to search for more valuable products in known and new fungi.
- (5) Fungi are attracting more attention among the medical community, as the number of fungi involved in human diseases has increased enormously in the last few decades, especially in immunity- deficient patients.
- (6) Only about 6 % of the total number of species of fungi, suggested to be 1.5 million species, are known, and the remaining huge number are waiting for discovery.
- (7) Mycology, like other taxonomy sciences of life, is not inspiring for the junior generation of biologists, who are reluctant to establish their future career in it. They are fascinated by other, especially applied, specializations that may also secure higher- salary jobs.

Mycology is critically challenged at present and in the future, and a huge task lies before generations of mycologists to confront and overcome the risks of these challenges.

I deeply hope for you a successful conference and enjoyable stay in Assiut, Egypt, the land of history.

Prof. A.H. Moubasher



President of the Congress

ICBAM-1 2010 ORGANIZING COMMITTEE
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President: Prof. A. H. Moubasher

Organizing Committee.

Prof. A. A. Abdel-Razik	Chairman	Faculty of Agriculture
Prof. M. B. Mazen	Vice Chairman	Faculty of Science
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Conference Treasurer

A.H.Moharram

Department of Botany, Faculty of Science, and Vice Director of the Assiut University Mycological Centre (AUMC), Assiut University

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CONFERENCE AND GENERAL INFORMATION

Conference Language

Oral papers, posters and abstracts will be in English

Conference Badges

Delegates are kindly requested to wear their badges at all times.

Venue

The conference will be held at the Administration Building of Assiut University , Assiut, Egypt.

P.O. Box: Assiut, Egypt 71516

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Aumc20102010@hotmail.com

Web site: aun.edu.eg/aumc/aumc.htm

Accommodation and local transportation:

- Assiut University Guest Houses will be available for participants.
- Assiut University Hotel will be available at special rate.
- Organizing Committee will do the appropriate reservation for all participants.
- Assiut University will provide local transportation in Assiut for participants at arrival and departure.

**PROGRAMME OF THE FIRST INTERNATIONAL CONFERENCE ON
BASIC AND APPLIED MYCOLOGY**

(ICBAM-1), 9-11 March 2010

Tuesday 9 March 2010	
8.30 – 10.00	Registration , Loading Presentations, Poster up (Octagonal Hall, Administration Building of Assiut University)
10.00 – 10.30	Opening Ceremony القاعة الثمانية
10.30 – 11.00 O1-	<p>Opening Lecture: A H Moubasher <i>Department of Botany, Faculty of Science, & Director of the Assiut University Mycological Centre, Assiut, Egypt.</i> <i>Email:moubasher29@yahoo.com</i></p> <p>More than forty years of study of fungi in soil and other sources in Egypt and other Arab countries</p>
11.00-11.30	Coffee/Tea Break
SESSION 1: Chairpersons: D Minter , M A El- Naghy & Zidan Zeid	
11.30-12.00 O2-	<p><u>P M Kirk</u> <i>CABI UK Centre (Egham) Bakeham Lane ,Egham, United Kingdom</i> <i>E-mail:p.kirk@cabi.org</i></p> <p>Globalization and fungal biodiversity</p>
12.00- 12.20 O3-	<p><u>R El-Sufty</u>¹, <u>S Al Bgham</u>², <u>S Al-Awash</u>², <u>A Shahdad</u>² and <u>A Al Bathra</u> <i>Biological Control Project of Red Palm Weevil "3rd Phase"</i> <i>Arab Organization for Agricultural Development (AOAD)</i> <i>Prof. of Economic Entomology Plant Prot. Dept. Fac. Agric. Tanta Univ. Egypt</i>¹ <i>Ministry of Environment and Water, United Arab Emirates</i>². <i>E-mail:elsufty@yahoo.com</i></p> <p>A study on a trap for autodissemination of the Entomopathogenic fungus <i>Beauveria bassiana</i> by red palm weevil adults in date palm plantations</p>

12.20-12.40	O4-	F I Okungbowa , Ejale Angela U. and Edogun Joy O. <i>Department of Plant Biology and Biotechnology, University of Benin, PMB 1154 Benin City, Nigeria.</i> <i>E-Mail : fiokun2002@yahoo.com</i> Effect of concentration and exposure time of various laboratory disinfectants on germination and radial growth of <i>Aspergillus flavus</i> and <i>A. niger</i> spores
12.40-13.00	O5-	AU Ejale and A O Eikhuemelo <i>Department of Plant Biology and Biotechnology, Faculty of Life Sciences, University of Benin ,Benin City, Nigeria</i> <i>E-mail: ejale50@yahoo.com</i> Preservation of fresh tomato (<i>Lycopersicon esculentum</i> M.) fruits with leaf extract of <i>Momordica charantia</i> L.
13.00-13.20	O6-	AH Moubasher A M Moharram , and A H Zaki <i>Department of Botany, Faculty of Science, Assiut University, Assiut, Egypt</i> <i>E-mail: ahmadmhrm@yahoo.com</i> Effect of temperature and pH on extracellular enzymes produced by thermophilic and thermotolerant fungi
13.20-15.00		Lunch Break
15.00-16.00		Poster viewing
SESSION 2: Chairpersons: P Kirk & A F Moustafa		
16.00 – 16.30	O7-	Dr. David Minter <i>CABI Europe, Bakeham Lane, Egham, Surrey, TW20 9TY, UK</i> <i>E-mail: d.minter@cabi.org</i> Conservation of fungi: the orphans of the Rio de Janeiro Convention
16.30-16.50	O8-	M A Abdel-Wahab ^{1,2} and Takahiko Nagahama ² ¹ <i>Department of Botany, Faculty of Science, Sohag University, Sohag</i>

	<p>82524, Egypt.²Extremobiosphere Research Center, Japan Agency for Marine-Earth Science and Technology (JAMSTEC), 2-15 Natsushima cho, Yokosuka 237-0061, Japan</p> <p>E-mail:mohamed700906@gmail.com</p> <p>Lignicolous marine fungi from Japan</p>
16.50-17.10 O9-	<p><u>F A Abdel-Aziz</u> Department of Botany, Faculty of Science, Sohag University, Sohag 82524, Egypt E-mail:bhfaten@yahoo.com</p> <p>Marine fungi from two sandy beaches of the Mediterranean Sea in Egypt</p>
17.10-17.30 O10-	<p>M A El-Sharouny, M A Abdel-Wahab, <u>S S Mohammed</u> and A A El-khateeb Department of Botany, Faculty of Science, Sohag University E-mail:sabahm3000@yahoo.com</p> <p>Vertical distribution of fungi on <i>Phragmites australis</i> in Upper Egypt</p>
17.30-17.50 O11-	<p><u>G A Abd-Elaah</u> and S S Ahmed Department of Botany, Faculty of Science, Sohag University, Sohag, Egypt E-mail:gamalata@yahoo.com</p> <p>Effect of four detergents on growth and protein pattern of aquatic fungi isolated from different water sources</p>
17.50-18.20	<p>Coffee / Tea Break & Poster viewing</p>
<p>SESSION 3: Chairpersons: J Mouchacca, I El-Kady & M B Mazen</p>	
18.20-18.40 O12-	<p><u>A F Moustafa</u> Department of Botany, Faculty of Science, Sues Canal University, Ismalia, Egypt. E-mail: mostafa_ahwid@hotmail.com</p> <p>Useful informations about fungal nomenclature</p>

18.40-19.00 O13-	<p><u>S Z Iqbal</u>, I ABhatti, M R Asi, M Ahmed <i>Department of Chemistry & Biochemistry, University of Agriculture. Faisalabad 38040, Pakistan.</i> <i>E-mail:shahzad10542005@yahoo.com</i> General Screening of Aflatoxins contamination in chillies by reverse phase high performance liquid chromatography</p>
19.00-19.20 O14-	<p><u>S M Alghalibi</u> <i>Department of Biology, Faculty of Science, Sana'a University, Yemen.</i> <i>E-mail:alghalibi@yahoo.com</i> Fungal contamination and total aflatoxins contents of dry raisins fruits in Republic of Yemen</p>
19.20-19.40 O15-	<p><u>A A Sassi</u> , AR. Sowan**, MA. Barka* and FS Zgheel*** <i>Faculty of Agriculture, Al-Fateah University* Tripoli , Graduate Studies Academy** Tripoli , Biotechnology Research Centre***, Tripoli –Libya.</i> <i>E-mail: almahdi_sassi@yahoo.com</i> Presence of ochratoxin A in human urine from Al-Jafara region, Libya :Preliminary study</p>
19.40 - 20.00 O16-	<p><u>E M Mostafa</u> <i>Botany Department Faculty of Science Assiut University Assiut, EGYPT</i> <i>E-mail: eman.abdelaal@science.au.edu.eg</i> Toxigenic aspergilli isolated from meats</p>
<i>Free Evening</i>	
Wednesday 10 March 2010	
8.30 – 9.00	Loading Presentations, Posters up
SESSION 4: Chairpersons: M Helmy, M I Ali & Abdel-Sattar	
9.00-9.30 O17-	<p><u>J Mouchacca</u> <i>Département de Systématique & Evolution (Laboratoire de Cryptogamie), Muséum National d'Histoire Naturelle (USM 602), Case</i></p>

