

International Conference on

# Agri Biotech & Environmental Engineering

September 11-12, 2017 San Antonio, USA



## Hikmet Budak

*Montana State University, USA*

### Next generation tools in agriculture and charting the future research plan

World population is expected to be 9 billion people in 2050 and global food production will need to increase by 70% in order to meet the global demand. Simultaneously, we as plant scientists must work to cope with changes in climate fluctuation, droughts, infestation of insects and diseases. These are major threat to international food security. Meeting the global food demand and addressing these challenges require using and utilizing new tools and technologies. With the advent of Next generation technologies and emergence of OMICS techniques including transcriptomics, proteomics, metabolomics, ionomics and CRISPR-Cas tools have helped to identify and characterize the genes, proteins, metabolites and ions involved in drought signaling pathways including editing, deleting and replacing the genome. Together, all these efforts helped in understanding the complex traits such as yield, water deficit and drought tolerance mechanism. In this talk we will talk more about new tools for next generation agriculture for crop improvement.

### Biography

Hikmet Budak has received his PhD degree with a major in Plant Breeding and Genetics and with a minor in Biometry from the University of Nebraska-Lincoln, USA in 2002. He has worked as a Coordinator and led grass genetics and breeding program at the same university and then returned to Turkey in 2004. He has received the Turkish Young Scientist Award in Turkey and Achievement Award by WORLCOMP06, USA in 2016. He has then joined Montana State University, USA as Montana Plant Sciences Endowed Chair in 2016. He has published over 120 peer reviewed articles and 10 book chapters. His research interests include molecular mechanisms of abiotic/biotic stress in wheat and barley in addition to computational genome analysis and genomics.

[hikmet.budak@montana.edu](mailto:hikmet.budak@montana.edu)

### Notes: