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Commentary to: Transcriptomics in Aid to the Establishment of Secondary Metabolic Pathways in Non-Model Plants

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Commentary

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The article provides a very good insight and forecast of biological research in coming era and author has a very good observation and interpretation of ongoing biological research. Plant biology, especially researches associated with medicinal plants are always been in prime attraction. We have seen lot of patents after biological researches on medicinal and aromatic plants [1-5]. According to ancient records, these plants are of very high importance either in field of medicine or in other products manufacturing. Recent biological research and protein profiling is a step forward in proving those scripts in reality.

Transcriptomics is study of the complete set of all RNA molecules, including mRNA, rRNA, tRNA, and other non-coding RNA transcribed in one cell or a population of cells [6-7]. These are the main precursor of any proteinaceous products in a living organism with protein synthesizing machinery. These studies can tell us clearly about need of generation of a particular product in an organism and this is why very useful in establishment of unsolved facts of plant and animal biology [8-12].

The induction of secondary metabolism has a link to particular environmental conditions or developmental stages [13]. For example, when grown in a nutrient-rich medium, most bacteria employ almost solely basic metabolism in order to grow and reproduce. However, when nutrients depletion occurs, they start producing an array of secondary metabolites in order to promote survival. Actually, secondary metabolites are not essential for growth or survival of an organism. Best examples of these secondary metabolites can be terpenoids [14-16], alkaloids [17-22], etc. which is an essential ingredient and part of various drugs. This is really an observation of much concern as more than 2,00,000 such compounds are already reported from plants [6].

The complete information and observation provided by Sangwan NS was quite useful and a great emphasis on recent research trends in India as well as in other part of world. I would also like to request author to bring more insight on biological research techniques involved in establishment of complete system biological or pathway analysis of these plants [23-26]. I am sure that would bring a path of success for many researchers like me as author is an expert of this field and belongs to a premiere research organization.

Article also provides a clear focus on studies related to non-model plants to analyze gene discovery, transcript quantification, marker discovery, and small RNA regulations. When in 2000 Arabidopsis genome was out in public, lot of research interest flew in it. So now it is time for system biological research for these plants.

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