	<p><i>Postale 39, 57 rue Cuvier, 75231 Paris Cedex 05, France;</i> <i>E-mail: mouch@mnhn.fr</i> Mycobiota of the arid Middle East. Biodiversity of novel fungal taxa introduced from 1940-2000.</p>
9.30-9.50 O18-	<p>A H Moubasher, <u>M AA Abdel-Rahman</u>, AY. Abdel-Mallek, and G. H. A. Hammam¹ <i>Plant Protection Research Institute, Agricultural Research Center</i> <i>E-mail:alaaa4@hotmail.com</i> Biodiversity of entomopathogenic fungi infecting cereal and cabbage aphids in Assiut</p>
9.50-10.10 O19-	<p>M M Ali <u>M I Yasser</u> , & A S Mousa <i>Botany Department, Faculty of Science Beni Suef University, Egypt.</i> <i>E-mail:manal_yaser2006@yahoo.com</i> Optimization of the factors affecting the survival and proliferation of <i>Tichoderma harzianum</i> Rifai in Egyptian soil</p>
10.10-10.30 O20-	<p><u>A M Abdel-Azeem</u> <i>Department of Botany, Faculty of Science, University of Suez Canal, Ismailia 41522, Egypt.</i> <i>E-mail:zemo3000@yahoo.com</i> Biodiversity of Egyptian mycobiota-Gaps in knowledge</p>
10.30-11.00	Coffee / Tea Break
<p>SESSION 5: Chairpersons: Kamal abdel-Hafez, Moustafa Hussein , A A Moubasher & Afaf Shaban</p>	
11.00-11.20 O21-	<p><u>Mohamed a Abdel Aal</u> <i>Department of Dermatology, Venereology and Andrology, Faculty of Medicine, Azhar University</i> <i>Email:</i> For better understanding of cutaneous fungal diseases</p>
11.20-11.40 O22-	<p><u>Ensaf Abdel Mageed</u> <i>Department of Dermatology, Venereology and Andrology, Faculty of Medicine, Assiut University, Assiut Egypt</i> <i>E-mail:</i> Opportunistic mycoses</p>

11.40-12.00 O23-	<p><u>S Seif Eldin</u></p> <p><i>Department of Medical Microbiology and Immunology, Faculty of Medicine, Assiut University, Assiut Egypt</i> <i>E-mail: salwaegy@yahoo.com</i></p> <p>Molecular strain typing of <i>Candida albicans</i></p>
12.00-12.20 O24-	<p><u>J Mouchacca</u></p> <p><i>Département de Systématique & Evolution (Laboratoire de Cryptogamie), Muséum National d'Histoire Naturelle (USM 602), Case Postale 39, 57 rue Cuvier, 75231 Paris Cedex 05, France;</i> <i>E-mail: mouch@mnhn.fr</i></p> <p>Biological degradation of Ramesses II mummy</p>
12.20-12.40 O25-	<p><u>A M Moharram</u>, A H Moubasher, A A H Moubasher, & A M H allam</p> <p><i>Department of Botany, Faculty of Science, Assiut University, Assiut, Egypt</i> <i>E-mail: ahmadmhrrm@yahoo.com</i></p> <p>Two new cases of subcutaneous mycosis in Egypt caused by <i>Veronaea</i> and <i>Exophiala</i> species</p>
12.40-13.00 O26-	<p>M. A. Ismail, A.H. Moubasher, <u>M. Al-Ryani</u>, and M. A. Farhan</p> <p><i>Department of Botany, Faculty of Science & Assiut University Mycological Centre (AUMC), Assiut University, Assiut, Egypt</i> <i>E-mail: mohamedryani@yahoo.com</i></p> <p>Seasonal fluctuations of opportunistic indoor aeromycobiota in the external dermatology clinics of Assiut University Hospitals</p>
13.00-17.00	Lunch Break & Nile cruise
SESSION 6: Chairpersons: A A Abdel-Razik ,O M El-Maghraby &A H Hafez	
17.00-17.20 O27-	<p><u>M R Hadi</u>, G R Balali ²</p> <p><i>Department of Biology, Sciences and Research Branch of Fars, Islamic Azad University, Iran</i> <i>E-mail: hadi_mohammadreza@yahoo.com</i></p>

	The effect of salicylic acid on the reduction of <i>Rizoctonia solani</i> damage in the tubers of Marfona potato cultivar
17.20-17.40 O28-	<u>F A Abushaala</u> , H M Safar <i>7th October University, Faculty of Science, Microbiology Department, Misurata, Libya</i> <i>Email:al-satil@hotmail.com</i> Decomposition of organic matter and behavior of some fungi by using semi – natural units of rabbit faeces
17.40-18.00 O29-	<u>A M Shater</u> & S M Al-Bader <i>Biology Department, College of Applied Sciences – University of Thamar, Thamar, Yemen</i> <i>E-mail: alhababi2008@yahoo.com</i> Isolation and identification of some fungal species from soil and dung in Thamar Province/Yemen
18.00-18.20 O30-	<u>Sahar Khalid</u> <i>Government College University Lahore,Pakistan.</i> <i>Sahar_khalid@hotmail.com</i> Effects of Chick waste, Leaf Litter and DAP on VA mycorrhiza in <i>Praecitrullus fistulosus</i>.Linn
18.20-18.40 O31-	<u>E M Mostafa</u> <i>Botany Department Faculty of Science Assiut University Assiut, EGYPT</i> <i>E-mail: eman.abdelaal@science.au.edu.eg</i> Taxonomy and biotechnological application of <i>Monoascus</i> A review article
18.40-19.20	Coffee & Tea Break
SESSION 7: Chairpersons: O M El-Maghraby , A M Sallam& M M K Bagy	
19.20-20.00	Closing Remarks, Best Poster Award, Poster Down

ORAL PRESENTATIONS

O1 MORE THAN FORTY YEARS OF STUDY OF FUNGI IN SOIL AND OTHER SOURCES IN EGYPT AND OTHER ARAB COUNTRIES

A H Moubasher

Department of Botany, Faculty of Science, and Director of the Assiut University Mycological Centre, Assiut, Egypt.

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For more than four decades, fungi were intensively surveyed in soil in different habitats in Egypt and some Arab Countries: desert, desert valleys, agricultural and newly- reclaimed land, and salt marshes, as well as in other sources:

Unlike the higher plants there is no specific soil mycobiota for the different habitats, but *Fusarium* was more frequently recovered from agricultural soil than from other habitats, and dematiaceous hyphomycetes were more prevalent in desert soil.

The soil mycobiota of Egypt and other Arab Countries are basically similar. A substantial part of the Arab world is desert and semi-desert.

Soil fungi display seasonal periodicities. The moderate-temperature months are regularly the richest in counts and spectra. *Aspergillus* tends to prevail in months with average temperatures exceeding those of *Penicillium*.

Thermotolerant and thermophilic soil fungi were determined.

Soil fungi are generally osmotolerant (recovered on up to 50% sucrose agar) or halotolerant (recovered on 5% or more sodium chloride agar). Some of them are osmophilic or halophilic [growing better on media which contain high concentrations of sucrose (up to 50%) or sodium chloride (up to 25%)].

Fungi deteriorating grains of wheat, corn, sorghum and barley grains and seeds of peanut during storage under different conditions of moisture content and temperature were determined. The type of seed, temperature, moisture content and storage period selectively affect the pattern of dominance of deteriorating fungi.

Air-borne fungi were studied in Assiut, Qena and some desert valleys, in addition to indoor hospital air. They exhibit seasonal periodicities, showing their peaks in spring and autumn. *Cladosporium* and *Alternaria* are the most dominant genera as is the case in many parts of the world. Comparison between composition of air-borne, phyllosphere-borne, and

soil fungi reveals a basic similarity between air-borne and phyllosphere-borne fungi which suggests that air-borne fungi are mainly contributed by fungi developing on plant surfaces.

The application of pesticides (fungicides, insecticides and herbicides) commonly employed in Egypt exerts selective effects, either detrimental or initiative on soil fungi as well as on rhizosphere and rhizoplane fungi, and the effect may be extended to phyllosphere and phylloplane fungi. The persistence period of the effect of a pesticide whether toxic or initiative is influenced by its chemical composition and dose applied.

Desert truffles were studied in Qatar. They are delicious food there and in many Arab Countries. They are ectomycorrhizal fungi (belonging to order Terfeziales, Ascomycetes) living in association with several desert plants, mainly *Helianthemum* spp. Three species were identified, namely *Tirmania nivea*, *T. pinoyi* and *Terfezia claveryi* .

Production of mycotoxins by fungi isolated from human food- and animal feed-stuffs was investigated in collaboration with my colleague Prof. I. El-Kady and his research students. The list of fungi screened includes species of *Aspergillus*, *Penicillium*, *Stachybotrys* , *Fusarium*, *Trichoderma*, *Acremonium*, *Trichothecium*, *Myrothecium* and *Memnoniella*. The list of mycotoxins identified is lengthy and includes aflatoxins, satratoxins, roridins, trichodermin, verrucarins and many others.

Keratinolytic ability is restricted to a relatively narrow spectrum of soil fungi.

