

## CURRICULUM VITAE

**Surname:** Khyami – Horani هالة محمود الخيمي  
**Name:** Hala  
**Permanent address:** Amman, P.O. Box 2686; Fax (00962-6) 5684366;  
Tel (00962 -6) 5523553; Mobile (0096279 5560777  
**Email:** horani-h@ju.ed.jo;  
horani.hala@gmail.com  
**Nationality:** Jordanian  
**Sex:** Female  
**Marital status:** Married, three children  
**Present position:** Vice-president for scientific research, graduate studies, and quality  
Professor of Microbial Biotechnology/ University of Jordan  
  
**Education:** B.Sc. in Biology, Univ. of Jordan  
M. Sc. Microbiology, American University of Beirut  
Ph.D. Microbial Biotechnology, Herriot-Watt, Edinburgh, Scotland, 1991  
**Dissertation title:** Characterization and cellulase synthesis in some thermotolerant bacilli from Jordan

### FIELDS OF RESEARCH INTEREST

- Biological control of insects; pathogenicity of *Bacillusthuringiensis* and *B. sphaericus*, screening for *cry* genes; cloning of the *cry* gene; Genetic transformation of tomato plant with *cry5*
- Biodiversity of bacteria
- Bacteriocin production
- Quality criteria for reclaimed water.
- Isolation and characterization of potential biodegraders: Plant waste materials: cellulose, xylan, etc.; degradation of xenobiotic compounds: phenolic compounds, herbicides and pesticides, etc.
- Biodiversity of marine bacteria: Bacteria associated with coral reefs; antibiotic and antiviral products of marine bacteria

### ADMINISTRATIVE EXPERIENCE

#### **A. University of Jordan**

Vice Dean of Student Affairs 1995-1996

Acting Dean of Student Affairs 1996

Assistant Dean of the Faculty of Science 1997-1998

Vice Dean of the Faculty of Science February- July 2005

Dean of the faculty of Science 2005- 2009

Vice president for scientific research, graduate studies and quality 2010- present

## **B. Others**

- Board of trustees, Jordan University of Science and Technology, member, 2010-present
- Board of trustees, Irbid National University-Jordan , member, 2009-2010
- Board of trustees Jordanian National Forum for Women, 2007- present
- Greater Amman Municipality, Board member 2007- 2011
- Accreditation committee, Ministry of higher education, member 2007-2009
- Women center, member of board 2005-present

## **TEACHING EXPERIENCE (COURSES TAUGHT)**

Undergraduate courses

General Biology; General Microbiology; Applied Microbiology, Biotechnology

Postgraduate courses

Advanced General Microbiology; Advanced Applied Microbiology; Bacteria: Structure and function; Microbial Physiology; Microbial Ecology

## **COMMITTEES AND ORGANIZATIONS**

Member of the following organizations and committees

- A) Department level
- Department Council 1978 – present (member)
  - Committee of Scientific Research in the department 1991-1993; 1996-1998; 2002-2003 (member)
  - Committee of General Biology Courses 1985 -1995 (member)
  - Committee of Graduate Studies 1992-1993 (member)
  - Committee of Biology Department Curriculum 1992 – 1995 (member)
  - Committee of Scientific Research 1996- 1998; 2001-2005(member)
  - Committee of Graduate Studies 1999- 2000, 2002-2005 (member)
  - Committee of Social activities 2002-2004 (head)
- B) Faculty Level
- Faculty of Science Council 1992 – 1994, 1997-1998, 2005 (member)
  - Student Violation Committee 1992 – 1994 (member), 1999-2000 (head)
  - Social Activity Committee 1991 – 1993 (member)
  - Scientific Committee 1999-2001 (member), 2005 (head)
  - Curriculum Committee 2000-2002 (member); 2005(head)
  - Committee of Graduate Studies 2005-2006(head)

Appointment and Promotion Committee 2005 -2006(head)  
Faculty of Science Council (head) 2005-2009

