NMR spectroscopy and chemometrics-based analysis of grapevine

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Curriculum Vitae

Kashif Ali was born on 1st February, 1981 in Karachi, Pakistan. He got his early education in Karachi. In the year 2000, after passing his higher secondary school examination, he joined University of Karachi for his Bachelors degree (B.Sc.) in Physiology, with biochemistry and microbiology. In 2002, he started his Masters (M.Sc.) in Biotechnology and finished in 2005. During M.Sc., he worked on one year project based on tissue culture and molecular studies on ornamental plants. In 2006, he started working as junior research fellow at H.E.J. Research Institute of Chemistry where, apart from working on the *in vitro* propagation of ornamental and fruit plants, he focused on the enhanced production of valuable plant secondary metabolites using cell suspension cultures in combination with chemical elicitors. In 2007, he got the Overseas Scholarship offered by Higher Education Commission of Pakistan for the Ph.D. studies which bring him to Leiden University, The Netherlands. He started his Ph.D. research on project named Genomic Research-Assisted breeding for Sustainable Production of quality GRAPEs and WINE (GRASP GRAPE WINE, http://urgi.versailles.inra.fr/index.php/urgi/Projects/GRASP) involving NMR-based metabolomics of grapes and wine. The results of this research are presented in this thesis.

List of Publications:

1. **Ali K,** Maltese F, Zyprian E, Rex M, Choi YH, Verpoorte R. 2009. NMR metabolic fingerprinting based grapevine metabolites associated with Downy mildew resistance. Journal of Agricultural and Food Chemistry, 57, 9599-9606.

2. **Ali K,** Maltese F, Choi YH, Verpoorte R. 2010. Metabolic constituents of grapevine and grape-derived products. Phytochemistry Reviews, 9, 357-378.

3. **Ali K,** Maltese F, Fortes AM, Pais MS, Choi YH, Verpoorte R. 2011. Monitoring biochemical changes during grape berry development in Portuguese cultivars by NMR spectroscopy. Food Chemistry, 124, 1760-1769.

4. **Ali K,** Maltese F, Toepfer R, Choi YH, Verpoorte R. 2011. Metabolic Characterization of Palatinate German white wines according to sensory attributes, varieties, and vintages using NMR spectroscopy and multivariate data analyses. Journal of Biomolecular NMR, 49, 255-266.