



Universidade de São Paulo
Faculdade de Ciências Farmacêuticas



Brazilian Regional Fruits as a Source of Bioactive Compounds

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Regional Seminar 2017 in Latin America
San Jose, Costa Rica



UNIVERSIDADE
DE SÃO PAULO



Brazilian Biome



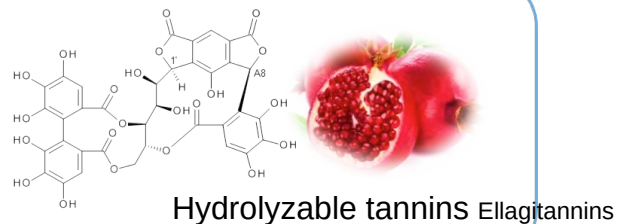
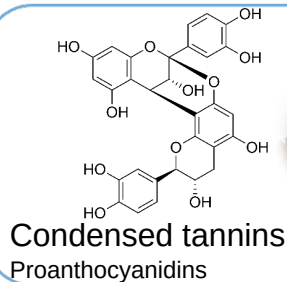
Brazilian Bioma



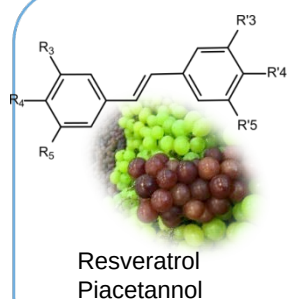


PHENOLIC COMPOUNDS

Tannins

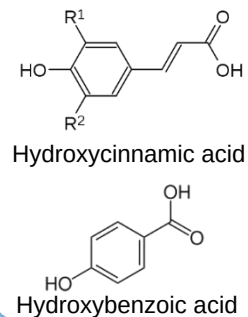


Stilbenes

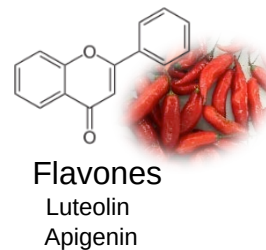
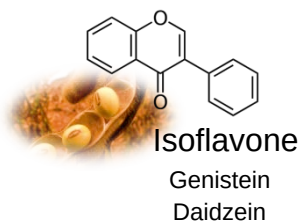
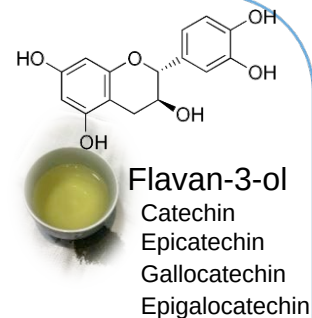
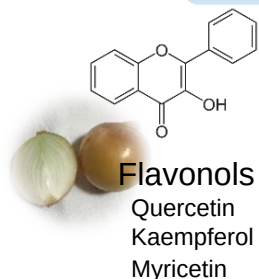


