The molecular mechanisms underlying the absorption of aglycone and glycosidic flavonoids in a Caco-2 BBe1 cell model

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Figure S1. Expression levels of lactase-phloridzin hydrolase (LPH) in different sections of the entire mouse intestine and Caco-2 BBe1. The relative fold changes were calculated by comparing to LPH expression in mouse colon tissues. Values are presented as mean ± SEM, n = 4.Values with a different letter are significantly different at $P < 0.05$.

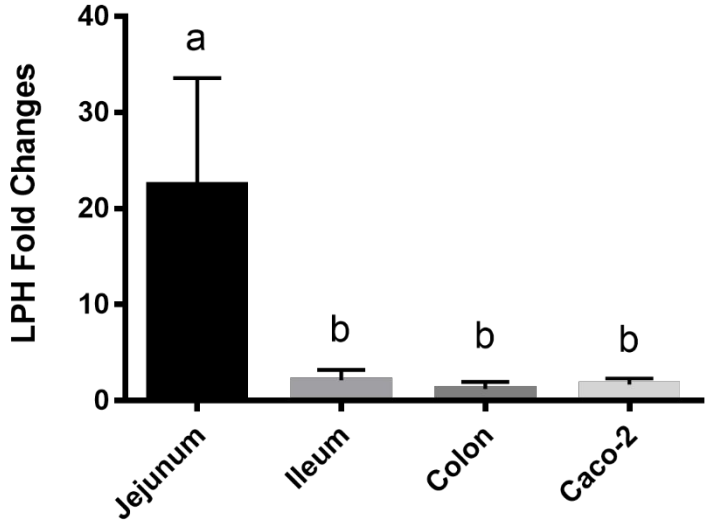
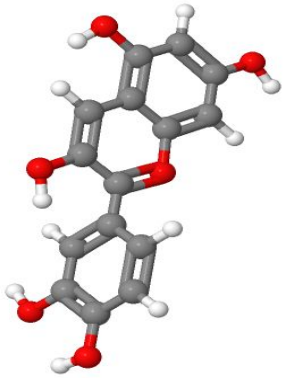
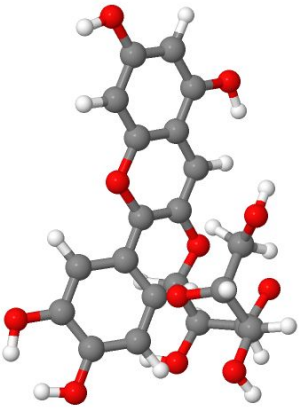


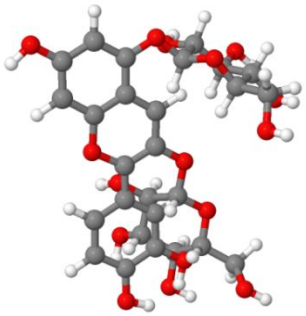
Figure S2. 3D structures of flavonoid aglycones and respective mono- and di-glycosides and the two glucose transporters SGLT-1 and GLUT2 studied.