C) University Level

Student Violation Committee 1995 –1996 (member); 2002- 2009 (head)  
University Council 2002-2003, 2005-present (member)  
Biotechnology Committee- Mango Center for Scientific Research, 2003-2005 (member)  
Center of Water and Environmental Studies, 2005 (member of the board)  
Faculty of Higher Studies, 2005 (member of the board)  
Board of Deans' Council ( member) ,2005-2009  
Board of the University School 2005-2009 (member)  
Curriculum Committee 2005- 2009 (member)  
Scientific committee /Mango Center for Scientific Research 2004- 2009 (member)  
Board of the Center for Scientific Research (member)  
Board of the Center for Women'sStudies 2006-present (member)  
Board of the Energy Center 2006- 2009 (member)  
Board of the Center for Women'sStudies 2008- 2009 (head)  
Board of Marine Science Station in Aqaba 2005-2009 (member)  
Committee for accreditation of scientific journals 2009- present (head)

Committee on Conferences and Seminars (head)  
Committee for the financial reward to 3 hours of teaching / League once a year (head)  
Committee for the appointment and the dispatch of the first departments in the undergraduate(head)  
Committee for Excellence(head)  
Committee to extend the probation period for faculty members (head)  
Committee to extend the trial period for the members of the researchers (head)  
Committee (training sessions) (head)  
Selection Committee for the Distinguished Researcher (head)  
Committee to study the instructions for institutionalizing student exchanges for university students from(head)  
Committee of the foundations of scholarship at the university.(head)  
Committee to reconsider the model of the "assessment of a faculty member to extend the trial period from(head)  
Committee for evaluation of the learning process(head).

D) Others

- Member of the National Jordanian Committee for Youth Year 1984-1985.
- Translator, revisor and editor of Connect UNESCO- UNEP Newsletter ( ARRABITA) , Vol.XII, XIII. 1987-1988.
- Advisor for General Biology Courses / Jordanian University for Women ( petra university) 1991 - 1993

- Technical Consulting committee / Al Albait University  
1992 – 1993
- Technical Consulting committee-Jordanian University  
for Women ( petra university) 1991 -1993
- Author & Editor of Biology Text books for the First  
Secondary Class level in Jordan 1995-2010
- Member of the general microbiology society, UK 1989-  
1997
- Member of the society for invertebrate pathology, USA  
1993- 1995
- Member of Jordan Society of Biological Sciences 1986-  
present
- Member of the Royal Society for the Conservation of  
Nature 1998- present
- Member of Jordan's team to the meetings of the Middle  
East Multilateral Peace talks on environment  
1996- 1999
- Member of the board of trustees and advisory committee  
SIGI in Jordan 1998- 2005
- Member of the Professional Jordanian National Committee  
for Women 1998- 2004
- Member of the professional's consulting committee for the  
Jordanian National Commission for women  
2000-2004
- Member of the National Jordanian Committee for  
genetically modified food: Regulations for public  
safety in Jordan 2002-2005; 2007-present
- Head of the Scientific Committee/ Member of the  
advisory committee for the Second Arab Women Summit  
2002-2007
- Jordanian society of genetics (Finder and member) 2002-  
2004
- Member of the Jordanian official team for the Second  
Arab Women Summit. 2002.
- Member of the Technical committee for the evaluation of  
the use of protein animal feed for chicken/  
Ministry of Environment.2005-2006
- Supervisor of teachers who submitted projects in order to offer  
them guidance and assistance throughout the projects'  
development.
- Member of the Intel ISEF –secondary school Judging  
committee 2006 in the field of biological  
sciences
- Member of biotechnology committee –Higher council of  
science and technology
- Head of the judging committee for Abdul HameedShoman  
Award for Science Teachers in Jordanian Elementary  
and Secondary School 2006-present
- Member of the judging committee for Abdul  
HameedShoman Award for Young Arab Scientists,  
2006-present