**Fruits and Vegetables
(Poly)phenols**

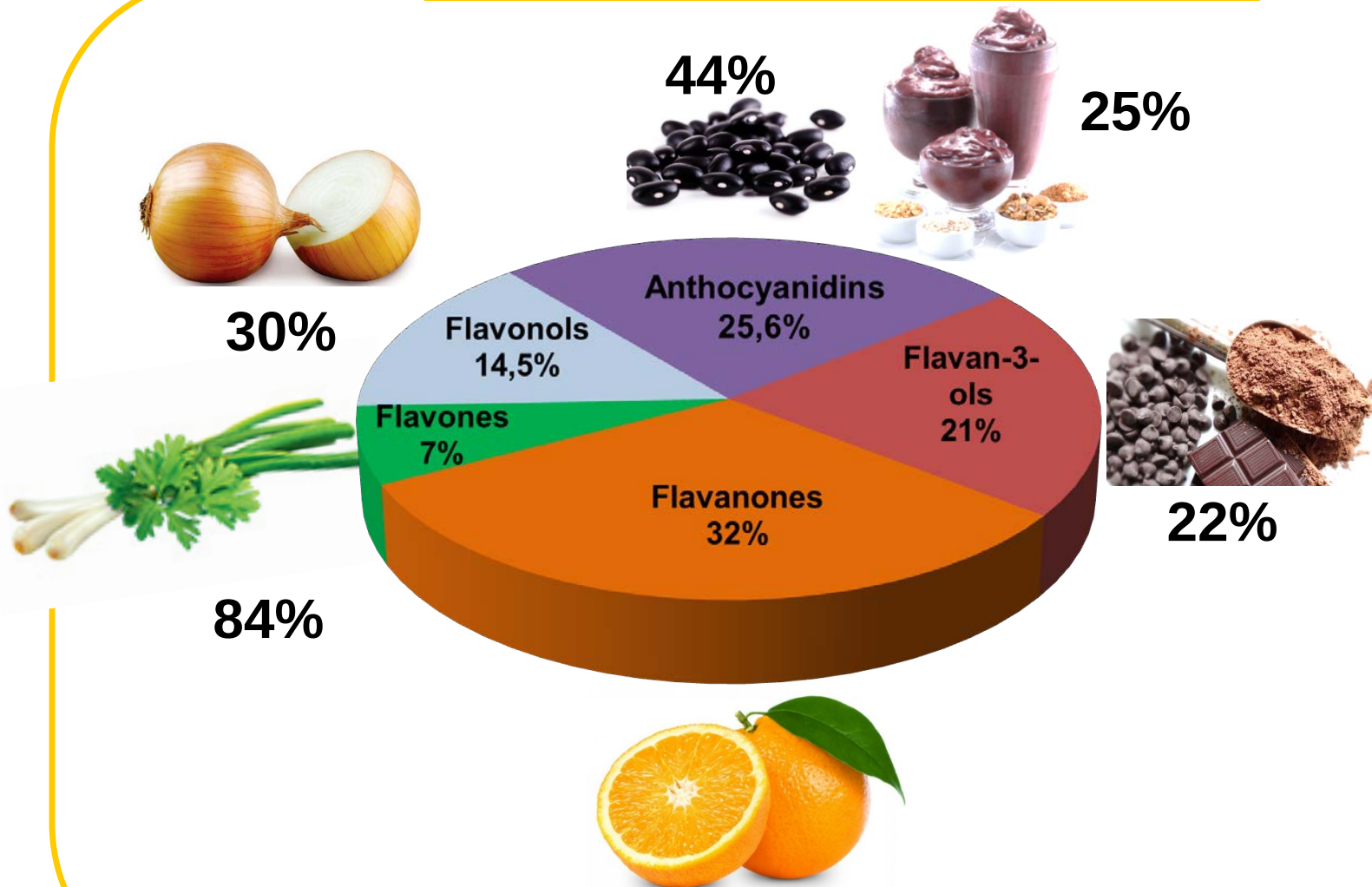
Phenolic acids



Flavonoids



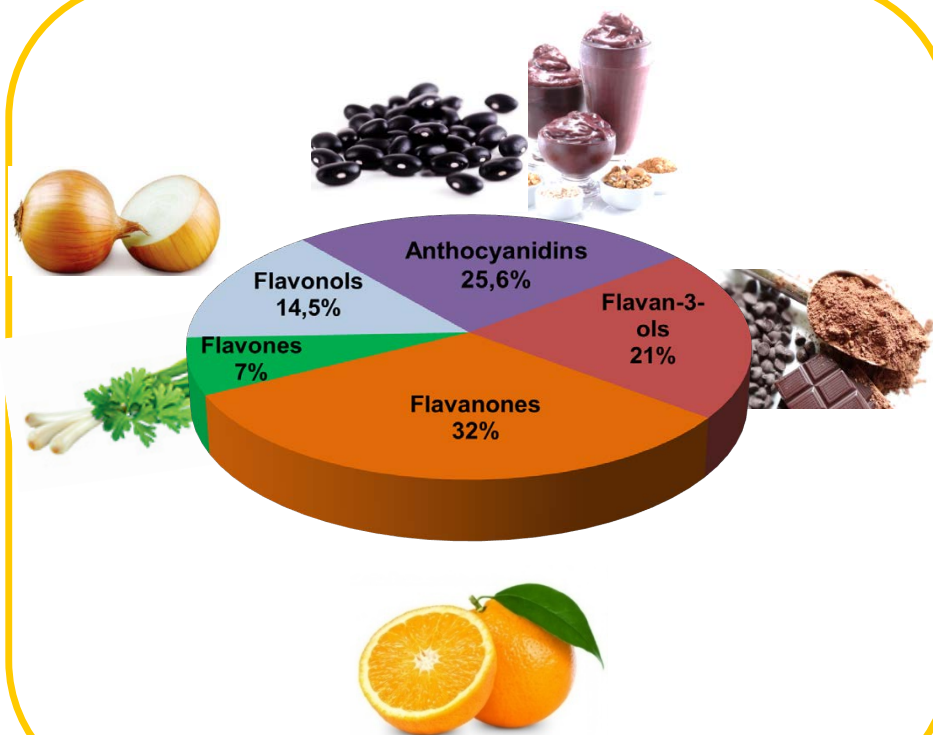
Brazilian Estimated Dietary Flavonoids Intake