The succession of fungi during composting of wheat and broad bean straws was also studied. This is a thermogenic process. The temperature rises sharply up to about 70° C between 4-11 days, and then falls down gradually. These fluctuations of temperature initiate patterns of colonizing fungi of the composted straw in succession, from one period to another. Thermotolerant and thermophilic fungi gain a better access to this substrate than the mesophilic ones.

The incidence of *Aspergillus fumigatus* displayed a noticeable periodicity in soil of Egypt during 1932-2007.

O2 GLOBALIZATION AND FUNGAL BIODIVERSITY

P Kirk

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The globalization of human society in terms of territory, trade and travel often has a significant influence on fungal biodiversity at several levels. However, of equal importance is mobilizing and managing all the relevant data, in a format which allows analysis, such that these influences can be assessed and evaluated. The various projects actively working on the mobilization and managing of primary biodiversity data will be highlighted and methods of contribution at the personal, project and institutional level will be described.

O3 A STUDY ON A TRAP FOR AUTODISSEMINATION OF THE ENTOMOPATHOGENIC FUNGUS *BEAVERIA BASSIANA* BY RED PALM WEEVIL ADULTS IN DATE PALM PLANTATIONS

R El-Sufty¹, S Al Bgham², S Al-Awash², A Shahdad² and A Al Bathra²

Biological Control Project of Red Palm Weevil "3rd Phase" Arab Organization for agricultural Development (AOAD. 1Prof. of Economic Entomology, Plant Prot. Dept., Fac. Agric. ,Tanta Univ. Egypt 2Ministry of Environment and Water, United Arab Emirates.

E-mail:elsufty@yahoo.com

A trap was designed to allow red palm weevil adults to pass through it so that they come out contaminated with high density of the fungus conidia for spreading them amongst the red palm weevil population in date palm plantations. A fungus inoculum containing 10% conidia was prepared and used in the trap. An adult was contaminated with 9.53×10^7 conidia per a tape visit with a lethal time of 8.25 days. Field trails were carried out using 20 traps in 3 date palm plantations in the period from April 2006 to May 2007 in the Northern Region of United Arab Emirates. Efficiency of the trap was evaluated by assessing the monthly mortality caused by the fungus in the insect population. In the last two months, mortality of adults caused by the fungus in the field population ranged 41.2-51.3% compared by 4.8-4.9% in the control. Results showed that the trap is effective for spread of the fungus *Beauveria bassiana* in *Rhynchophoms ferrugineus* population.

O4 EFFECT OF CONCENTRATION AND EXPOSURE TIME OF VARIOUS LABORATORY DISINFECTANTS ON GERMINATION AND RADIAL GROWTH OF *ASPERGILLUS FLAVUS* AND *A. NIGER* SPORES

F I Okungbowa, E U Angela and E O Joy

Department of Plant Biology and Biotechnology, University of Benin, PMB 1154 Benin City, Nigeria.

Email: fiokun2002@yahoo.com;

Although different disinfectants/sterilizing agents are used to clean work benches and to surface-sterilize materials for inoculation, *Aspergillus* spores still constitute a nuisance as their presence in cultures lead to waste of materials, time and resources as well as error in research procedures. This investigation was done to determine the most effective disinfectant/sterilizing agent and duration of exposure of spores. Spores of *Aspergillus flavus* and *A. niger* isolated from market samples of groundnut (*Arachis hypogea*) seeds were treated with various concentrations of ethanol, methanol and sodium hypochlorite for 3 minutes and 5 minutes. Thereafter, spore suspension of each fungus was plated on triplicate Potato Dextrose Agar media and incubated at room temperature (27±20C) for seven days. Radial growth of mycelium was measured daily with a metre rule. For each plate, radial growth was measured three times and the mean calculated. *Aspergillus flavus* had radial growth of 3.9,3.0,2.9,2.0,3.6 (for 70% ethanol,70% methanol 90% ethanol, 90% methanol and sodium hypochlorite, respectively) for 3 minutes . Growth was 3.3, 2.9, 2.8, 1.4 and 3.4cm, respectively, for 70% ethanol, 70% methanol, 90% ethanol, 90% methanol and sodium hypochlorite (5 minutes). The control plates yielded radial growth of 3.0cm. There was no growth on day 2 and day 3 for spores treated with 90% methanol. For *A. niger* spores treated with 70% and 90% ethanol for 3 minutes, there was no growth at all whereas radial growth of 3.7, 4.3 and 3.2cm was recorded for 70% methanol, 90% methanol and sodium hypochlorite, respectively. For 5 minutes exposure, radial growth was 3.7, 4.4 and 4.4cm for 70% methanol, 90% methanol and sodium hypochlorite, respectively; the other treatments yielded no growth while growth in the control was 4.2cm. The results indicate that 90% methanol and 5 minutes exposure were best for *A. flavus* whereas 70% ethanol treatment was adequate for *A. niger*. Therefore, different species of *Aspergillus* require different treatments for proper control.

O5 PRESERVATION OF FRESH TOMATO (*LYCOPERSICON ESCULENTUM* M) FRUITS WITH LEAF EXTRACT OF *MOMORDICA CHARANTIA* L.

A U Ejale and A O Eikhuemelo

Department of Plant Biology and Biotechnology, Faculty of Life Sciences, University of Benin, Benin City, Nigeria

E-mail: ejale50@yahoo.com

Tomato (*Lycopersicon esculentum* Mill.) - a type of vegetable, has become one of the most popular and widely grown vegetables in the world including Nigeria. It was introduced into West Africa through early Portuguese traders and freed slaves from West Indies. It constitutes an important component of the daily diet of many people generally including Nigerians. Tomato fruits are of a highly perishable nature, with a shelf life of between 12 hours to 72 hours. A great percentage of the potential harvest is lost to rot. The softening of the fruits is caused by macerating enzymes produced by pathogens like *Alternaria* spp. and *Rhizopus stolonifer*. Contaminations of healthy fruits are some of the evident consequences of decay. This results in heavy losses nutritionally to the consumers, and financially to the tomato farmers as well as the rural and urban dwellers far from areas of production who will have to pay more for a few healthy fruits that finally get to them. This study is a follow up to an earlier work in which 'neem' leaves were used to preserve the fresh fruits of tomatoes for 14days. In this study the leaf extract of *Mormodi charantia* was used to preserve healthy ripe tomato (*Lycopersicon esculentum*) fruits for more than 45days.

O6 EFFECT OF TEMPERATURE AND PH ON EXTRACELLULAR ENZYMES PRODUCED BY THERMOPHILIC AND THERMOTOLERANT FUNGI

A H Moubasher, A M Moharram and Abeer H Zaki

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Thirteen thermophilic and thermotolerant fungal species isolated from cultivated soil and desert plants in Egypt were tested for their cellulolytic, amylolytic and lipolytic activities in solid and broth cultures. Carboxymethyl cellulases (CMC-ases) produced by *Absidia corymbifera*, *Scytalidium thermophilum*, *Melanocarpus albomyces*, *Myceliophthora thermophila*, *Talaromyces thermophilus* and *Thermomyces lanuginosus* were active at temperatures ranging from 45°C to 75°C with maxima activity at 75°C. CMC-ases produced by *Aspergillus fumigatus*, *A. terreus*, *Malbranchea cinnamomea*, *Rhizomucor pusillus* and *Thermoascus aurantiacus* showed better activity at 45°C. CMC-ases from *S. thermophilum* and *T. lanuginosus* exhibited good activity at different pH values (ranging from 2.0 - 8.3) with the highest being detected at pH 8.3. CMC-ases from *A. corymbifera* and *A. terreus* were optimally active at pH 7. CMC-ases from *M. cinnamomea*, *M. albomyces*, *R. pusillus*, *M. thermophila*, *T. thermophilus* and *T. aurantiacus* showed their highest activities at pH 5. α -amylases produced by *A. fumigatus*, *T. aurantiacus*, *M. cinnamomea*, *M. thermophila*, *T. thermophilus* and *T. lanuginosus* efficiently hydrolyzed soluble starch over a temperature range of 30°C - 70°C with the highest activity at 50°C. α -amylase produced by *M. cinnamomea*, *M. thermophila* and *T. thermophilus* was markedly active over a pH ranging from 5 - 9 showing the highest activity at pH 6.9. The highest lipolytic activity was mostly detected at 65°C and pH 7 especially in the culture filtrates of *M. albomyces* followed by *A. terreus*, *T. aurantiacus*, *T. lanuginosus*, *A. fumigatus*, *T. thermophilus* and *A. corymbifera*.

