

**Applying Generalized Additive Models to Unravel Dynamical Changes in Anthocyanin
Biosynthesis in Methyl Jasmonate Elicited Grapevine
(*Vitis vinifera* cv. Gamay) Cell Cultures**

Running Title: Modeling secondary metabolism in cell cultures

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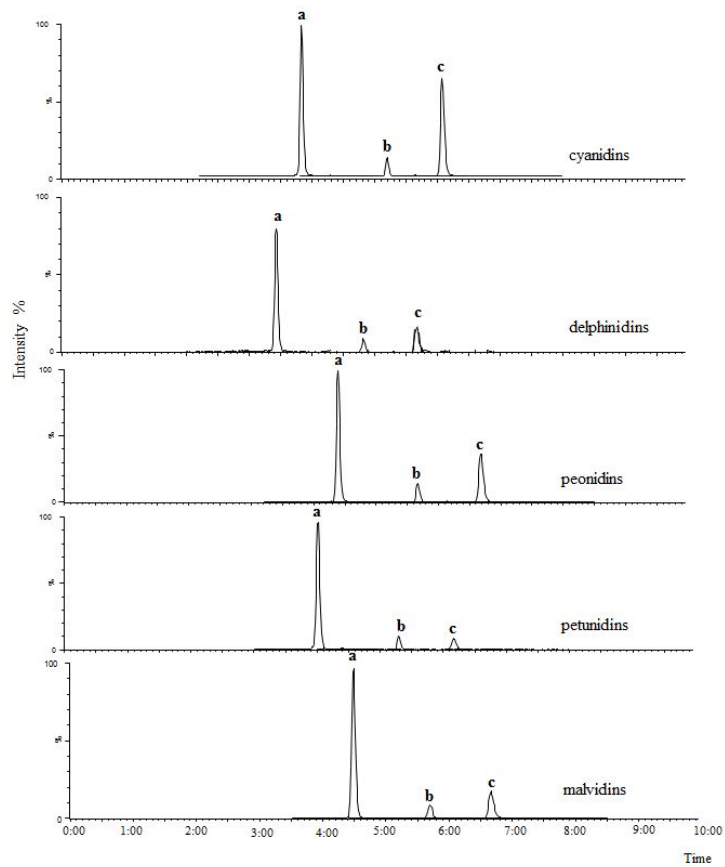


Figure S1: Fig 1. UPLC/QqQ-MS/MS chromatograms of anthocyanins; monoglucosides (a), acetyl glucosides (b) and coumaryl glucosides (c) obtained from grape cells extract.

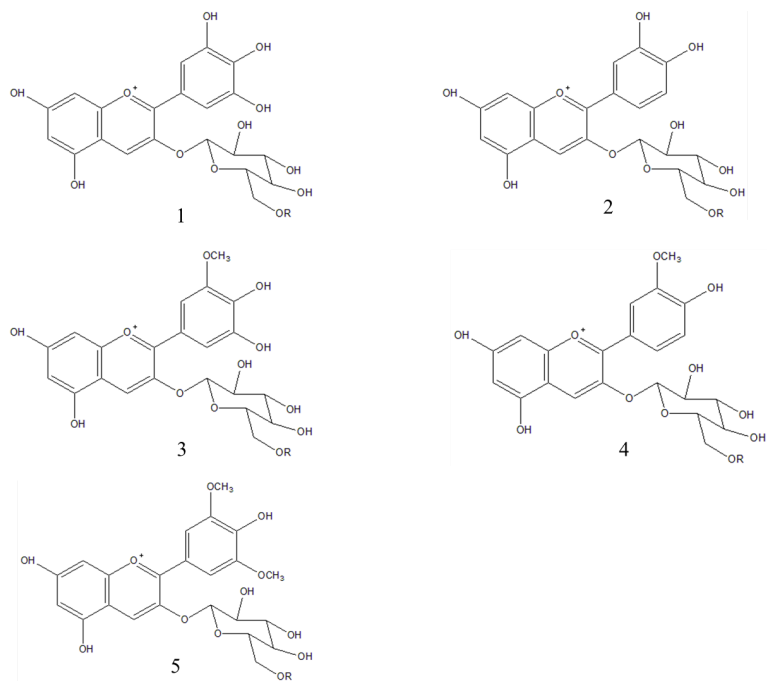


Figure S2: Fig 2. Principal anthocyanins in *V. vinifera* (L.) cv. Gamay cell suspension cultures. R: H, acetyl, *p*-coumaroyl; (1) delphinidin-3-O-glucoside, (2) cyanidin-3-O-glucoside, (3) petunidin-3-O-glucoside, (4) peonidin-3-O-glucoside, (5) malvidin-3-O-glucoside

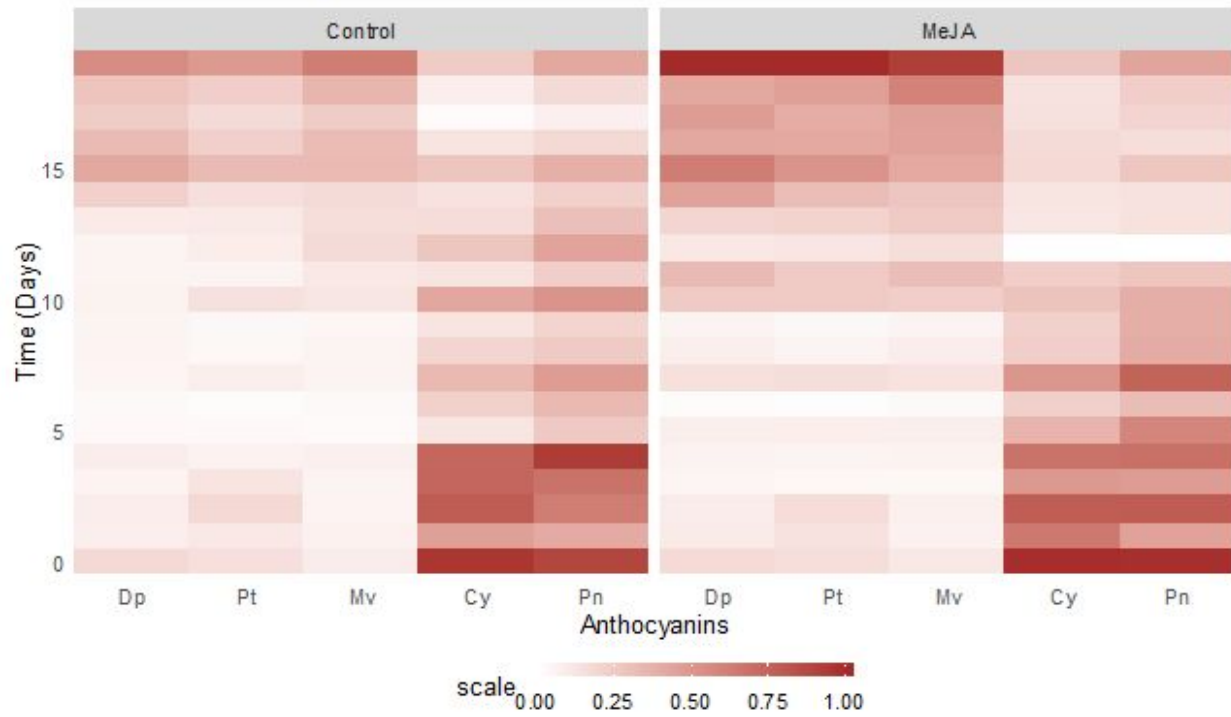


Figure S3. Anthocyanin composition in percentage of total anthocyanins of *Vitis vinifera* (L.) cv Gamay cell suspensions applied with MeJA

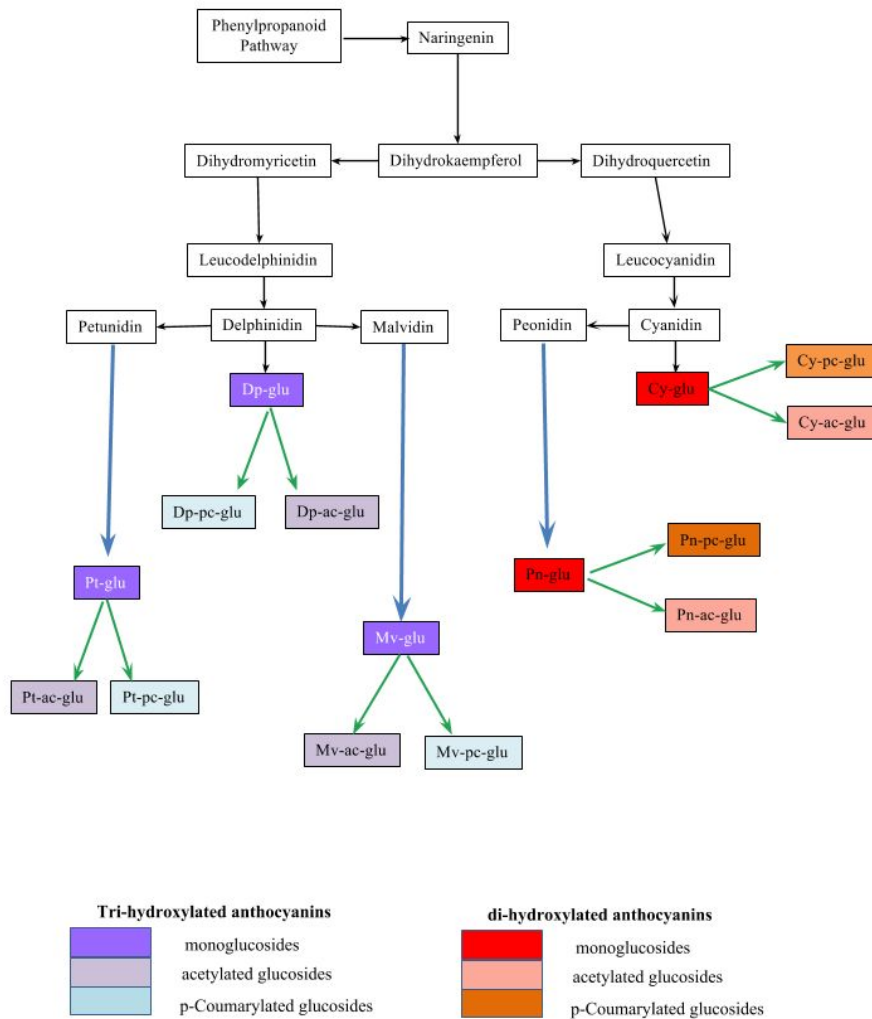
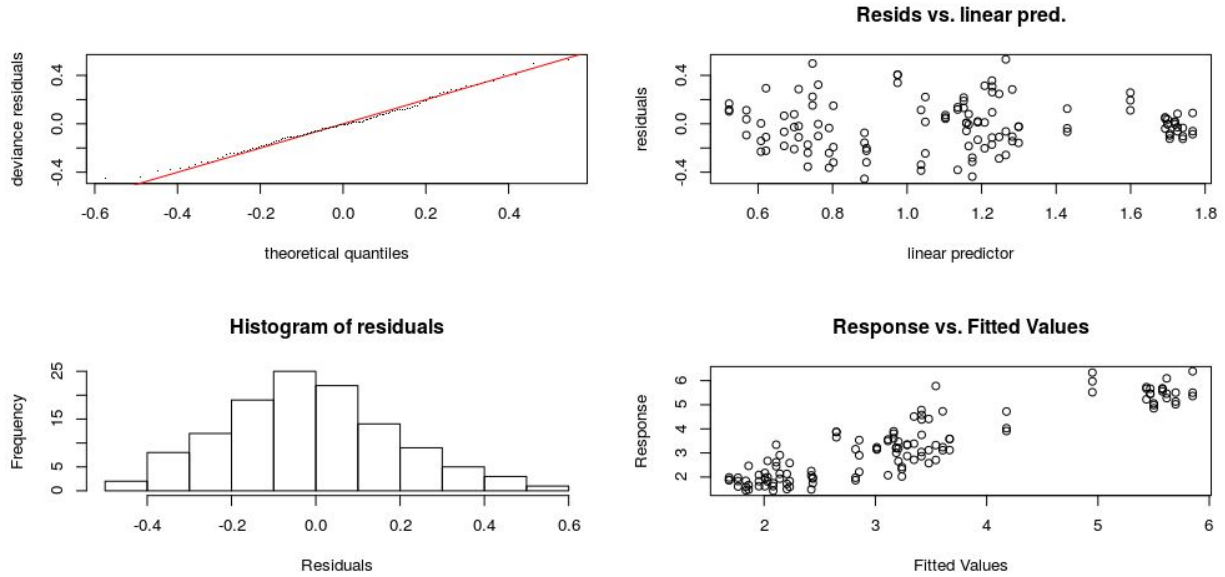