National Demographic Census
POF 2008-2009

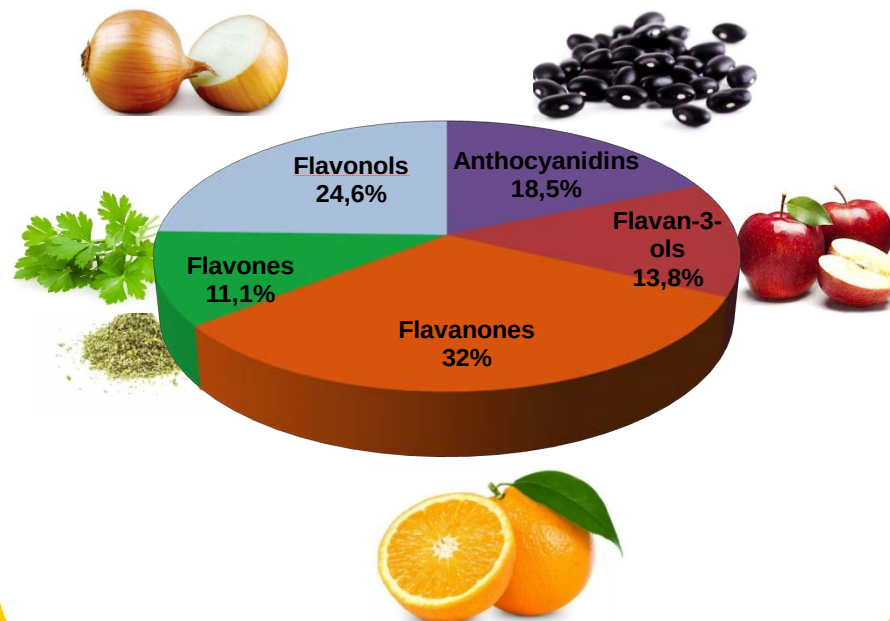
Anacleto et al.
Submitted, 2017

National Demographic Census POF 2008-2009



21.9 mg/day

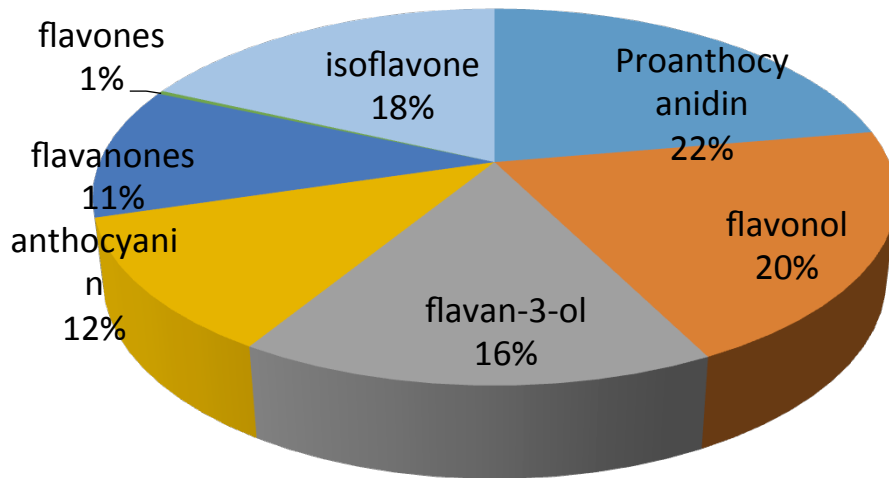
Food Service-SP 2016