- Referee in several Scientific Journals
- Chief Editor in **Advances in Biological Research**. IDOSI
- Member of editorial board of some scientific journals
- Biosafety higher committee- ministry of Environment, member 2008-present
- Member of strategic planning committee- board of trustees, Irbid private university, 2009-2010
- Member of curriculum committee- board of trustees, Irbid private university, 2009-2010
- Member of the tourism committee, financial committee at Greater Amman Municipality 2007- present
- Head of the strategic committee at Greater Amman Municipality, 2007-present
- Member of curriculum committee- board of trustees, Jordan University of Science and Technology, 2010-present
- DAAD committee member for the pre-selection of PhD scholarships for Jordan Nationals 2011-2012
- Member of the Steering Committee for the preparation and development of the national strategy for women in Jordan (2011-2015)
- Member of the committee in the ministry of planning on “Population and the living environment” 2012

### **INVENTION-DISCOVERY**

A Novel Serovar of *Bacillus thuringiensis* Ser. *jordanica* (serotype H71). Isolated from Jordan, 2003

### **PATENT CLAIM**

Cloning cry genes from the novel Jordanian *Bacillus thuringiensis* Ser. *jordanica* (serotype H71), and developing transgenic tomato species for resistance against insects, nematodes, and fungi.

### **PUBLICATIONS**

**Khyami -Horani, H.** & A. Ramadan, 1992. Birds of Jordan, Amman, Jordan

**Khyami -Horani, H.** & N. Dajani. 1993. A future look at the role of women in modern industry in Jordan. Regional Conference on the role of women in modern industry in the Arab World. 6-8 April. Amman- Jordan.

**Khyami -Horani, H.**, F. G. Priest, & A. M. Mahasneh. 1993. Cellulase synthesis in some thermotolerant bacilli from Jordan. Proceedings of the second Arab conference on perspectives of Modern biotechnology. Amman, Jordan.

**Khyami-Horani, H.** 1993. Rural Women in the protection of the agricultural environment in Jordan. Regional Conference in Lebanon Arab Women & the Environment B.U.C, NOV. 25-27, 1993.

**Khyami - Horani, H.& F. G. Priest.** 1994. Thermotolerant varieties of *Bacilluslicheniformis* isolated from desert environments. J. Applied Bacteriology. 77:392 - 400.

**Khyami - Horani, H.** 1995. Bacterial cellulases. Tenth International Conference on Global Impacts of Applied Microbiology and Biotechnology. Denmark, 6-12 August.

**Khyami - Horani, H., A. M. Katbeh-Bader, and Z. H. Mohsen.** 1995. Susceptibility of *Culex pipiens molestus* to standard strains of *Bacillus thuringiensis israelensis* and *Bacillus sphaericus* in Jordan. Dirasat. 22: 1337-1344.

**Khyami - Horani, H.** 1996. Thermotolerant strain of *Bacillus licheniformis* producing lipase. World Journal of Microbiology and Biotechnology. 12:399-401.

**Khyami - Horani, H.** 1996. Purification and some properties of an alkaline cellulase from an alkalophilic *Bacillus* sp. strain HC-1. World Journal of Microbiology and Biotechnology. 12:525-529.

**Khyami -Horani, H., A. M. Katbeh-Bader, and Z. H. Mohsen.** 1996. Mosquito larvicidal toxicity of endospore- forming bacilli isolated in Jordan. Dirasat. 23 (2): 140-144.

Shatanawi, M., G. Nakshabandi, M. Fayyad, **H. Horani**, and M. Sakkar. 1996. Experimental Field studies on the use of As- Samra treated wastewater for irrigation in Jrodan-Phase I. Abhath Al-Yarmouk. 5(2): 197-221.

**Khyami - Horani, H., and Al-Moghrabi, S.M.** 1997. Bacterial microflora associated with corals in the Gulf of Aqaba. International Conference on the Biology of Coastal Environments ( ICBCE 97)- Bahrain.

Al-Moghrabi, S.M., and **H. Khyami – Horani.** 1997. A follow up on the distribution of coliform bacteria along the Jordanian coastline of the Gulf of Aqaba. Mu'tah Lil-Buhuth Wad-Dirasat (Natural & Applied Sciences Series). 12 (1): 221-242.

