#### **Finding New Sources of Water for Growth**

Habibah Al Menaie, Kuwait Institute for Scientific Research, Kuwait Rula Deeb, Geosyntec Consultants, United States

Rethinking Wastewater: Water Reuse in the United States

David L. Sedlak, University of California at Berkeley, United States

Wastewater Management and Reuse: Motivations, Challenges and Opportunities in Developing Countries

May A. Massoud, American University of Beirut, Lebanon

Water Reuse in the State of Kuwait: Successes and Hopes
Mohamed I. Ahmed, Kuwait Institute for Scientific Research, Water Resources Center, Kuwait

Mitigating Risks to Sustainability in Desalination Technologies via Innovative Materials,
Economic Analyses and Environmental Assessment
Hassan A. Arafat, Masdar Institute of Science and Technology, United Arab Emirates

# Old Energy, New Methods to Access Resources: The Hydraulic Fracturing Story

Habibah Al Menaie, Kuwait Institute for Scientific Research, Kuwait Rula Deeb, Geosyntec Consultants, United States

Water Management for Enhanced Sustainability and Economics of Shale Gas Development Kelvin B. Gregory, Carnegie Mellon University, United States

Fracturing Challenges: The Journey to Innovative Solutions
Mohammed Bataweel, Saudi Aramco, Saudi Arabia

Fracture Geometry Characterizations through Physical Modeling Waleed Al-Bazzaz, Kuwait Institute for Scientific Research, Kuwait

Technology Integration in Hydraulic Fracturing: Being Effective while Remaining Efficient
Taner Batmaz, Schlumberger Oman & Co. LLC, Oman

## **Global Food Security: Adaptations for the Future**

Nisreen Al-Quraan, Jordan University of Science and Technology, Jordan Joy Ward, University of Kansas, United States

Adaptive Management of Water Resources in Grasslands: Challenges in a Changing World.

Jesse Nippert, Kansas State University, United States

Food Security in the Arab countries: Current Status and Future Scenarios Rezg Basheer-Salimia, Palestine Technical University, Palestine

Climate Change: Threats to Water Resources and Food Security
Ali Al-Shrouf, Abu Dhabi Food Control Authority, United Arab Emirates

Seed Maturity and Drying Methods at Harvest are Critical to Seed Desiccation Tolerance and Quality: Impact on Food Security

Nezar Samarah, Jordan University of Science and Technology, Jordan

#### **Keynote**

Water-Energy-Food Nexus in the Arab Region: Risks and Opportunities
Hani Sewilam, The American University in Cairo, Egypt

#### **Environmental Regulators of Cancer**

Mehdi Bourouba, University of Sciences and Technology H. Boumediene, Algeria Muhammad Zaman, Boston University, United States

Epigenetics, a Link between Environmental Exposure and Cancer?
Lifang Hou, Northwestern University, United States

Effective Therapeutic Targeting of Leukemia Initiating Cells in Chronic Myeloid Leukemia
Rihab Nasr, American University of Beirut, Lebanon

Can Environmental Exposures that Damage Mitochondria Contribute to Cancer?

Joel Meyer, Duke University, United States

The Biological Clock in Health and Diseases

Mohammed Boudjelal, King Abdullah International Medical Research Center, Saudi Arabia

### Linkages

Sherien Elagroudy, Ain Shams University, Egypt Hesham Hamoda, Boston Children's Hospital, United States

Environmental Chemicals and Chronic Childhood Disease: Emerging Concerns and Possible
Solutions
Leonardo Trasande, New York University, United States

Hydraulic Fracturing of Shales: Water Contamination Risks, Wastewater Management
Strategies, and Emerging Research Challenges
Brian Ellis, University of Michigan, United States

Metabolomics an Emerging Technology Addressing Plant and Human Health Research
Projects in the Post Genomic Era
Mohamed A. Farag, Cairo University, Egypt

Targeting Cancer with Dietary Bioactive Agents Mostafa Waly, Sultan Qaboos University, Oman