62.8 mg/day

74.4 mg/day
Arabbi and Lajolo, 2004

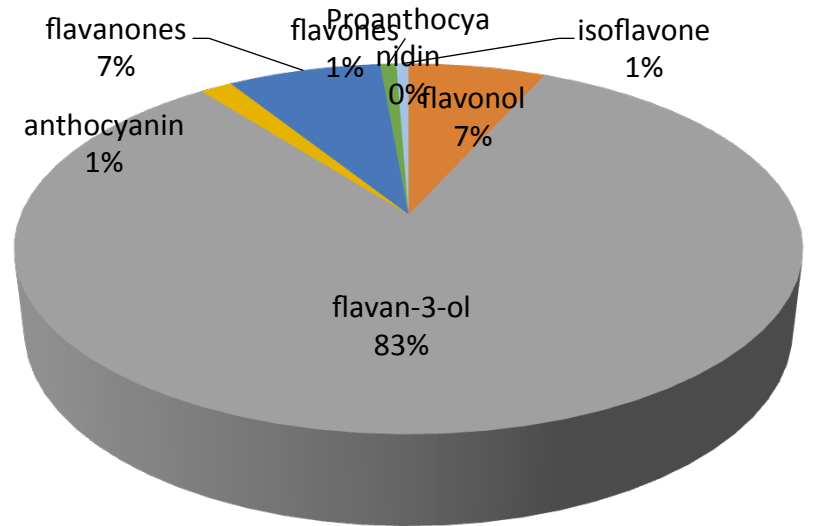
Korean Population 2007-2012



Apple	69 mg
Mandarin	39 mg
Tofu	37 mg
Onion	29 mg
Grape	29 mg

318 mg/day

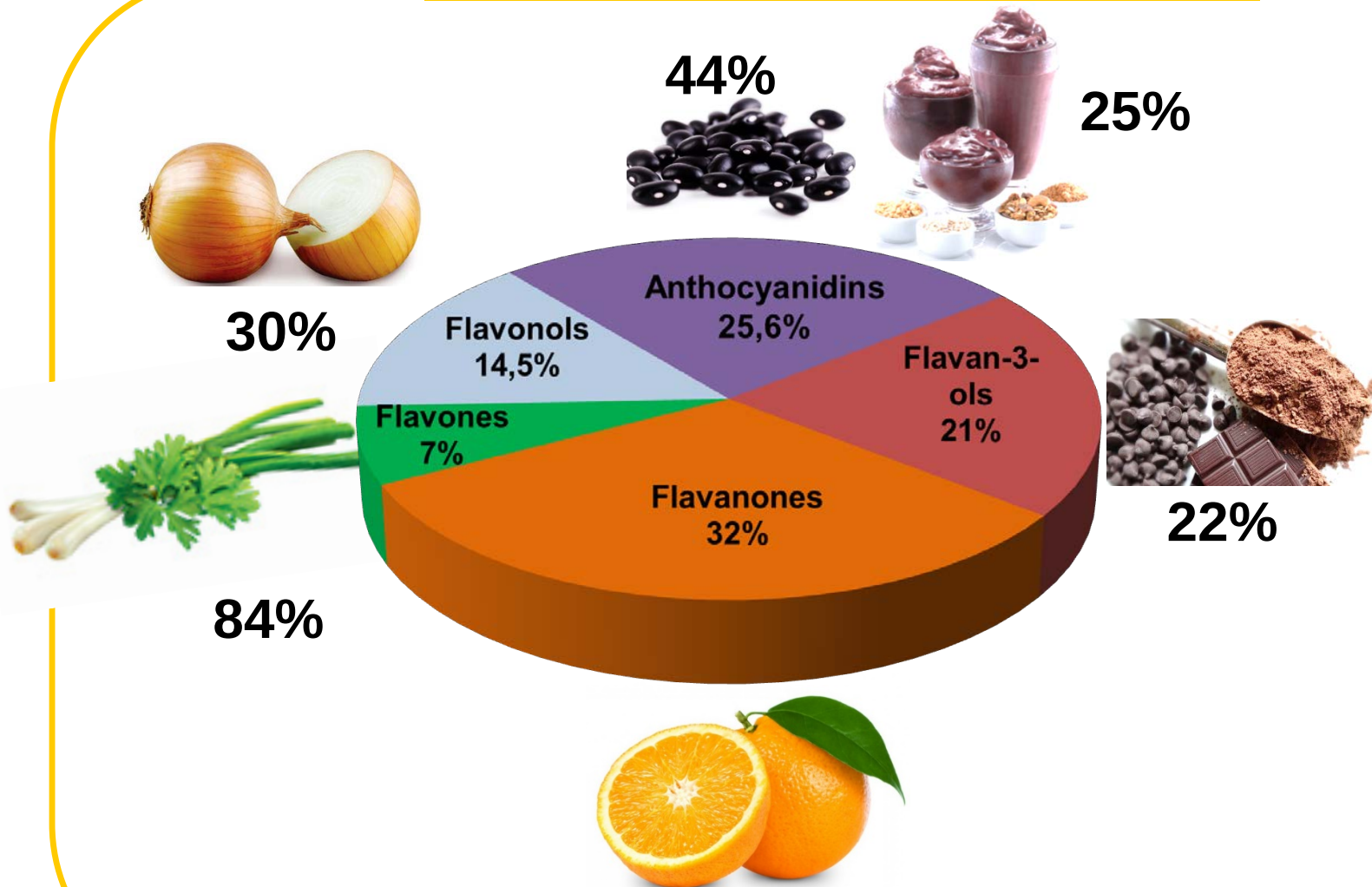