Al-Nakshabandi, G.A., M.M.Saqqar, M.R. Shatanawi, M.Fayyad, and **H. Khyami – Horani.** 1997. Some environmental problems associated with the use of treated wastewater for irrigation in Jordan. Agricultural Water Management . 34:81-94.

Al-Moghrabi, S.M., and **H. Khyami – Horani.** 1998. Distribution and seasonal variation of nutrients in the Gulf of Aqaba ( Jordan). Dirasat 25 (2): 226-239.

**Khyami - Horani, H., A. M. Katbeh-Bader, and Z. H. Mohsen.** 1998. Mosquito larvicidal toxicity of endospore-forming Bacilli isolated from Jordan. The Third Arab Conference on “ Modern Biotechnology and Areas of Applications in the Arab World”. Cairo, Egypt.

**Khyami - Horani, H.**, A. M. Katbeh-Bader, and Z. H. Mohsen. 1999. Isolation of endospore-forming bacilli toxic to *Culisetalongiareolata* (Diptera: Culicidae) in Jordan. Letters in Applied Microbiology. 28 (1): 57-60.

**Khyami - Horani, H.**, and Al-Moghrabi, S.M. 1999. Bacteria associated with corals in the Gulf of Aqaba. Al-Manarah. 4 (2): 211-225.

Katbeh-Bader, A. M., **Khyami - Horani, H.**, and Z. H. Mohsen. 1999. Effect of temperature on the susceptibility of *Culisetalongiareolata* Macquart (Culicidae: Diptera) to two standard strains of biocontrol bacteria. Journal of Applied entomology. 123: 629-631.

**Khyami - Horani, H.** 2000. Antibiotic Activity of Heterotrophic Bacteria of Marine Origin. The First Arab Symposium on Antimicrobial Drugs. 20-21 April, Amman-Jordan.

**Khyami - Horani, H.** 2000. Characterization of protein crystals from local isolates of *Bacillus thuringiensis* and *Bacillus sphaericus*. Biotechnology in Agriculture: Present and Future. 5-7 September, Amman- Jordan

**Khyami - Horani, H.** 2000. Isolation and characterization of bacilli toxic to insect larvae isolated in Jordan. The Seventh Arab Congress of Plant Protection. 22-26 October, Amman\_ Jordan.

**Khyami - Horani, H.** 2000. Bacterial degradation of industrial and agricultural Pollutants in Jordan. 11-12 October, Ammann- Jordan.

Sebei, S., Ameer, C., **Khyami - Horani, H.**, and Boudabous, A. 2001. Induction de la Secretion de Nouvelles substances Inhibitrices « Bacteriocin Like » de *Bacillus*. 1<sup>er</sup> Journées de Biotechnologie Industrielle et de L'environnement. 9-11 February, Tunis.

Sebei, S., Ameer, C., **Khyami - Horani, H.**, Karchani, S., and Boudabous, A. 2001. Détection et Caractérisation d'une Nouvelle Bactériocine de *Bacillus cereus*. XII<sup>èmes</sup> Journées Nationales de Biologie. SSNT. 5-7 November, Monstair

**Khyami - Horani, H.** 2002. Toxicity of *Bacillus thuringiensis* and *B. sphaericus* to Laboratory Populations of *Drosophila melanogaster* (Diptera: *Drosophilidae*). J. Basic Microbiology. 42(2): 105-110

Sebei, S., Ameer, C., **Khyami - Horani, H.**, and Boudabous, A. 2002. Partial Purification, Inhibitory Spectrum and Mode of Action of Cerein H77, A Novel Bacteriocin Produced by *Bacillus cereus* H77. Proceedings of International Symposium of Environmental Pollution Control and Waste Management. 7-10 January, Tunis.

