



# 1st Arab-American Frontiers of Sciences, Engineering, and Medicine Symposium

Kuwait Institute for Scientific Research \* U.S. National Academies October 17-19, 2011 in Kuwait City

PROGRAM - (Sessions listed in alphabetical order)

# **Agriculture**

Organizers:

Ahmad Al-Salman, Sultan Qaboos University, Sultanate of Oman Asaad Khalid, National Research Center, Sudan

#### Speakers:

Use of Mathematical Models in Developing Strategies for Sustainability Yaseen Al-Mulla, Sultan Qaboos University, Sultanate of Oman

Addressing Climate Change Impacts in the Context of Multiple Stresses in North Africa Region Balgis Osman Elasha, African Development Bank, Tunisia

Role of GABA Shunt Pathway in Plant Abiotic Stress Tolerance
Nisreen Al-Quraan, Jordan University of Science and Technology, Jordan

Using Modern Tools to Investigate Control of and Engineer Specialized Metabolism in Medicinal and Invasive Plant Species

David R. Gang, Washington State University, USA

### **Diabetes**

Organizers:

Hari Pujar, Merck & Co., Inc, USA Lama Yousef, Damascus University, Syria

#### Speakers:

Alarming High Prevalence Rates of Diabetes and Metabolic Syndrome in Arab countries: Data from Jordan Yousef Khader, Jordan University of Science and Technology, Jordan

Diabetes Mellitus in the Middle East: Challenges for the Clinician Marie Merheb, Mount Lebanon Hospital, Lebanon

Designing Antigen-specific Immunotherapy for Treatment of Type 1 Diabetes
Kristin Tarbell, National Institutes of Health, USA

Regulation of Systemic Energy Balance and Glucose Homeostasis by Protein-Tyrosine Phosphatase 1B Fawaz G. Haj, University of California Davis, USA

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Energy Organizers: Fajhan Al-Mutairi, KISR, Kuwait Ghada Amer Benah University, Egypt

### Speakers:

Waste to Energy via Thermochemical Pathways Isam Janajreh, Masdar Institute, UAE

Developing Contacts for Improved Performance and Lifetime in Organic Photovoltaics
Dana C. Olson, National Renewable Energy Laboratory (NREL), USA

Molecular Materials for Electronic and Solar Energy Applications
Aram Amassian, KAUST, Saudi Arabia

Linkages Organizers: Habibah Al-Manaie, KISR, Kuwait Rula Deeb, ARCADIS U.S., Inc., USA

#### Speakers:

Recovering Ammonia for Hydrogen Biofuel Production during Anaerobic Digestion
Donna Fennell, Rutgers University, USA

Virtual Water Trade for Agriculture Water Demand Management under Climate Change in the Middle East Mutasem El-Fadel, American University of Beirut, Lebanon

Mycological Linkages between Renewable Energy and Agriculture Scott Baker, Pacific Northwest National Laboratory, USA

Management of Obesity in Diabetes: Making the U turn Ebaa Alozairi, Kuwait University, Kuwait

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### Water

Organizers:

Sherien Elagroudy, Ain Shams University, Egypt Ziad Mimi, Birzeit University, Palestine

### Speakers:

Probing Shallow Aquifers in Northern Kuwait Using Airborne Sounding Radars Essam Heggy, NASA Jet propulsion Laboratory, California Institute of Technology, USA

Latest Technologies in Water Desalination Amy Childress, University of Nevada, USA

Water Reuse – Overview, Technologies, Public Awareness and Obstacles
Pascal Saikaly, KAUST, Saudi Arabia

Sustaining Financial Investment in the Field of Water Management Mohamed A. Dawoud, Environment Agency-Abu Dhabi, UAE