US Population 1999-2002



Tea	157 mg
Citrus	11 mg
Wine	4 mg

189.7 mg/day

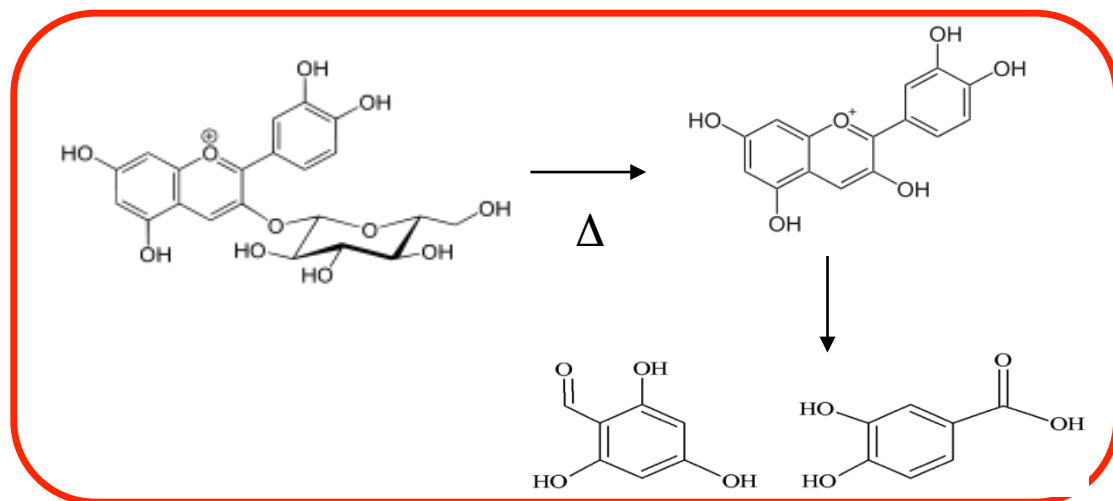
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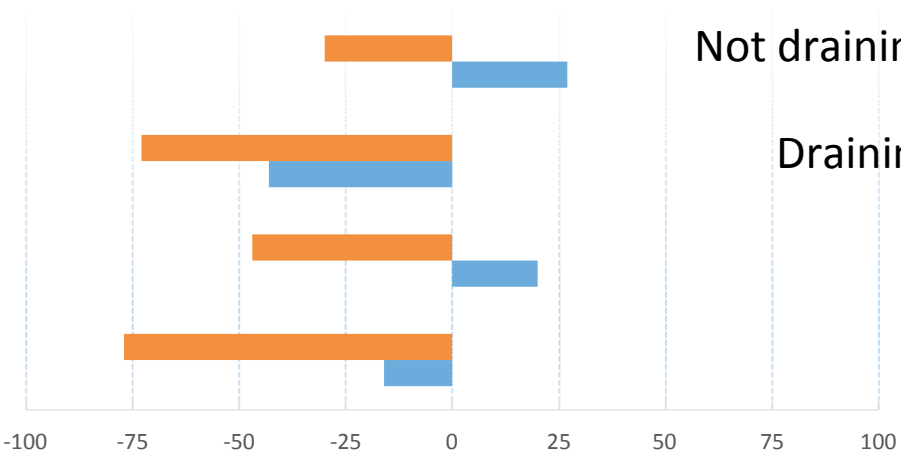
National Demographic Census
POF 2008-2009