07 CONSERVATION OF FUNGI: THE ORPHANS OF THE RIO DE JANEIRO CONVENTION

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Only about 5% of all fungi have so far been discovered, and about 95% still wait to be found: fungi are neglected organisms. That means they are not well protected. Like animals and plants, they are endangered by human activity. Until recently, however, nature conservation has almost totally overlooked them. Although the 1992 Rio Convention on Biological Diversity extends protection to all groups of organisms, it is worded in terms of “animals, plants and micro-organisms” and fungi do not fit well into these categories. As a result, countries which signed the Rio convention have almost universally overlooked fungi in preparing their biodiversity conservation plans: fungi are truly the orphans of Rio. Over recent years, therefore, work has started in several countries on preparing fungal red lists. This has been facilitated by various resources now available on the internet, including the Cybertruffle website (www.cybertruffle.org.uk) which includes Cyberliber, the digital library for mycology (www.cybertruffle.org.uk/cyberliber), IndexFungorum, the global nomenclator for fungi (www.indexfungorum.org/Names/Names.asp), and the fungal databases of Landcare (<http://nzfungi.landcareresearch.co.nz/html/mycology.asp?ID=>) and the USDA (<http://nt.ars-grin.gov/fungalatabases>). Since 2005 there have been red listing training workshops in Africa, Europe, North America and South America on evaluating fungi using standard IUCN red listing criteria. Another such workshops is associated with the present conference. Mycologists trained through these workshops are now evaluating the conservation status of fungi in their own countries, and also contributing to global level evaluations. The main work to evaluate the conservation status of fungi at a global level is currently the IUCN Sampled Red List Index of the Ascomycetes. A total of 1500 randomly selected species of Ascomycetes (including anamorphs) are being evaluated globally for their conservation status. This will contribute to the IUCN’s wider aim to carry out sampled red list evaluations for all groups of organisms. Results from this project are both shocking and predictable: more than 95% of this randomly selected sample (from a sample pool which itself contains only 5% of the total estimated number of fungi) have been evaluated as “data deficient”. At the same time, the mycological community has developed an infrastructure for fungal conservation. In 1985, the European Council for Conservation of Fungi was established. This was the first body of its type. The Australasian Mycological Society, formed in 1995, was the second continental-level body explicitly working for fungal conservation. In 2008 the Mycological Society of America established a fungal conservation committee for North America, and the Latin-American Mycological Association appointed a working party to establish a conservation committee for South America. This was followed, in 2009, by establishment of a fungal conservation group for Africa within the African Mycological

Association, and a fungal conservation group for Asia within the Mycological Committee for Asia. In 2009, another major step was achieved, when the International Union for Conservation of Nature (IUCN) recognized fungi as different from animals and plants, and agreed to increase the number of committees for fungi on its Species Survival Commission from 2 to 5. The first IUCN conference explicitly devoted to fungal conservation took place in October 2009, and resulted in a landmark agreement to establish a Global Federation of Fungal Conservation Groups. There are several areas where this infrastructure is still, however, incomplete. One very important area is the Arabic speaking world, where mycological societies are lacking in many places, and there is still no fungal conservation group. Delegates are urged to use the opportunity of this Conference to address that problem.

O8 LIGNICOLOUS MARINE FUNGI FROM JAPAN

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The occurrence of marine fungi on drift wood and mangrove intertidal wood collected from Japan were surveyed. Thirty-nine fungi (28 Ascomycetes and 11 mitosporic) were recorded from 90 driftwood samples that collected from two beaches. Of these, 16 fungi are new records for Japan. Twenty-nine and sixteen fungi were recorded from the sandy and the rocky beach respectively. Fungi recorded from the two beaches were significantly different with only six species common to both sites. All, but one, of the recorded Ascomycetes were Pyrenomycetes. *Ceriosporopsis halima* was very frequent fungus from both sites, while *Corollospora* species dominating the fungal community on the sandy beach. Other common fungi include: *Arenariomyces trifurcates*, *Lignicola laevis* and *Clavatospora bulbosa*. Twenty fungi were recorded from 60 intertidal wood samples from Gesashi mangrove in Okinawa including several interesting taxa. Several new fungi were recorded during the current study include: a new genus, *Gesasha* intertidal with three new species and a new species of *Halosarpheia* with unknown teleomorph. Large subunit and small subunit rDNA for the new fungi were sequenced and their phylogenetic analyses proved that they are members of the order Halosphaeriales and they are new to science.

**O9 MARINE FUNGI FROM TWO SANDY BEACHES OF THE
MEDITERRANEAN SEA IN EGYPT**

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Marine fungi from the coast of the Mediterranean Sea in Egypt were surveyed. Thirty-one taxa including 19 Ascomycetes and 12 anamorphic fungi were recorded from one hundred submerged drift wood samples collected randomly along two sandy beaches. The most frequent fungus was *Corollospora maritima*. Other common fungi include *Corollospora portsaidica*, *Leptosphaeria oraemaris*, *Cumulospora marina* and *Periconia prolifica*. Among the 31 taxa identified during this study, 21 fungi are new records for the Mediterranean Sea bringing the total number of marine fungi recorded from the sea to seventy-nine. Seven new fungi were recorded during the course of this study of which two new species of *Corollospora* and one anamorph were described and work in progress to describe the remaining four fungi. Unknown species of *Didymosphaeria* is illustrated in this paper but not formally described because there was not enough material available for further study of the species.

O10 VERTICAL DISTRIBUTION OF FUNGI ON *PHRAGMITES AUSTRALIS* IN UPPER EGYPT

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Vertical distribution of fungi on aerial and submerged parts of *Phragmites australis* was studied. Eighty-nine fungi (48 Ascomycete and 41 mitosporic fungi) were recorded from 2481 samples that were randomly collected from both River Nile and irrigation canals from Aswan and Qena governorates in the period between December 2008 and December 2009. The fungal diversity on submerged stems and leaves was significantly higher than that on aerial ones. Sixty-eight were recorded from decayed submerged stems and leaves compared to only 39 fungi were recorded on aerial parts. There are a significant difference were found in the fungal communities between the two different habitats. *Cladosporium cladosporioides*, *Alternaria alternata*, *Fusarium solani* and *Chaetomium globosum* are dominated species to the aerial parts, while *Trichoderma viride*, *Zygosporium oscheoides*, *Dictyosporium digitatum*, *Linocarpon angustatum*, *Aniptodera sp.*, *Massarrina sp.* and *Jahnula granulosa* are dominated species to the submerged parts. Twenty-three fungal species are overlapped between the two habitats such as *Leptosphaeria agnita*, *Kirschsteiniothelia elaterascus*, *Nigrospora* state of *Khuskia oryza*, *Cladosporium Cladosporioides* and *Aspergillus niger*. The five most common fungi in the present study are *Leptosphaeria agnita*, *Kirschsteiniothelia elaterascus*, *Chaetomium globosum*, *Ophioceras sp.* and *Cladosporium Cladosporioides*. *Porosphaeriopsis sp.*, *Podospora sp.* and *Trichocladium nypae* are a dominated species to Qena governorate, while *Jahnula granulosa*, *Savoryella lignicola*, *Xylaria sp.* and *Dictyosporium digitatum* are dominated species to Aswan governorate.

O11 EFFECT OF FOUR DETERGENTS ON GROWTH AND PROTEIN PATTERN OF AQUATIC FUNGI ISOLATED FROM DIFFERENT WATER SOURCES

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Thirty-eight species belonging to thirteen aquatic fungal genera were isolated from different water sources. The samples were collected during the period from January to December 2007 from Sohag canals (2), sewage and the River Nile. The dominant species were *Achlya klebsiana*, *Saprolegnia monica* var. *glomerata* and *Pythium intermedium*. Four liquid detergents namely; Feba, Pril, Savonil and Xtra were applied at different concentrations (0.1, 1, 5 and 10 ml/L) on the four tested aquatic fungi. The maximum inhibition in the growth of the fungal species was recorded at higher concentrations (10 ml / L) in all the applied detergents. Protein patterns of the tested fungal species under the influence of the four liquid detergents at (0.1 ml/L) concentration were measured by (SDS- Page). Some bands were detected in the control and under the effect of the different detergent. Some bands were detected in the control and disappeared under the effect of detergents. These results were different by differ the fungal species tested.

O12 USEFUL INFORMATIONS ABOUT FUNGAL NOMENCLATURE

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In this lecture hints will be given about some important aspects of nomenclature like name etymology and valid publication. What happens if a name of a new taxon is not correctly formulated? or not validly published? or properly assigned?. What are the rule protecting wrights?. Circumstance of name change and meaning of symbols & abbreviations used in name citations.

O13 GENERAL SCREENING OF AFLATOXINS CONTAMINATION IN CHILIES BY REVERSE PHASE HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

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The occurrence of aflatoxins in chili samples from central areas of Punjab, Pakistan, was determined by using high-performance liquid chromatography (HPLC). The present study has been designed to find out the variation levels of aflatoxins in chilies of different localities. Total 98 samples (36 of ground chili and 60 of whole pod chilies) were analyzed. Aflatoxins were confirmed in 16 samples (45%) of ground powder chilies and 32 samples (53 %) of whole pod chilies collected from different areas of Punjab. The presences of aflatoxins mean concentration in ground chilies were found 12.4 µg/Kg ranging from 1.2 µg/Kg to 89.9 µg/Kg compared with the mean concentration of 11.9 µg/Kg ranging from 0.09 µg/Kg to 93.6 µg/Kg in whole chilies. It was found that the concentration of aflatoxins were higher in ground chili samples.

