**Title:** Selection of suitable lily cultivars by using needle agroinfiltration for blue flower production

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**General introduction:**

The data in this study is part of Maliheh Fallahpour’s Ph.D. thesis project that has been done at the Agricultural Biotechnology Research Institute of Iran (ABRII), between December 2016 to December 2021: DOI: ……...

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**Purpose of the study:**

In this experiment, the possibility of transient expression of *F3'5'H* gene and delphinidin accumulation were examined by the agroinfiltration method in petals of six commercial lily cultivars. The results of all the analyzes are made available as tables and figures in the ‘‘manuscript text.docx’’

**Test equipment:**

The topics in this study are provided in the measurement of anthocyanidin contents that were analyzed by using ‘Knauer’ HPLC, and calculation of the relative gene expression which was done by ‘Roche’ Real-time PCR.

**Software implementation:**

All the data obtained were analyzed using the SPSS 24.0 software. In the Real-time PCR method, outputs are analyzed by the REST Software version 2009. All diagrams are drawn by Excel software.

**Description of the data in this data set:**

In the HPLC experiment, calibration curves were constructed using different concentrations of delphinidin chloride, cyanidin chloride, and pelargonidin chloride as standards. Then, the following linear equations were obtained to evaluate anthocyanidin contents by inserting raw data into the below formula:

Delphinidin: y= 95816x-57732

Cyanidin: y= 159116x-29852

Pelargonidin: y= 118077x-95555

In the Rael-time PCR study, cycle threshold values (CT) were recorded for analysis by the REST Software.