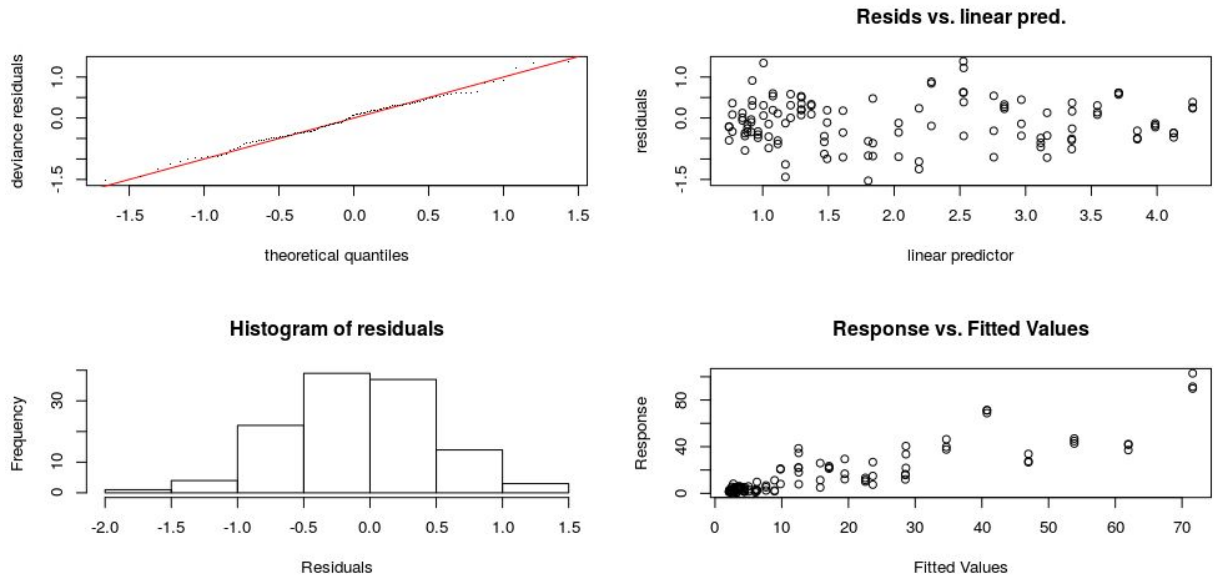
Figure S4 Scheme of the biosynthesis pathway of anthocyanins in grape cell cultures:
Dp-glu: Delphinidin-3-O-glucoside; Dp-ac-glu: Delphinidin-acetyl-3-O-glucoside; Dp-pc-glu: Delphinidin-3-O-(6-p-coumaroyl)glucoside; Cy-glu: Cyanidin-3-O-glucoside;
Cy-ac-glu: Cyanidin-acetyl-3-O-glucoside; Cy-pc-glu: Cyanidin 3-O-(6-p-coumaroyl)glucoside;
Pt-glu: Petunidin-3-O-glucoside; Pt-ac-glu: Petunidin-acetyl-3-O-glucoside; Pt-pc-glu: Petunidin 3-O-(6-p-coumaroyl)glucoside;
Mv-glu: Malvidin-3-O-glucoside; Mv-ac-glu: Malvidin-acetyl-3-O-glucoside; Mv-pc-glu: Malvidin 3-O-(6-p-coumaroyl)glucoside;
Pn-glu: Peonidin-3-O-glucoside; Pn-ac-glu: Peonidin-acetyl-3-O-glucoside; Pn-pc-glu: Peonidin 3-O-(6-p-coumaroyl)glucoside.