Anacleto et al.
Submitted, 2017

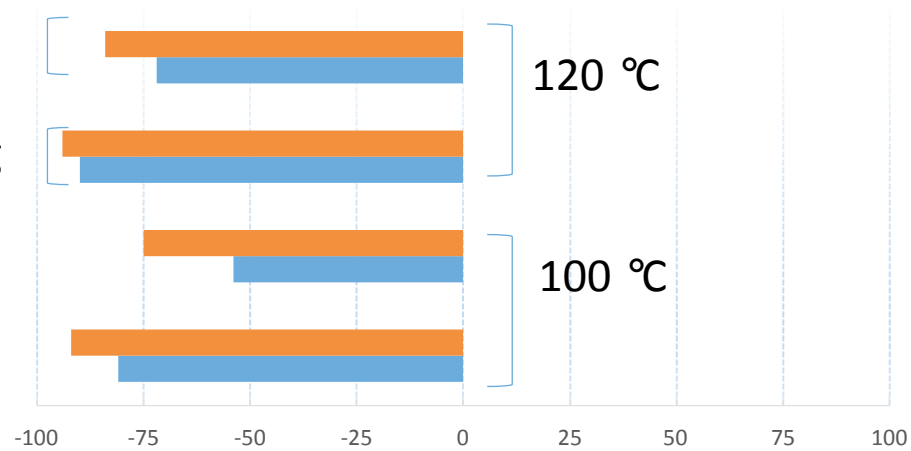
With Soak Without Soak



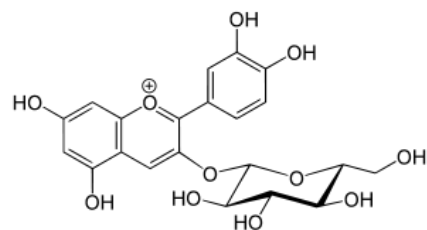
Total Quercetin- 3.0 mg/100 g dw



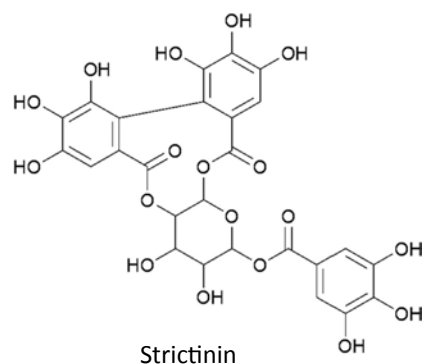
Total Anthocyanins- 37 mg/100 g dw



Eugenia brasiliensis- Grumixama “Brazilian Cherry”



Cyanidin 3-O-glucoside



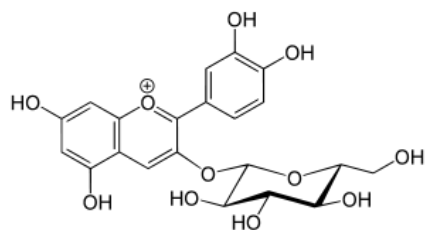
Strictinin



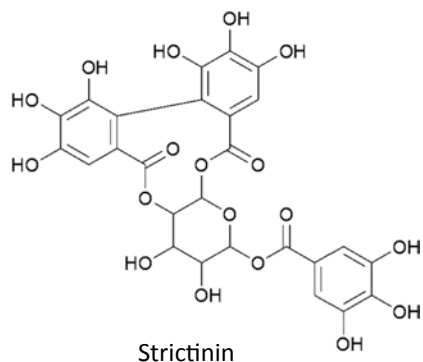
Eugenia Uniflora

mg/100 g	Purple Grumixama	Yellow Grumixama
Quercetin	71.82	132.11
Cyanidin	401.81	
Catechin	284.34	264.79
Ellagic acid	20.12	54.81
Total EA	572.02	939.91

Eugenia brasiliensis- Grumixama “Brazilian Cherry”



