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Differential transcriptomics in early-stage fruits from two genotypes of Annona squamosa L with contrast in seed number

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Seedlessness is a desirable characteristic as it increases fruit acceptance by consumers due to several benefits: Seedless fruits are easier to eat; fruit juice or fruit jam processing is easier and often seeds have bitter taste or are hardy in nature. *Annona squamosa L* is a popular fruit throughout the tropics mainly southern Mexico, Antilles, Central and South America, Africa, Australia, India, Indonesia, Polynesia and US (Hawaii and Florida). Recently, we have reported the first transcriptome sequence information from early-stage fruits of *A. squamosa*. We have further generated a comprehensive transcriptional profile for early-stage developing fruits from two genotypes of *A. squamosa* with contrast in seed number. A total of 172178 unigenes were assembled from the raw reads generated in the developing fruits of four stages (0, 4, 8, and 12 days after pollination). Sequence similarity analyses against 4 public protein databases (Prunus persica, Vitis vinifera, Fragaria vesca, and Amborella trichopoda) at E-value cut-off of 10-5 revealed 48641 unigenes as annotated. Differentially expressed unigenes related to hormone pathways, transcription factors and seed development were identified between the two genotypes. The study will be useful in understanding the molecular mechanism of fruit development in *Annona sp*.

Biography

Yogesh Gupta is PhD Research Fellow from National Agri-Food Biotechnology Institute, Mohali (Punjab) India. He is doing PhD on gene discovery for seedless in Annona species. He has published one research paper in BMC Genomics in 2015.

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