**Khyami - Horani, H** and M. Ateyyat. 2002. Efficacy of Jordanian Isolates of *Bacillus thuringiensis* Against Citrus leafminer, *Phyllocnistiscitrella* Stainton (Lepidoptera: Gracillariidae). Int. J. Pest Management. 48: 297-300.

**Khyami - Horani, H.** 2002. Haemolytic and mosquitocidal endotoxin activity of Jordanian strains of *Bacillus thuringiensis* and *B. sphaericus*. Dirasat, Pure Sciences. 29:235-241

**Khyami - Horani, H,** M Hjaij and J-F Charles. 2003. Characterization of *Bacillus thuringiensis* Ser. *jordanica* (serotype H71), A Novel Serovar Isolated in Jordan. Current Microbiology. 47:26-31

Cherif, A., S. Borin, L. Brusetti, A. Boudabous, **H.Khyami – Horani,** and D. Daffonchio. 2003. Genetic relationship in the “*Bacillus cereus* group” by rep-PCR fingerprinting and sequencing of a *Bacillus anthracis*-specific rep-PCR fragment. J. Applied Microbiology. 94: 1108-1119.

Al-Banna, L. and **Khyami - Horani, H.** 2004. Nematicidal Activity of Two Jordanian Strains of *Bacillus Thuringiensis* on Root Knot Nematodes, *Meloidogyne Incognita* & *M. Javanica*. Nematologia Mediterranea. 32:41-45

Abu-Dhaim, E., Al-Banna, L. and **Khyami - Horani, H.** 2006. Evaluation of Jordanian *Bacillus Thuringiensis* strains against *Meloidogyne species*. Jordan Journal of Agricultural Sciences. 1:49-57

Sadder, M, **H. Khyami-Horani,** and L. Al-Banna. 2006. Application of RAPD technique to study Polymorphism among Jordanian *Bacillus thuringiensis* isolates from Jordan. World Journal of Microbiology and Biotechnology. 22:1307-1312

**Khyami - Horani, H,** and Al-Banna, L. 2006. *Bacillus thuringiensis jordanica*: A biocontrol agent of *Meloidogyne javanica* on tomato. Phytopathologia Mediterranea. 45:153-157.

Al-Khatib, M., **H. Khyami - Horani,** E. Badran, and A. Shehabi. 2007. Incidence and characterization of diarrheal enterotoxins of fecal *Bacillus cereus* isolates associated with diarrhea. Diagnostic Microbiology and Infectious Disease. 59: 383-387.

**H. Khyami–Horani,** and F.G. Priest. 2008. Thermotolerant varieties of *Bacillus licheniformis* isolated from desert environments. J. Applied Microbiology. published online: 11 MAR 2008

Masoud, H, **H.Khyami-Horani,** K. Alshwabkeh. 2009. Characterization of *Salmonella* Lipopolysaccharide Isolated from Poultry Farms in Jordan. Dirasat: Pure Sciences. 1:30-37.

A. Al-Lahham, J. Abu Qayyas, **H. Khyami-Horani,** R. Al-Kayali. 2010. Colonization with *Streptococcus pneumoniae* and coverage of the pneumococcal conjugate vaccines among Jordanian pediatrics: results of 3 studies, 2005-2010. 26<sup>th</sup> International Pediatric Association Congress. Johannesburg, South Africa 3-9 August 2010. Poster 917

Obeidat, M, **H.Khyami-Horani,** and M. T. Sadder. 2010. Molecular typing of local Jordanian *Bacillus thuringiensis* Strains by RAPD-PCR. Submitted

**Khyami-Horani.** Arab women and the environmental dimension of sustainable development. Arab women organization; 3<sup>rd</sup> Conference. Tunis, 28-30 October 2010.