Cyanidin 3-O-glucoside



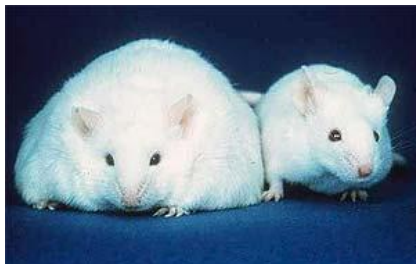
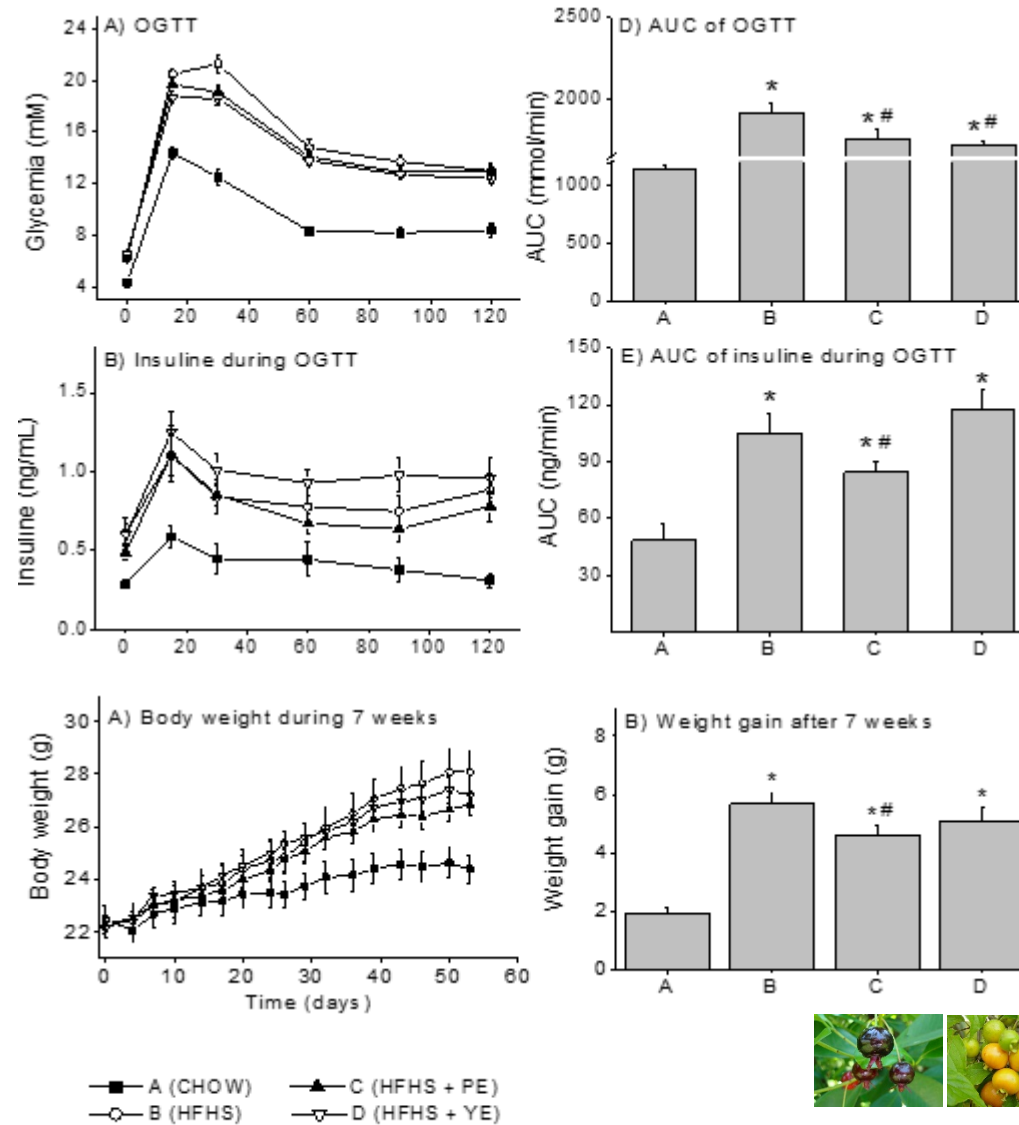
Strictinin