**O14 FUNGAL CONTAMINATION AND TOTAL AFLATOXINS
CONTENTS OF DRY RAISINS FRUITS IN REPUBLIC OF YEMEN**

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This study was designed to study the mycoflora and aflatoxin contents of dry raisins in Yemen Republic. Thirty six raisin samples collected from different shops and markets in Sana'a city were analyzed mycologically for the presence of fungi. A total of forty eight species belonging to 20 genera were recovered from the analyzed raisins samples on three cultural media. *Aspergillus* was the most dominant genera on the three types of media of which, *A. niger* was the most common species. *A. flavus* was isolated in moderate, low and rare frequency on 1% and 20% sucrose Czapek's and Sabouraud dextrose agar media. *Penicillium* was isolated in moderate frequency on 1 and 20% sucrose Czapek's agar media, but in low frequency on Sabouraud dextrose agar medium. The raisin samples were analyzed for the presence of total aflatoxin using ELISA technique. The data revealed that 3 out of 7 samples of raisins analyzed were contaminated with total aflatoxin at levels ranged from 2678.66 to 11556.88 ppt (ng Kg⁻¹).

O15 PRESENCE OF OCHRATOXIN A IN HUMAN URINE FROM AL-JAFARA REGION-LIBY PRELIMINARY STUDY

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A total of 85 sample of human urine were analyzed in this preliminary study for the presence of ochratoxin A using immunoaffinity column clean up (Ochra test column) and HPLC, where 65 samples collected from poly-clinical hospital in Alzahra city- Al-Jafara for people attending nephropathy clinical for unknown cause, 5 samples from dialysis patient and 15 samples from healthy people in June 2008. From 85 participants involve in this study 41 were females (48.23%) and 44 were males (51.76%). The females aged between 24 and 69 years old and male aged between 26 and 77 years old. The analysis result showed presence of ochratoxin A in urine of nephropathy patient in 4 samples from females (9.75%) with concentration range from 0.49 to 0.68 µg/l and average concentration of 0.57 µg/l in positive samples and 9 samples from males (20.45%) with concentration range from 0.20 to 2.60 µg/l and average concentration of 0.70 µg/l in positive samples with the lowest concentration recorded in this study was 0.20 µg/l and the highest concentration was 2.60 µg/l in male samples and ochratoxin A were not detected in urine samples of dialysis patient and healthy people at the detection limit 0.20 µg/l. In humans ochratoxin A is metabolized very slowly with a half life of more than 35 days and presence of this toxin in human urine of this preliminary study consider a serious health problem which result from consumption of food contain ochratoxin A

P16 TOXIGENIC ASPERGILLI ISOLATED FROM MEATS

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A total of 120 isolates of *Aspergillus flavus* (45 isolates), *A. flavus* var. *columnaris* (4), *A. parasiticus* (17), *A. fumigatus* (**14**), *A. niger* (20), *A. ochraceus* (**6**), *A. terreus* (10) and *A. versicolor* (4) were screened for potentialities to produce their characteristic mycotoxins. The results clarified that aflatoxins B and G in addition to kojic acid were formed by 61.2% from the total tested isolates of *A. flavus*, Alas aflatoxin B and kojic acid were produced by 60% of *A. paraisticus* tested isolates, while 85.7% of tested *A. terreus* isolates had the ability to produce both citrinin and citreoviridin. All tested isolates of each of *A. flavus* var. *columnaris*, *A. fumigatus*, *A. niger*, *A. ochraceus* and *A. versicolor* have the ability to produce their respective mycotoxins: aflatoxin B & Kojic acid by *A. flavus* var. *columnaris*; many kind of fumigatus toxins by *A. fumigatus*; Kojic acid & Ochratoxin A by *A. niger*; kojic acid, Ochratoxin A & Penicillic acid by *A. ochraceus* and Sterigmatocystin by *A. versicolor*. The results clarified that the Kojic acid produced by the most groups of Aspergilli. The bioassay of all the Aspergilli chloroform crude extracts were examined on the growth of two genus of bacteria and the results showing that no toxic effect on *Pseudomonas fluorescens* by all tested extracts. On the other hand, *Bacillus cereus* affected with variable degrees by the kinds; numbers and the amount of detected toxins in each crude fungal extract.

O17 MYCOBIOTA OF THE ARID MIDDLE EAST, BIODIVERSITY OF NOVEL FUNGAL TAXA INTRODUCED FROM 1940-2000.

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The Middle East region extends over 9 million Km². Its agriculture is commonly dependent on waters released from sources situated outside the area. Interest in the local mycobiota after the Second World War led to the discovery of taxa then regarded as being new to Science. From 1940-2000, simply 244 taxonomic units were defined. The novel taxa retrieved were examined according to the chronology of their introduction throughout the period investigated at a rate of 40 Units/decade. Their distribution in the several states of the region was also assessed; the majority of the collecting sites are in Palestine-Israel (P-I), Egypt and Iraq. All major taxonomic groups are represented. Anamorphic fungi and Ascomycetes clearly outnumber the Basidiomycetes; altogether they represent 89.0 % of the novelties. Numbers of new units of the Chytridiomycetes, Oomycetes and Zygomycetes simply range from 4-12. Among the 146 genera represented, the type material of twelve originate from Egypt (5), the P-I area and Lebanon (2 genus each), or from Iraq, Sudan and Kuwait. Novel taxa were also surveyed in relation to the original substrate of development. Anamorphic fungi were obtained equally from soil or on plants including standing crops. For Ascomycetes, the soil-borne units outnumber plant related forms; but in comparison with the former, this group yielded several interesting forms on other types of substrates, such as dung. For Basidiomycetes (37 units), plant-parasitic forms encompass taxa collected on the ground. On the basis of their ecology, a limited fraction of these novel taxa exhibit notable thermotolerant abilities and some even qualify as thermophiles. The present data emphasises that mycologists in Egypt have developed more interest in soil-borne anamorphic fungi and Ascomycetes than in homo- or heterobasidiomycetes. The latter received marked attention only in the P-I area. In Iraq, taxonomic studies focused particularly on Ascomycetes. The distribution of the minor taxonomic groups proved to be confined to the above three states. Since 1940, around four novel units were thus proposed per annum from a small part of the Middle East. This underlines the limited interest paid to the fungi of a region presumed to harbour a unique mycobiota. Future research should be directed to plant related forms of lower and higher fungi. Finally, in view of the overwhelming importance of mycology in the fields of biotechnology, adequate knowledge of the local mycoflora is essential.

O18 BIODIVERSITY OF ENTOMOPATHOGENIC FUNGI INFECTING CEREAL AND CABBAGE APHIDS IN ASSIUT

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Field surveys of wheat and canola aphid's cadavers during 2006 and 2007 seasons recovered six species of fungal pathogens, including five Entomophthorales and one Hyphomycete. Two species of cereal aphids were found infesting wheat plants namely, the oat bird-cherry aphid, *Rhopalosiphum padi* and the greenbug, *Schizaphius graminum*. The aphid species infesting canola plant was cabbage aphid, *Brevicoryne brassicae*. Fungi were identified as *Pandora neoaphidis* (Remaudiere & Hennebert) Humber, *Conidiobolus coronatus* (Costantin) Batko, *Entomophthora planchoniana* Cornu, *Neozygites fresenii* (Nowakowski) Remaudiere & Keller, *Zoopthora radicans* (Brefeld) Batko, and *Verticillium lecanii* (Zimmermann) Viegas. *P. neoaphidis* was the most abundant species in the populations of cereal and canola aphids. *N. fresenii* came second and commonly infected the three aphid species. The Hyphomycete, *V. lecanii* which infected cereal and cabbage aphids was encountered at almost lower degrees of abundance compared with the four Entomophthorales species.

O19 FACTORS AFFECTING THE GROWTH OF *TRICHODERMA*

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The present study is planned to evaluate the efficiency of potential antagonistic *Trichoderma* as biocontrol agent for biocontrol damping-off of tomato and root rot of kidney bean plants, by Optimization of cultural factors of *Trichoderma* in soil under laboratory conditions. Results revealed that introducing *Trichoderma* to the soil as mycelial preparations growing on rice husk, resulted in better survival and proliferation, than when grown on corn meal at concentration of 5 % with moisture content 30 % and optimum temperature 28°C. Also Studying some culture conditions of the bioagent on the antimicrobial activity, The incubation period of 12 days, pH of 5.5, the optimum incubation temperature was 25°C, and 20°C and using chitin and sodium nitrate as a carbon and nitrogen sources gave high growth and the best antagonistic potential.

O20 BIODIVERSITY OF EGYPTIAN MYCOBIOTA-GAPS IN KNOWLEDGE

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Records of Egyptian mycobiota including lichenized fungi proved to be scattered among a wide array of journals, books, dissertations, preliminary annotated checklists and compilations some of them not easily available. This study extended for eight years to document the majority of available sources and allowed data tracing for more than 197 years of Egyptian mycology for the first time. Species richness is analyzed numerically with respect to the systematic position and ecology. Values of relative species richness of different systematic and ecological groups in Egypt compared to values of the same groups worldwide, show that our knowledge in Egypt is fragmentary especially for certain groups such as Agaricales, Glomeromycota, lichens, nematode-trapping fungi, entomopathogenic, yeast, marine and aquatic higher fungi and coprophilous fungi. On the other hand certain groups have never been the target of any study before in Egypt such as Trichomycetes and black yeast. By screening of available sources of information, it was possible to figure out a range of 2140 taxa that could be representing Egyptian mycobiota up to the present time. Only 60 new taxa have been described from Egypt, of which 1 belongs to Chytridiomycota, 33 to Ascomycota and 26 to mitosporic fungi.