Ibrahim Alabbadi, Renad Al-Momani ,**HalaKhyami-Horani. 2011.**Impact of Electronic Academic Staff Websites for Scientific Research Documentation On World Universities Ranking: University Of Jordan Challenge. 11<sup>th</sup> International Educational Technology Conference Proceedings (Volume I): 597-600

NataliSarsourand**HalaKhyami-Horani.**2011.Isolation, partial purification and characterization of the bacteriocins produced by Jordanian isolates of bacillus cereus and *Bacillus thuringiensis*. The European biotechnology congress 2011 (September 28 –October 1,2011)

**HalaKhyami- Horani.** 2011. Higher education in Jordan: Reality and ways to improve it. Paper presented at the meeting of experts on the establishment of higher education in the Islamic world under the auspices of the Organization ISESCO. Beirut, Lebanon. 20-23 June 2011

**HalaKhyamiHorani** and Amjad Ahmad Hdaib.2011.Developing strategies for higher education in Jordan. Paper presented to a regional experts meeting on drafting the strategy of ISESCO in the development of higher education. Amman-Jordan. 24-27 October 2011.

Amal El Kharouf and **HalaKhyamiHorani.**2011. Development of the reality of women working in universities. Paper submitted in the fifth Conference on Scientific Research in Jordan. Amman in 19.11.2011

Amal El Kharoufand **HalaKhyamiHorani.** 2012.The Evolution of the Reality of Women Working in the Jordanian Universities (Public and Private) since 2000 to 2009. Academy of International Business MENA Chapter 2012 Conference

Rawaa Al-Kayali, **HalaKhyami-Horani**, Adnan Al-Lahham. 2012. Resistance patterns and risk factors of *Streptococcus pneumoniae* carriage among Jordanian healthy children. Written not submitted

## **M.SC. THESES SUPERVISED**

Partial Purification and characterization of a Protease from an Alkalophilic *Bacillus*-like bacterium. 1994

Isolation and Serological Characterization of *Listeria monocytogenes* from Chickens in Jordan. 1995

Bacterial Degradation of Some Phenols in Waste Water of Detergent Factories in Jordan. 1996

Isolation and Characterization of 2,4-D Dichlorophenoxyacetic Acid (2,4-D)-Degrading Bacteria from the Jordanian Environment. 1998

Characterization of Protein Crystals from Local Toxic Isolates of *Bacillus thuringiensis* and *Bacillus sphaericus*. 1999

Isolation and Characterization of Bacteria that can grow on Tomato Pomace Produce Fiber Hydrolytic Enzymes. 2001

Microbial Contamination of Waterlines Used in Dental Units in Jordan. 2003

Prevalence of enterotoxigenic and enterohaemorrhagic *Escherichia coli* genotypes in water and stool isolates from Jordan using multiplex PCR. 2004

Prevalence of enterotoxigenic *Bacillus cereus* isolates in stool from Jordan using PCR. 2005

### **Ph.D. THESES SUPERVISED**

Molecular typing of local *Bacillus thurengiensis* strains and determination of their proposal crystal proteins cytotoxicity against cancer cells, 2007.

Biochemical and genetic characterization of the bacteriocins produced by *Bacillus cereus* and *Bacillus thurengiensis* isolates, 2008.

Serotype and antimicrobial susceptibility of *Streptococcus pneumoniae* isolated from healthy children in Amman, Jordan, 2008.

Isolation, partial purification and characterization of the bacteriocins produced by local Jordanian isolates of *Bacillus cereus* and *Bacillus thuringiensis*. 2009.

Isolation and identification of bioactive compounds from marine *Streptomyces* from the Gulf of Aqaba, 2009

### **Ph.D. THESES / EXAMINATION COMMITTEE MEMBER**

Availability and Distribution of Pathogens Resistant to certain Antibiotics in Marine Environment in Lathikia, Syria. 1998

The Inhibitory Effect Of Selected Plants Extracts On Growth And Enterotoxin Produced By *Clostridium perfringens*. 2003

In vitro studies of the effect of fermented dairy product containing probiotics and neutraceuticals on different characteristics of intestinal microflora. 2003.