Diagnosis of GAM models

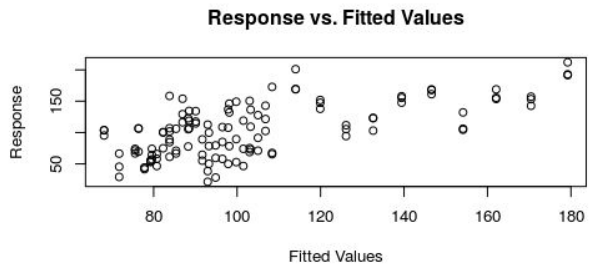
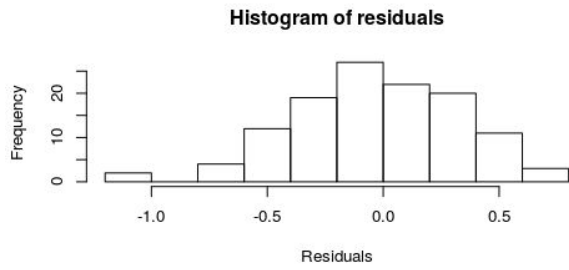
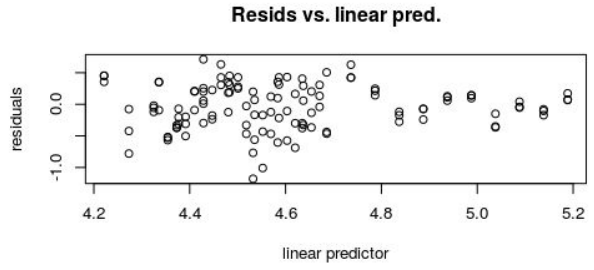
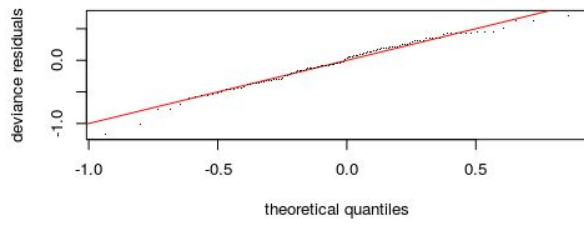
Total anthocyanin concentration



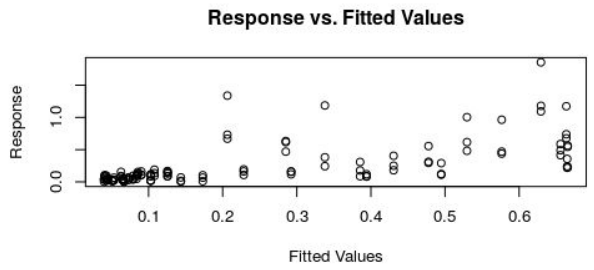
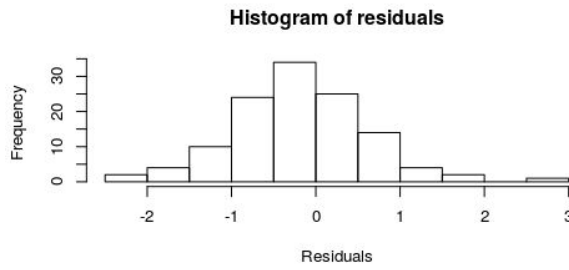
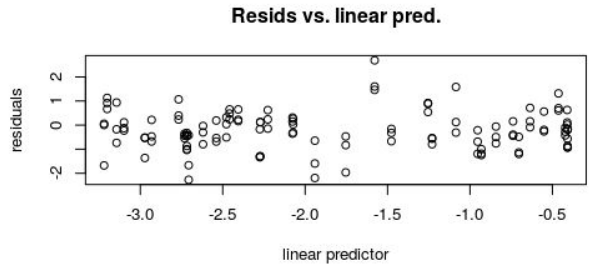
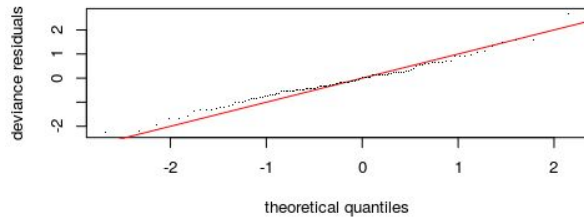
Delphinidin-3-O-glucoside