O21 FOR BETTER UNDERSTANDING OF CUTANEOUS FUNGAL DISEASES

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O22 OPPORTUNISTIC MYCOSES

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O23 MOLECULAR STRAIN TYPING OF *CANDIDA ALBICANS*

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Candida species are increasingly important nosocomial pathogens in immunocompromised, Intensive Care Unit and postoperative patients. *Candida albicans* ranks first among the identified species and is unique among fungal pathogens in terms of the diversity of infections it can cause. Epidemiological investigations of infection outbreaks in hospitals are highly desirable to identify the source and route of infection to eradicate it. Such investigations require accurate strain typing, because in candidaemia it is problematic to distinguish between endogenous source of infection and infection transmitted exogenously from other infected patients or even health care workers. Molecular typing methods used to assess clonality of *Candida albicans* include pulsed field gel electrophoresis, restriction fragment length polymorphism, restriction fragment length polymorphism followed by Ca3 probe hybridization and randomly amplified DNA analysis. Such DNA typing methods are used to study strain variation and epidemiology of *Candida* species. The choice of appropriate typing methods depends on the purpose of the study. Molecular typing methods should be reproducible, discriminatoty and amenable to standardization

O24 **J Mouchacca**

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Biological degradation of Ramses II mummy

**O25 TWO CASE REPORTS OF SUBCUTANEOUS MYCOSIS IN EGYPT
CAUSED BY *VERONAEA* AND *EXOPHIALA* SPECIES**

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Two cases of subcutaneous mycosis were examined in the Outpatient Clinic of the Assiut University Hospitals. The first case was a 14-year-old female with scaly violaceous plaques over both cheeks associated with a verrucous fungating mass on the nose with malformation of the upper lip. Plaques were also observed on the right forearm. Direct microscopy of skin biopsy showed dark hyphae ramifying through the tissue. The case was clinically described as phaeohyphomycosis. Cultures on Sabouraud's dextrose agar (SDA) produced a dematiaceous fungus identified as *Veronea botryosa*. The second case was a 42-year-old woman showing large multilobular brownish lesions covering the whole right side of the face, ear, forehead and neck. Similar lesions were observed over upper and lower limbs, back and abdomen. Direct microscopy of skin biopsy showed dark muriform sclerotic bodies and hyphae in tissues a characteristic feature of chromomycosis. Culture on SDA yielded a black yeast fungus very close to *Exophiala dermatitidis*. In vitro sensitivity test showed complete inhibition of *V. botryosa* and *E. dermatitidis* by three kinds of essential oils (carvacrol, citral and citronellal). Both fungal species were also inhibited by the antifungal therapeutic agents terbinafine, ketoconazole, itroconazole and natamycin but were not sensitive to miconazole nitrate and clotrimazole. Amphotericin B prevented the growth of *E. dermatitidis* but was not active against *V. botryose*. To the best of our knowledge this is the first report on isolation of *V. botryosa* and *E. dermatitidis* from clinical samples in Egypt.

**O26 SEASONAL FLUCTUATIONS OF OPPORTUNISTIC INDOOR
AEROMYCOBIOTA IN THE EXTERNAL DERMATOLOGY
CLINICS OF ASSIUT UNIVERSITY HOSPITALS**

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In a trial to assess the aeromycobiota of the external clinics of the Department of Dermatology at Assiut University Hospitals, a preliminary survey in four sites was carried out during the four seasons of the year 2009. The sedimentation plate method and 2 forms of Sabouraud media (Sabouraud dextrose agar, SA and Sabouraud dextrose agar supplemented with cyclohexamide, SAC) were used. Fewer total numbers of propagules were obtained on SAC (80 versus 1059 on SA). The fungal catches showed their peak in winter on both media while the lowest number was recorded in summer on SA and in spring on SAC. A total of 71 species related to 26 genera were obtained on both media. Generally, the major component of airspora was *Cladosporium* (with *C. cladosporioides* and *C. sphaerospermum* being the most encountered) on both media. Other most commonly encountered fungi on one medium type were *Aspergillus* (on SA); *Penicillium*, *Acremonium* and *Scopulariopsis* (on SAC). Many of reported fungal species in the current study are human opportunistic pathogens. The implications of these mycobiota in human health are also discussed. This study also demonstrates that there is an urgent call and need for establishing guidelines on assessment and remediation of indoor mycobiota in Egyptian hospitals especially in zones at risk.

**O27 EFFECT OF SALICYLIC ACID ON THE REDUCTION OF
RIZOCTONIA SOLANI DAMAGE IN TUBERS OF MARFONA
POTATO CULTIVAR**

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This study was carried out to evaluate the effects of salicylic acid in Marfona potato cultivar (*Solanum tuberosum* L.) on reducing the pathogenesis of *Rizoctonia solani* in potato tubers under greenhouse conditions. The pots sterilized soils had been infected by *R. solani* (21B1 strain) two weeks before transplanting the potato plantlets. The seedlings were treated with 0 (control), 0.1, 0.2, 0.5, 1, 2 and 4 mM of salicylic acid every week. The results showed that treatment with 0.2 mM salicylic acid resulted in 73% reduction in the infection symptoms on the potato tubers (sclerotia). Moreover, the intensity of infection symptoms were further reduced by an increase in the concentration of salicylic acid. The least infection was observed when 0.5 mM salicylic acid was applied. The results also showed that the number of potato tubers was increased by the application of 2 mM salicylic acid to plants that had been infected with fungi. Base of the results obtained, the application of 0.2 - 0.5 mM salicylic acid resulted in the reduction of tuber losses caused by *Rizoctonia* fungi.

**O28 DECOMPOSITION OF ORGANIC MATTER AND BEHAVIOR OF
SOME FUNGI BY USING SEMI – NATURAL UNITS OF RABBIT
FAECES**

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The autecology of, and interrelationships between *Aspergillus niger*, *Mucor hiemalis* and *Trichoderma harzianum* were studied. Growth and activity in faecal materials were followed using semi – natural units of rabbit faeces "coprome". Estimations were made of loss of weight and loss of calorific value. Evidence was obtained that metabolic activity and degradation of faecal materials continued for a considerable period after reproduction had taken. The highest weight loss at all sampling times was caused by *T. harzianum*, the lowest weight loss being found using *M. hiemalis* at all sampling time (32.06 , 22.42 %) respectively when inoculated singly. In paired cultures the lowest weight loss occurred when *A. niger* and *M. hiemalis* were inoculated together and the highest when *T. harzianum* and *A. niger* were inoculated together (26.12, 35.85 %) respectively. The maximum weight losses when all the three spores inoculated together were (34.56 %). The three fungi together reduced the calorific value to a greater degree than any fungi did in monoculture at all sampling times.

O29 ISOLATION AND IDENTIFICATION OF SOME FUNGAL SPECIES FROM SOIL AND DUNG IN THAMAR PROVINCE, YEMEN

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During the period from 27/9/2008 to 7/4/2009, thirty samples of soil and dung were collected from Thamar province to isolate and identify soil borne, coprophilous, and keratinophilic fungi. A part of soil sample was used as direct plate method; other was used to isolate keratinophilic fungi by hair baiting technique. Coprophilous fungi were isolated from dung samples by moist chamber method. Potato carrot agar and oat meal agar were used as culture media and for preparing the pure cultures. Ascomycetes which recorded during this study related to the genera *Ascodesmis*, *Chaetomium*, *Emericella*, *Eupenicillium*, *Eurotium* and *Kernia*. The hyphomycetes are belonging to *Chrysosporium*, *Gilmaniella*, *Malbranchea*, *Microsporium*, *Paecilomyces*, *Papulaspora*, *Phoma* and *Thermomyces*. Some isolates distinguished in this article are newly recorded for Yemen mycoflora.

O30 EFFECTS OF CHICK WASTE, LEAF LITTER AND DAP ON VA MYCORRHIZA IN *PRAECITRULLUS FISTULOSUS* LINN

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The effect of Chick Waste, leaf litter and DAP (Diammonium phosphate) was studied on the mycorrhiza of *Praecitrullus fistulosus* Linn. Four plots of length 8x8 were selected. From these, one was considered control (To) having no fertilizer amended in it, while remaining three was experimental. T1 was leaf litter amended, T2 was chick waste and T3 was having DAP in it. *P.fistulosus* L. was grown in all the plots. The plants were collected after the time interval of 3rd, 5th and 8th week respectively. During this time age, length, number of leaves, number of branches, number of fruits, number of tendrils, number of flowers other and VAM of plant were calculated. The highest number of leaves, branches, fruits, tendrils and flowers were observed in T1 leaf litter. Organic fertilizer having high NPK showed enhanced growth in it. However the highest number of vesicles and arbuscules were calculated in To (control) while the lowest were counted in T1 leaf litter. All the mean values showed significance from each other when they were statistically analysed.

O31 TAXONOMY AND BIOTECHNOLOGICAL APPLICATION OF MONOASCUS - A REVIEW ARTICLE

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Monascus is one of the most economic fungi around the world. About 24 known species were treated (morphologically, physiologically , relationships between the pigment and fungal development , factors affecting pigment production and metabolic pathway of the pigment production) . *Monascus* species break down starchy materials in the substrate into several metabolites, depend up on substrates; *Monascus* species and environmental factors. *Monascus* growth acts as an indicator key in the synthesis of pigments and other metabolites. Colors of *Monascus* pigments are classified into three categories: yellow, orange and red color . More than ten pigmented compounds have been reported to be produced from fermentation. Monascorubin Rubropunctatin orange insoluble in water but converted into soluble pigment when its react with amines to red a deep crimson color is formed as the culture ages of *Monascus purpureus* . They are widely used for coloring foodstuffs , cosmetic and medicin in East Asia, Europeans and USA countries. The red pigmented *Monascus purpureus*; *M. ruber* and *M. pilosus* are among the most important producer species used on industrial scales. Monacolin K (also known as lovastatin, mevinolin, mevacor and red yeast rice) is a natural cardiovascular agent used for cholesterol lowering, body weight and blood pressure decreasing, also used as anticancer agent.

POSTER PRESENTATIONS

P1 PRESENCE OF OCHRATOXIN A IN SOME FOOD FROM AL JAFARA REGION-LIBYA: PRELIMINARY STUDY

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Eleven (11) food samples and four (4) coffee samples of several kind and trade mark were collected from different super-markets in Al-Jafara region and analysed for the presence of ochratoxin A, using immunoaffinity column clean up (ochra test column) and HPLC. The samples were of different cereal products and coffee consumed regularly and normally, The analysis result of food samples indicate eight samples (72.72%) were found contaminated with ochratoxin A with the lowest concentration found in couscous (National production) with concentration of 0.59 µg/kg and the highest concentration was 15.50 µg/kg in couscous (import) with 4 samples (36.36%) contain ochratoxin A above the Libyan and European specification which allow 3 µg/kg. In the coffee samples ochratoxin A were found in 2 samples of Arabic coffee (50%) and the highest concentration present in Arabic coffee (National production) with concentration reach 70.16 µg/kg which is highly above the Libyan and Europe Union regulation which allow µg/kg for Arabic coffee. Other food sample which show presence of ochratoxin A have a concentration of 10.70, 1.49 and 1.13 µg/kg for macaroni(national production), 3.25 µg/kg for rice (import), 4.80 µg/kg for wheat flour (National production), 1.89 µg/kg for wheat flour (import), 3.32 µg/kg for Arabic coffee and 15.50 µg/kg for couscous(import). The other three samples of food (27.27%) which consist of one sample macaroni (import), two sample of rice (import) and two sample of instant coffee (50%) show absence of ochratoxin A at the detection limit below 0.2 µg/kg. Presence of ochratoxin A in food consider a serious problem for human health where this toxin recognized possible carcinogenic to human and carcinogenic to animal health by International Agency for Research on Cancer.

**P2 EFFECT OF SALINITY STRESS ON MYCORRHIZA FORMATION IN
*BACOPA MONNEIRI***

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Arbuscular mycorrhiza (AM) is the most widespread and significant mutualism between root inhabiting fungi and roots of higher plants having nearly universal in their association including plants of agricultural and medicinal importance. A lot of medicinally important plants do not grow well in the arid region due to salinity problems and absence of mycorrhiza. *Bacopa monneiri* is an important medicinal plant used extensively for various purposes. Studies were carried out to assess the role of salinity in developing mycorrhizal infection in the roots of *B. monneiri*. Colonization potential and sporulation percentage of two AM fungi viz. *Glomus mosseae* and *G. intraradices* were evaluated at four different salinity levels. Tolerance of the plants to salinity was determined and leaf chlorophyll content was estimated. The results indicated that the AM fungi could infect and colonize the roots effectively under high salinity levels and increased chlorophyll content. Tolerance of the plants to salinity was increased and the AM association could found highly effective in enhancing establishment of the plant in soils under salinity.

P 3 DIVERSITY OF LEAF AND AIR FUNGI OF SOME PLANTS IN EGYPT

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Eighteen wild plants from Saint Katherine Protectorate, South Sinai belonging to nine families and eight cultivated plants from Ismailia governorate belonging to eight families have been studied for the diversity of leaf surface mycobiota in addition to aeromycota in both localities monthly over a year (July 2007 to June, 2008) From both localities under investigation it was possible to isolate and identify forty seven taxa belonging to 29 genera of leaf surface fungi and thirty three taxa belonging to 18 genera of aeromycota on Czapeks yeast extract agar media. *Alternaria alternata*, *Aspergillus fumigatus*, *A. flavus* and *A. niger* were the common fungal species found on leaf surfaces. *Alternaria*, *Aspergillus*, *Cladosporium* and *Penicillium* were the most frequently isolated genera of aeromycota. The presented results revealed that leaf shape, hair density and type may be the most important limiting factors on the diversity of mycobiota on studied plant species.

P4 QUORUM SENSING MOLECULES IN FERMENTING FUNGI

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Quorum Sensing is a phenomenon where a microbial population communicates in a synchronized manner through small, signalling Quorum Sensing molecules in response to changes in population density. When a critical threshold concentration of these signalling molecules is reached the microbial response is triggered. The response takes place at target genes on the transcriptional level leading to changes in expression levels of genes involved in Quorum Sensing, giving rise to many biological processes, such as bioluminescence, biofilm formation, expression of virulence factors and production of antibiotics [1]. While Quorum Sensing has been widely studied in bacteria, there clearly is a demand for these studies in filamentous fungi and basidiomycetes. The aim of screening is to discover QS molecules in the selected fungi, i.e. *Aspergillus nidulans*, *Aspergillus terreus*, *Trametes versicolor* and *Pleurotus ostreatus*. The morphology and physiology as well as the metabolic products in relation to Quorum Sensing in these fungi can be characterized using electronic microscopy, chromatographic methods, NMR and mass spectroscopy [3]. The genes can be identified using expression profiling with DNA microarray technology. In addition, quantitative real time PCR may be done to quantify the mRNA levels of the genes discovered by microarrays. These studies are established at different time points and different culture conditions, also proteins whose synthesis is under QS control.

P5 MARINE-DERIVED FUNGI ISOLATED FROM INVERTEBRATES AND SEAWEEDS OF MEDITERRANEAN COAST AT ALEXANDRIA AS A SOURCE OF BIOACTIVE SECONDARY METABOLITES.

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Since marine-derived fungi represent a rich source of bioactive metabolites which have not yet been fully exploited in Egypt and has never been the target of any solid study before. The present work deals with the bioactive secondary metabolites of marine-derived fungi isolated from marine organisms like seaweeds and invertebrate (sponge, ascidians) from Alexandria, Egypt in the period from 2006 to 2007.

It was possible to encounter as many as 48 species assigned to 4 classes, 11 orders, and 12 families. While order Eurotiales accommodates the greatest range of species (12 species), the orders Botryosphaerales and Pezizales accommodate the lowest range (one species each). On the substrate richness, green algae are by far the richest substrate by showing a spectrum of 41 species (out of 48), followed by brown algae (28) and red algae (21) while, other sources are relatively poor. Regarding substrate preference of isolated species, the data showed that while some taxa are likely able to exist on more than one substrate such as *Aspergillus niger*, *A. flavus* and *Phoma exigua* var. *exigua* others showed clear tendency for restricted occurrence, like *Gymnascella dankaliensis* and *Chaetomiopsis dinae* whose occurrence are restricted to ascidia and *Ulva lactuca*, respectively. Out of 48 isolated taxa five promising species were selected for their application *in-vitro* (*Nigrospora oryzae*, *G. dankaliensis*, *Chaetomium globosum*, *Engyodontium album* and *Trichurus spiralis*) and *in-vivo* (*T. spiralis*) biochemical assays after small scale cultivation and extraction of their secondary metabolites. Five *in vitro* assays were used to investigate the bioactive potentiality of fungal extracts. Agar diffusion assay against some pathogenic bacteria and fungi, antioxidative activities {thiobarbituric acid (TBARS), α,α -Diphenyl- β -picrylhydrazyl (DPPH)}, nitric oxide scavenging activity (anti-inflammatory), cytotoxic activity (brine shrimp lethality bioassay) and the inhibition effect on tyrosine kinase (anticancer).

Detoxification effects of *T. spiralis* extract *in vivo* was determined through the measurements of liver functions, antioxidant activities and oxidative stress biomarker of control and experimental rates (induced subacute hepatotoxicity using a mixture of heavy

metals) in blood and liver homogenate. For histopathological study liver tissues were taken from the control and all experimental groups. *C. globosum* recorded the highest antioxidant activity (92.82%) in TBARS assay, while *G. dankaliensis* came first by recording 59.28 % in DPPH assay in comparison with ascorbic acid (61.83%). In NO inhibition assay, *N. oryzae* showed 49.3 % comparing with ascorbic acid (73.12 %). The highest anticancer activity (96.22%) was refereed to *G. dankaliensis* using tyrosine kinase inhibition assay. Extract of *T. spiralis* in vivo showed a detoxification effect and minimized the histological alterations carried by heavy metals, diminished the serum ALT & AST activities and bilirubin and LPO (lipid peroxidation) level and elevated the albumin & antioxidant biomarker (GST and SOD) level.

