

**I am a plant scientist with particular interest in agricultural new technology, food security, water shortage and global climate change. I have worked in research for over 23 years, collaborating with national and international institutions. Part of the main consulting body of the General Commission for Scientific Agricultural Research/Syria on topics related to agriculture best practices, new technology, crop productivity improvement, climate change, drought etc. also I worked with regional organization to encourage innovation in agriculture in Arab world. Also, I work with international organization FAO, CGIAR, GFAR for redesigning agriculture research priorities and objectives in the region and in the world. Currently, I am a researcher, international project manager and knowledge exchange fellow at the University of Sheffield and a hydroponics expert working in collaboration with Grantham Center for Sustainable Futures and Institute of Sustainable Food. Also, working as an expert and hydroponics consultant with WPF. I have done a lot of work around hydroponics in different countries which include Turkey, Yemen, Libya, Zambia and many others.**

**As a researcher in the Department of Molecular Biology and Biotechnology at The University of Sheffield (UK), I worked on evaluating the effects of reducing stomatal density on the physiology and biochemistry of wheat under drought conditions. More specifically, I analyse wheat genotypes over-expressing the stomatal signalling peptide Epidermal Patterning Factor 2 (EPF2), which harbour reduced stomatal density. In addition, I investigate the effects of G-quadruplex DNA stabilization on root hair growth in wheat and the regulation of stomatal aperture in Arabidopsis. My research interests also focus on the understanding of metabolic regulations that impact Arabidopsis immunity. Besides wheat and Arabidopsis, I am collaborating with a number of colleagues looking at the relationship between arbuscularmycorrhizal (AM) fungi and the release of specific root exudates (benzoxazinoids) in maize, including analysis of rhizosphere chemistry.**