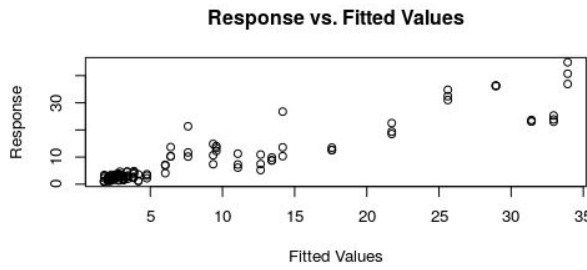
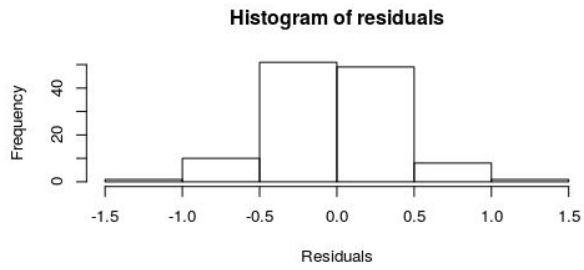
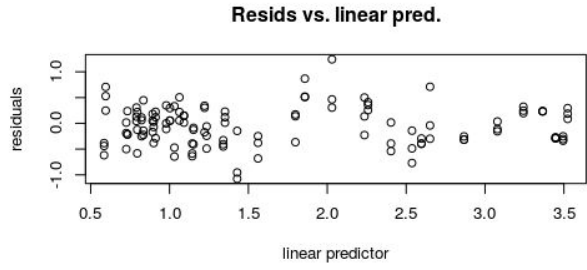
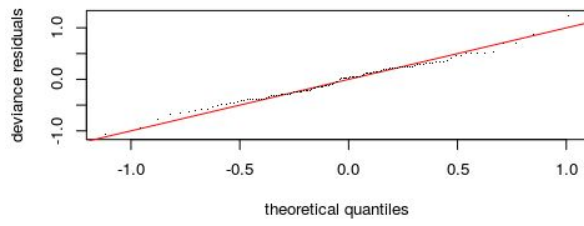
Cyanidin-3-O-glucoside



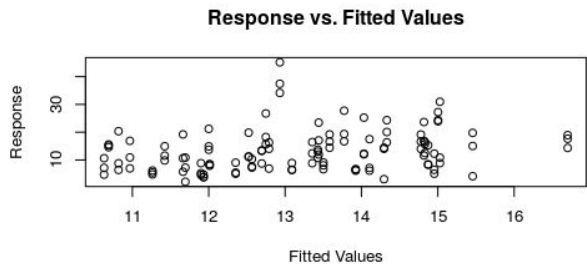
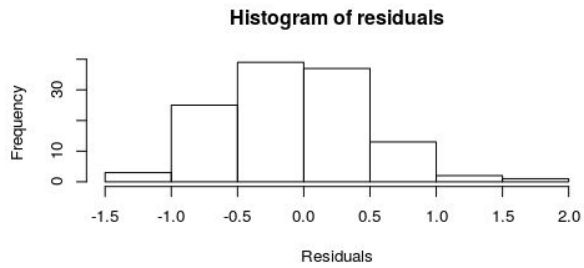
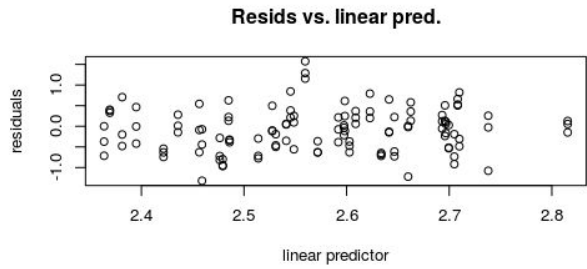
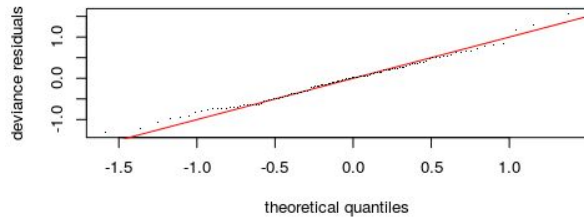
Delphinidin-Ac-3-O-glucoside