P6 *GRAPHIOLA PHOENICIS*: AN EMERGING PATHOGEN OF FALSE SMUT DISEASE OF DATE PALM IN INDIAN THAR DESERT

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Indian Thar Desert covers North West part of the Rajasthan State between 25°2' to 28°10' N and 69°3' to 74°0' E with an area about 25,000 km². It includes the arid and semiarid regions, 100 meters above the mean sea level. The vegetations are bushy, cacti, thorny and spinous shrubs, grasses and a few drought hardy slow growing tree species including date palm (*Phoenix dactylifera* Linn.). It is an important arid fruit plant. False smut disease of date palm (*Phoenix dactylifera* linn.) has been observed to be of wide occurrence in the arid and semi-arid region of Rajasthan (India) at Jodhpur, Bikaner, Jaisalmer and Jalore districts of Indian Thar Desert. It is caused by *Graphiola phoenicis* (Moug.) Poir. During spring and summer of 2007-2008, several date palm trees grown in given area showed symptoms typical of false smut disease. The fungus results in sub-epidermal spots on both sides of the pinnae (leaflets) and the rachis with small, black sori developing in abundance on old fronds. The fruiting structures emerge as small, black, covered sori on one year old, conspicuous on two year old leaves and continue to increase during the third year sori are most abundant on apical pinnae, less abundant on the middle section and even fewer on the basal section. Spores are produced in the fertile areas of the sori and are interspersed with groups of sterile filaments. At maturity, sori open to liberate masses of yellow spores which are spherical to ellipsoidal, 3-6 µm diameters and have a thick, smooth hyaline wall. After the spores disseminate, only the rough black crater of the sori remain. Thus, it causes great damage to the plant growth and reduced yield of fruit. Previously false smut diseases occur in scattered form within irregular interval in particular area. In 2007-2008 the disease occurrence was reported in severe form. Fungicides may be useful for managing this disease but research is limited as to products to use and timing of application. Therefore, urgent attention requires for control of emerging pathogen to control disease.

P7 PHOTO DEGRADATION OF MYCOTOXINS

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The field of antimicrobial fight is one of the constant challenges. Unfortunately, mycotoxigenic fungi considered as unavoidable contaminants in foods and feeds. The most important contaminants are those producing Afla toxin B1 (AFB1), which has a great hepatotoxic effect. Due to, the positive correlation between the consumption of aflatoxin contaminated foods and the increased incidence of liver cancer in several Asian and African population, Aflatoxin was classified as group 1A carcinogens by the International Agency for Research on Cancer. The aim of the present study was to inhibit the production of this undesirable aflatoxin by photodynamic treatment using Phloxine B as a photosensitizer. Solar simulator and Light Emitting Diode (LED) were used for irradiation. Samples of feed and feed ingredients were screened for fungal and aflatoxin B1 contamination. Twelve genera of moulds were isolated and 47% were found to be contaminated with variable amounts of AFB1. The isolated strains of *A. flavus* and *A. parasiticus* were tested for AFB1 production. Results showed that, photosensitization either by irradiation with solar simulator or with Light Emitting Diode inhibited the spore germination, mycelium growth and the production of AFB1. Although LED showed higher effect than solar simulator at the same concentration of Phloxine B, still lethal photosensitization by using solar simulator was more applicable than that by LED.

P 8 OCCURRENCE OF NEMATOPHAGOUS FUNGI IN ISMAILIA GOVERNORATE, EGYPT

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A Survey study was conducted during the season of 2008-2009 through 50 locations representing Ismailia governorate, Egypt, to determine the occurrence of the nematophagous fungi. One hundred rhizosphere soil samples were collected from fruit orchards, field crops and vegetables, followed by isolation of nematophagous fungi by sprinkle technique, while, nematode was extracted from soil by using the modified Baerman technique. The soil pH value, soil texture and organic matters percentages of each soil sample were analyzed to investigate the relationship between these environmental factors and the occurrence of nematode-trapping and parasitic fungi. Three species of two nematophagous fungi genera were found and identified in this study. *Dactylaria brochopaga* (nematode trapping fungus) was found parasitized on second stage (J₂) of root-knot nematode (*Meloidogyne incognita*) in 33% of collected soil samples. *D. brochopaga* was found in soil samples containing organic matters more than 5%, while, the occurrence of this fungus reduced when amount of organic matter was less than 2% in some collected soil sample. The optimal pH value for growth of *D. brochopaga* in natural habitat was ranged from 6.5 to 8.9 in loamy sand soil texture. In addition two species of Blastocladiomycota were recorded in 10% of collected samples. *Catenaria anguillulae*, which found parasitized on nematode body causing the break down of the nematode cuticle and *C. auxiliaris*, which causing destroying nematode egg in 3% of collected sample. The suitable pH value for fungus *Catenaria* was ranged from 7.8 to 8.3 in loamy sand soil. On the other hand, the organic matters haven't any effects on the growth of *Catenaria* or the ability of its parasitism. Data on the nematophagous fungi, soil pH value, soil texture and organic matters percentages are presented.

P9 FUNGAL BIODIVERSITY AND ANTIMICROBIAL ACTIVITY OF TWO WILD MEDICINAL PLANTS IN ASSIUT, EGYPT.

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Ninety-one species in addition to six varieties which belong to thirty six genera were collected from phyllosphere, phylloplane, rhizosphere and rhizoplane of 10 samples of each *Datura stramonium* and *kochia indica* on glucose- and cellulose- Czapek's agar media at 28 ± 2 °C. The result obtained from leaf surface (phyllosphere and phylloplane) and root surface (rhizosphere and rhizoplane) were basically similar on two types of media. In leaf surface, the most common fungi were *Alternaria*, *Aspergillus*, *chaetomium*, *Cladosporium*, *Cochliobolus*, *Emericella*, *Penicillium*, *Ulocladium* and *Stachybotrys*. In root surface, the most common fungi were *Aspergillus*, *Penicillium*, *Gibberella*, *Ulocladium*, *Alternaria*, *Stemphylium*, *Myrothecium*, *Chaetomium*, *Cladosporium*, *Macrophomina*, *Microascus*, *Mycosphaerella*, *Fusarium*, *Rhizoctania*, *Papulospira* and *Nectria*. Leaf surface fungi of *Datura stramonium* and *Kochia indica* have showed highly frequent. Scanning electron microscope examination of leaf surface of these plants showed that their leaves covered with dense hairs and their epidermal cells have distinguished character, these leaf surface characters could play a role in caching a lot of fungal spores. The ethanol extract of each plant had high inhibitory effect against tested Gram+ve bacteria while the Gram-ve bacteria were seemed more resistant to both extract of each plant. The extract of *D. stramonium* had highly inhibitory effect against six out of seven tested medical fungi isolates.

P10 THE FINE STRUCTURE OF ASCOSPHAERA APIS THE CAUSAL PATHOGEN OF HONEYBEE CHALKBROOD DISEASE AND THE INTERACTION BETWEEN SYMBIOTIC BACTERIA AND OYSTER MUSHROOM AGAINST THE CAUSAL PATHOGEN *IN VITRO*.

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The fine morphological structure of the sporocysts of *Ascospaera apis* the causal pathogen of honeybee chalkbrood has been studied using phase contrast light microscope and scanning electron microscopy. The interaction of antagonists bacteria *Pseudomonas fluorescense* or *Bacillus subtilis* *in vitro* against the causal pathogen, and also the effect of oyster mushroom (*Pleurotus ostreatus* L.) were studied. Results revealed that the mature sporocysts contained a large number of globules of varying sizes scattering on the surface of diseased brood. However, sporocysts formed *in vitro*, immature sporocysts walls were wrinkled, and became smooth as the sporocyst reached maturity. Moreover, the interior and exterior surface of the sporocyst wall had numerous distinguishable white colored papillae. Some globules in the developing sporocysts began to form immature spores, which aggregated to form spore balls. Some of the spore balls have appeared without any membrane, it was naked on the cultivated medium, and the ascospores can be disseminated easily thought this sexual form of inocula could permit easily infection to honeybee brood. *Ascospaera apis* (Strain black buff) ,which isolated from the black mummies obtained from Shottp locality ,Assiut governorate, when grown on mMS medium it started as a fluffy white growth and after about 14 days it became dark buffy growth due to the induction of a lot of sporocysts on the cultivated medium and induced a (UFO) growth like. *Ascospaera apis* Sporecysts when measured it ranged between (40 - 65 µm) and ascospores ranged between(2-2.7 µm). *Ascospaera apis* hyphae was shown invaded by a numerous bacterial cells of antagonistic bacteria *Pseudomonas fluorescense* *in vitro*, and these bacteria lysed and caused the disintegration of the cell wall of the fungal hyphae. Meanwhile, *Ascospaera apis* hyphae was showing shrinking appearance when grown *in vitro* with antagonistic bacteria *Bacillus subtilis* on cultivated medium. However, over growth of oyster mushroom (*Pleurotus ostreatus* L.) occurred over the growth of *Ascospaera apis* *in vitro* and was noticeably found when *Ascospaera apis* and oyster mushroom were grown in dual on a cultivated medium. The oyster mushroom firstly antagonized the causal pathogen of honey bee and then the mycelium of oyster mushroom nearly covered the cystospores of *Ascospaera apis* and the fungal mycelium of chalkbrood pathogen limited its additive growth due to the effect of *Pleurotus ostreatus* fungus. The prospective usefulness of these results is to apply the aforesaid bacteria with oyster mushroom in the field of biological control for honeybee's chalk brood disease.

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المؤتمر الدولي الأول للميكولوجيا الأساسية والتطبيقية



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ملخصات البحوث