Metabolic Fingerprinting and Profiling of Arabidopsis thaliana Leaf and its Cultured Cells T87 by GC/MS

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Cell suspension cultures are now recognized as important model materials for plant biotechnology. Very few studies of metabolic comparisons between cell cultures and original plants have been reported, even though the biological identity of cultured cells with the normally grown plant is of great importance. In this study, a comparison of the metabolome for primary metabolites extracted from the leaves of Arabidopsis thaliana and cultured cells from an Arabidopsis suspension culture (cell line T87) was performed. The results suggest that although cell suspension cultures and Arabidopsis leaves showed similarities in the common primary metabolite profile, nonetheless, moderate differences in quantitative profile were revealed.

Key words: Arabidopsis thaliana, Metabolomics, T87 Cultured Cells