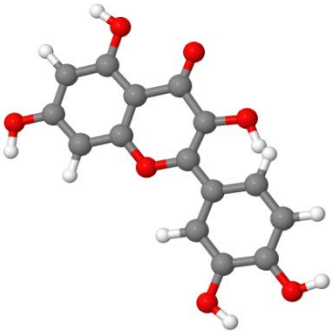
Cyanidin



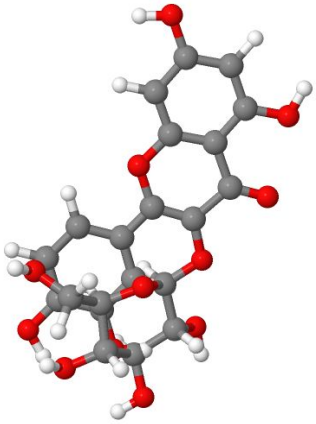
Cyanidin-3-O-glucoside Quercetin



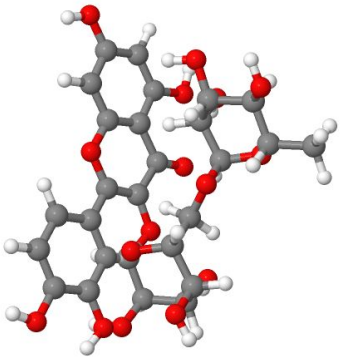
Cyanin



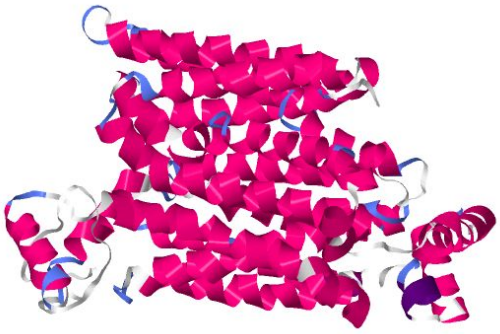
Quercetin



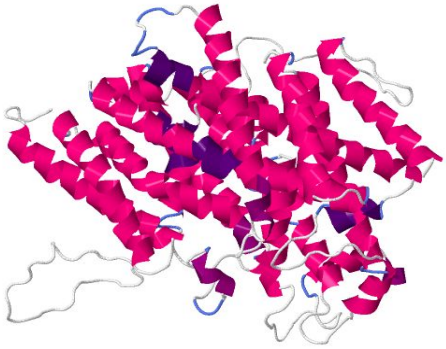
Quercetin 3-ß-D-glucoside



Rutin



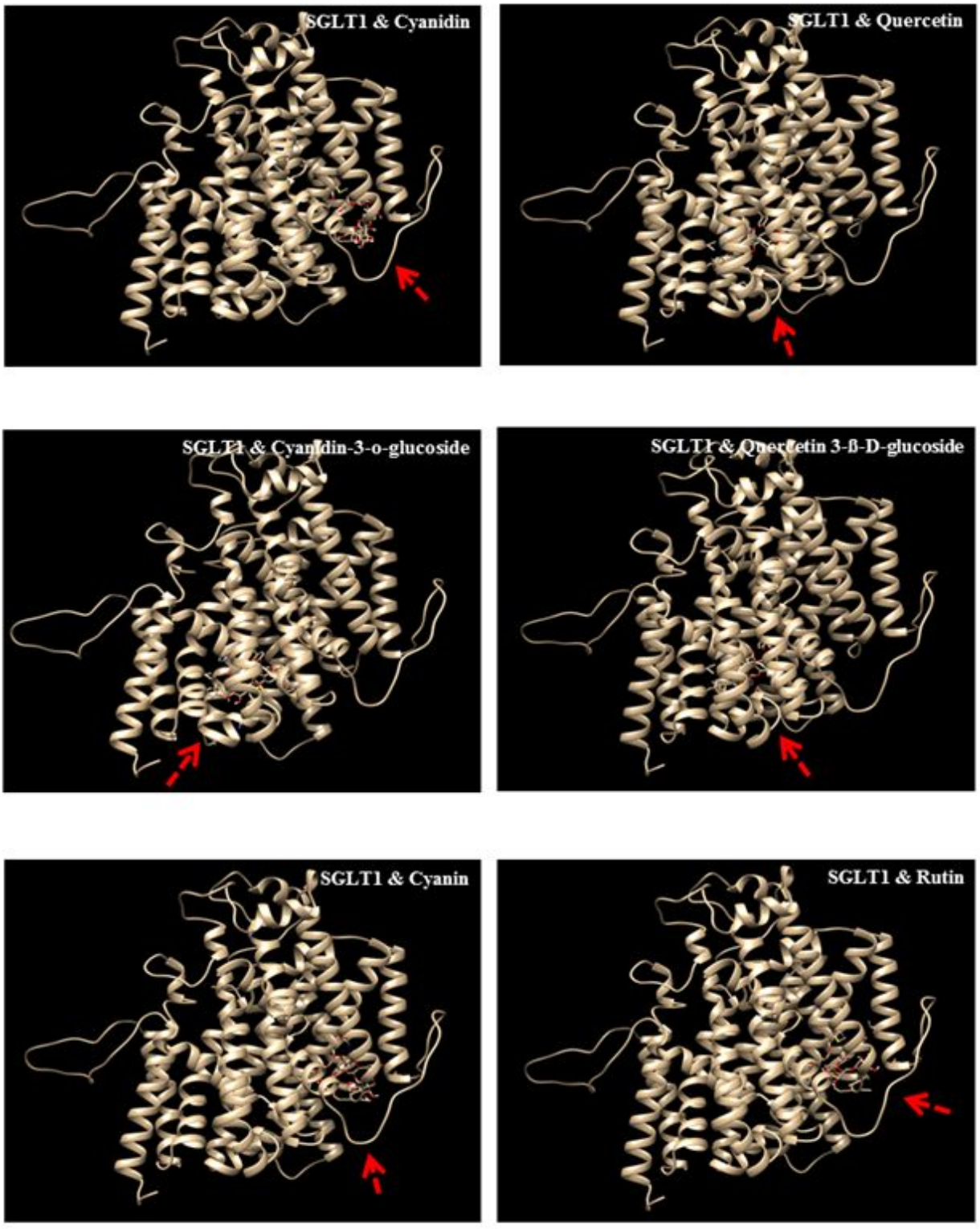
Glucose Transporter 2 (GLUT2)



Sodium/Glucose cotransporter 1 (SGLT1)

Figure S3. Predicted binding/docking sites of the studied flavonoid aglycones and respective mono- and di-glycosides within the SLGT-1 (**A**) and GLUT2 (**B**) transporter pockets.