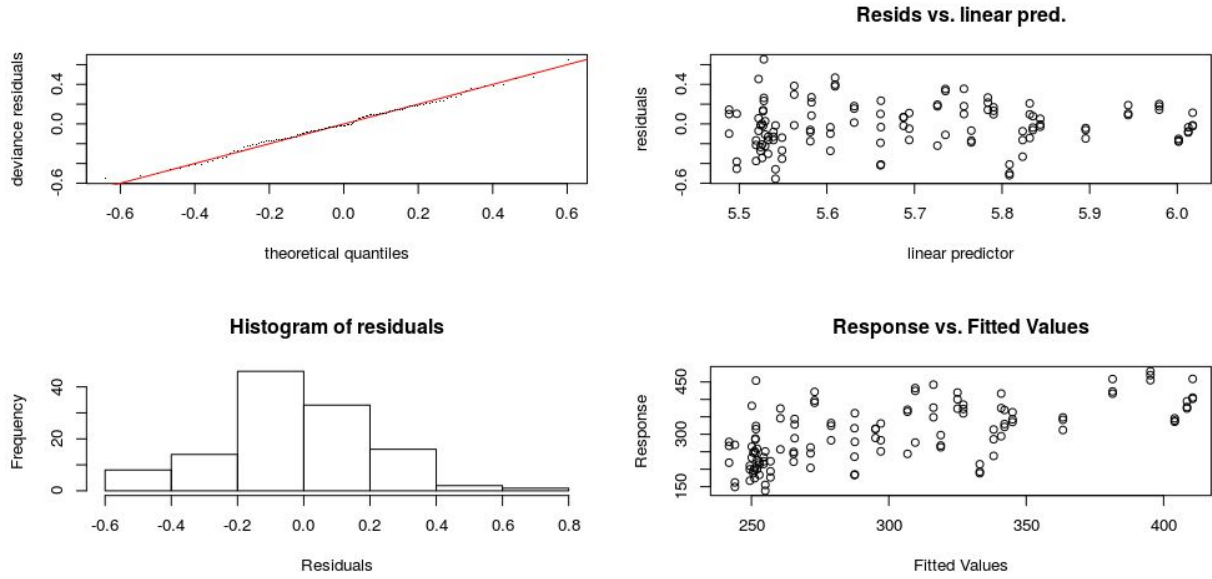
Delphinidin-pc-3-O-glucoside



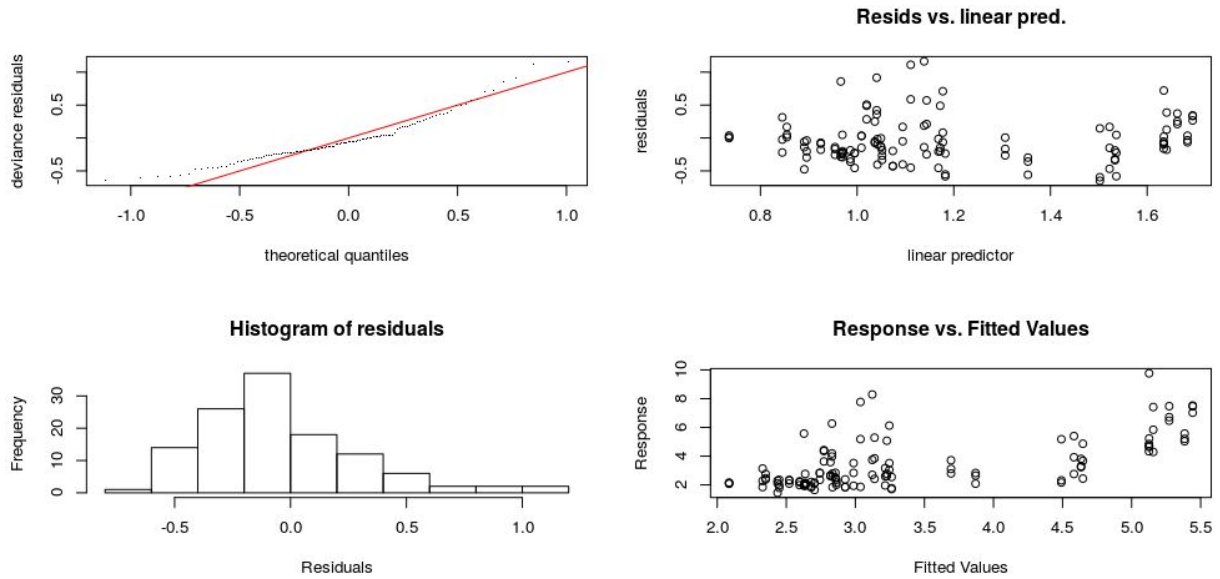
Cyanidin-Ac-3-O-glucoside



Cyanidin-pc-3-O-glucoside



Cyanidin-pc-3-O-glucoside/Cyanidin-3-O-glucoside



Delphinidin-pc-3-O-glucoside/Delphinidin-3-O-glucoside