## **M.Sc. THESES / EXAMINATION COMMITTEE MEMBER**

Isolation and Characterization of Extremely Halophilic Bacteria from the Dead sea. 1992

A Study of the Microbial Quality of a Sample of Hoummos B'theneh (Chickpea Dip) Produced in Jordan. 1992

Antibacterial activity of Some Quinolines and Third Generation Cephalosporins Against Gram- Negative Rods Obtained from Three main Hospitals in Jordan. 1993

Isolation and Genotyping Modification of Bacterial Strains Producing Extracellular Proteases. 1996

The use of Sorbate and Benzoate Salts to Inhibit the Growth of Yeasts in Labaneh. 1996

Isolation and Genotypic Modification of Bacterial strains Producing Extracellular Proteases. 1996

Isolation and Genotypic Modification of Bacterial strains Producing Extracellular Pectinase. 1997

Anaerobic Digestion of the Organic Fraction in Solid Wastes of the Greater Amman Municipality. 1998

Common Pathogens in Municipal Wastewater treatment plants. 1998

A Study of the Use of Yeasts in the Production of Fermented Cucumbers. 1998

A study of the Halophilic Bacteria of Nabulsi Cheese, and their Effect on the Quality of the Product. 1998

Incidence of *Candida albicans* in Feces patients and its Ability to Produce Proteinase Enzyme. 1999

Turnover of Egg White Proteins with Special Reference to Lysozyme during embryogenesis. 2000

The Utilization of the Polymerase Chain Reaction for the Detection of Genes Coding for Aminoglycosidase Modifying Enzymes in Bacteria of Clinical Isolates from Jordan University Hospital. 2000

Epidemiological study of *Pseudomonas aeruginosa* Isolates by Serotyping, PCR, and Antimicrobial Susceptibility Methods. 2002

PCR Amplification of *mecA* Gene in Clinical and Nasal Isolates of *Staphylococcus aureus* from Amman/Jordan. 2002

Genotypes of *Helicobacter pylori* prevalent among Jordanian patients with gastritis. 2004

Member of Comprehensive Exam Committee For Ph. D. Students In Biology, 2001,2003,2004

Member of Comprehensive Exam Committee For Ms.C Students In Biology, 1999, 2000, 2001, 2002,2003

### **MANUSCRIPTS IN PREPARATION**

***Bacillus*** : Antagonism and active biomolecules  
Cloning cry genes from local strains of *Bacillus thuringiensis*

### **WORKSHOPS AND SEMINARS**(in the last years)

Violence Against Children And Women 1999

Promotion and Protection of Human Rights in Jordan. 2000

Microorganism as Biological Indicators for Water Quality 2001

Characterization and Analysis of Biological Parameters for Drinking Water 2001, 2003

Nobel Laureates, Petra conference 2006; 2008

Regional seminars on “the university governance in Tempus countries”. Member of the Jordanian national team, Catania- Italy, 7-8 March 2011.

Regional experts meetings “drafting the strategy of ISESCO in the development of higher education”, October 24-27, 2011.

Regional Conference “The Future of Higher Education in the MENA Region” Morocco, 21-22 February 2012

## **FIELDS OF RESEARCH INTEREST**

- Entomopathogenic bacteria in Jordan: Biological control of insects; pathogenicity of *Bacillusthuringiensis* and *B. sphaericus*.
- Biodiversity of bacteria
- **Bacillus**: Antagonism and active biomolecules; Bacteriocin production
- Quality criteria for reclaimed water.
- Isolation and characterization of potential biodegraders: Plant waste materials: cellulose, xylan, etc.; degradation of xenobiotic compounds: phenolic compounds, herbicides and pesticides, etc.
- Biodiversity of marine bacteria: Bacteria associated with coral reefs; antibiotic and inhibitory compounds produced by marine bacteria

## **TECHNIQUES USED**

- Analysis of bacterial proteins by SDS Polyacrylamide Gel Electrophoresis
- Use of ELISA kits for detection of pathogens and in identification
- Preparation of bacterial genomic DNA and plasmids
- Determination of restriction patterns of total DNA, and Plasmid profiles
- Identification of genes using PCR techniques
- Isolation and identification of bacteria
- Product purity control, and Quality control