A



B

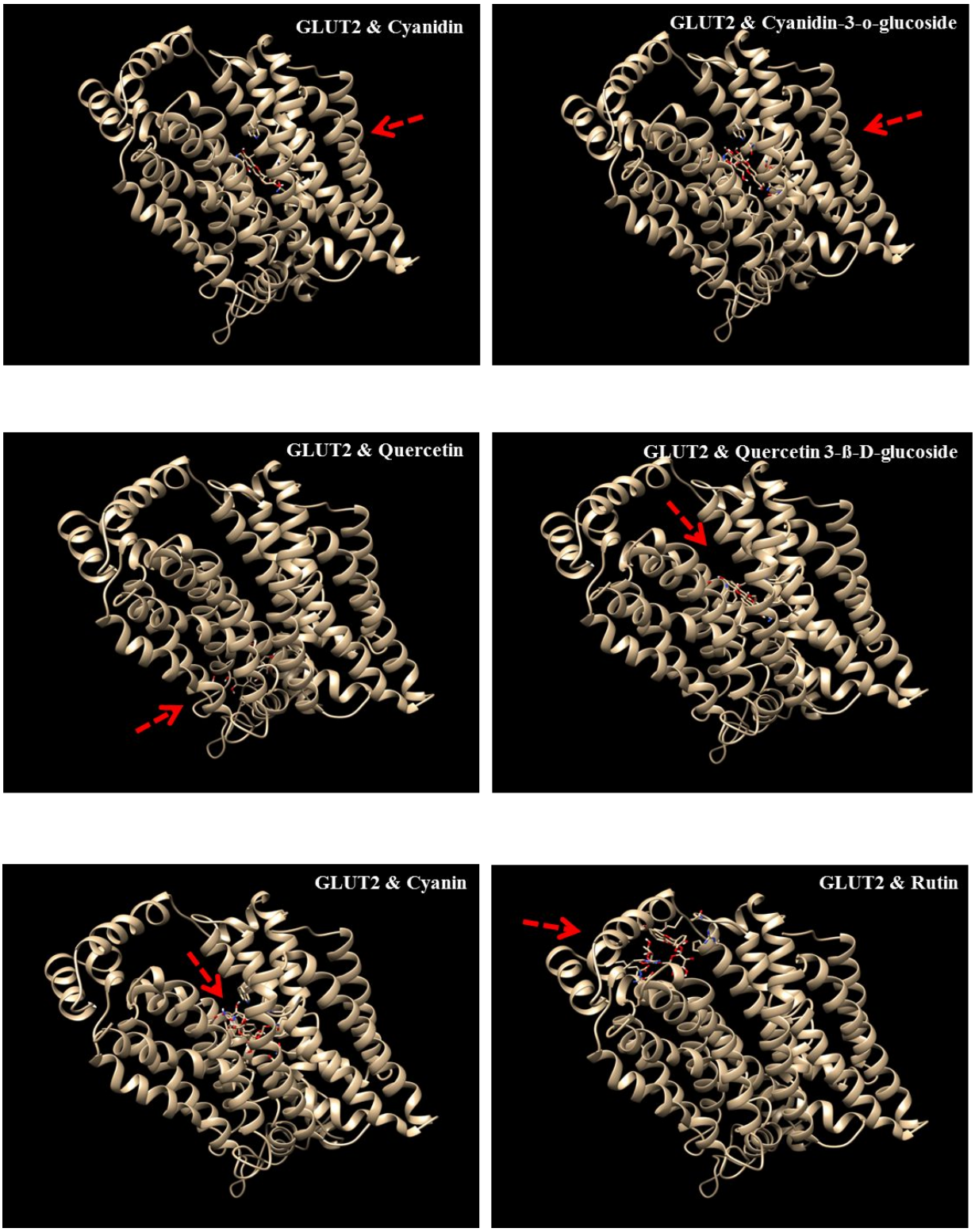

GLUT2 & Cyanidin
GLUT2 & Cyanidin-3-o-glucoside
GLUT2 & Quercetin
GLUT2 & Quercetin 3-ß-D-glucoside
GLUT2 & Cyanin
GLUT2 & Rutin

Figure S4. Topographic presentation of the di-glycosides. Cyanin (**A**) and rutin (**B**) had totally different atomic rearrangements that establish unique overall affinity and steric hindrances with the binding sites of the transporters.