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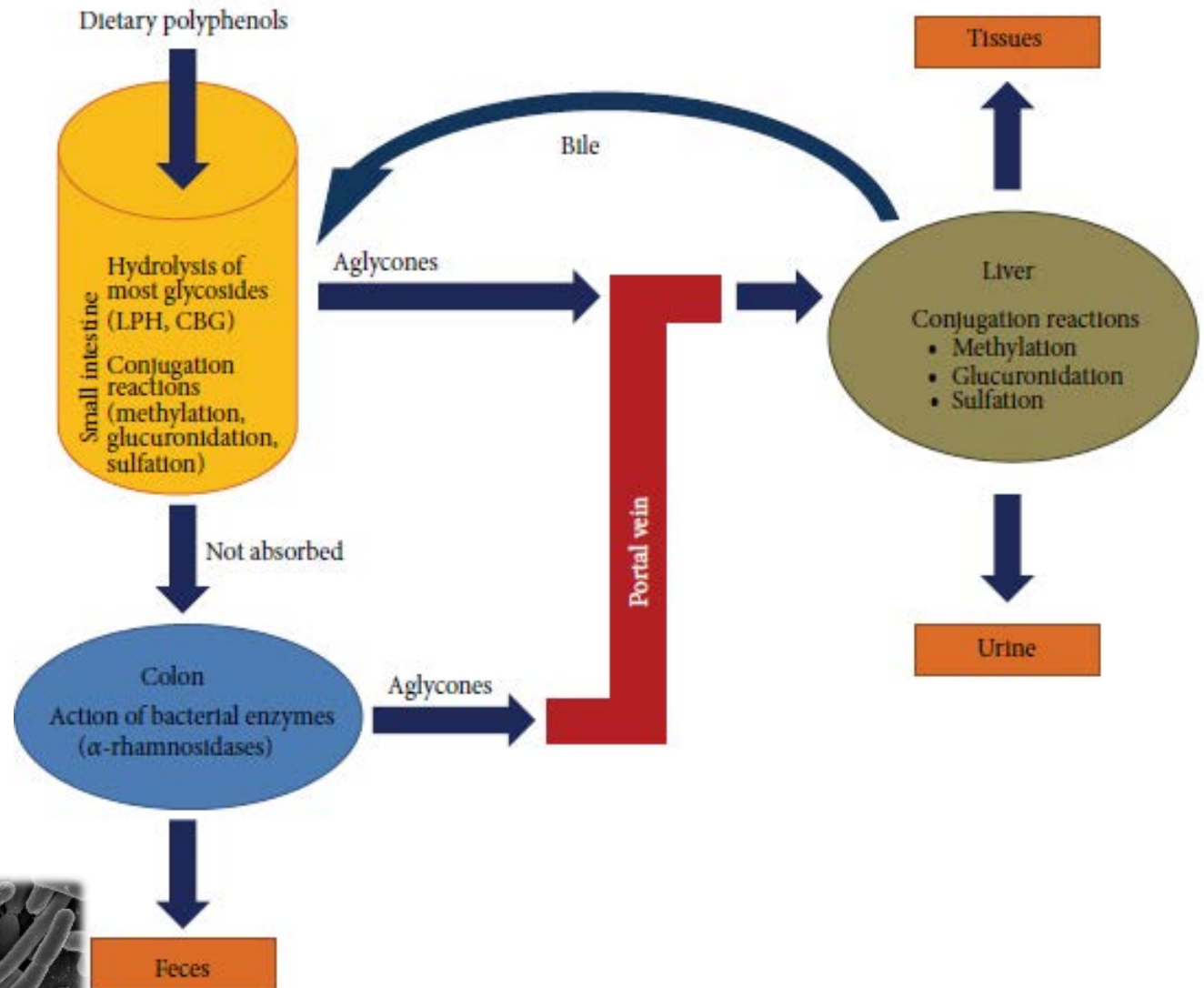
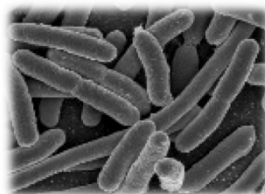
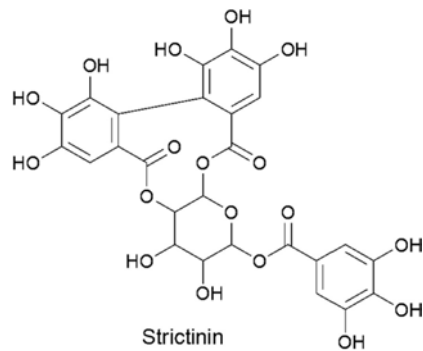
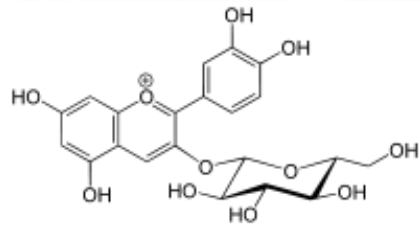


Insuline Resistance– Animal model



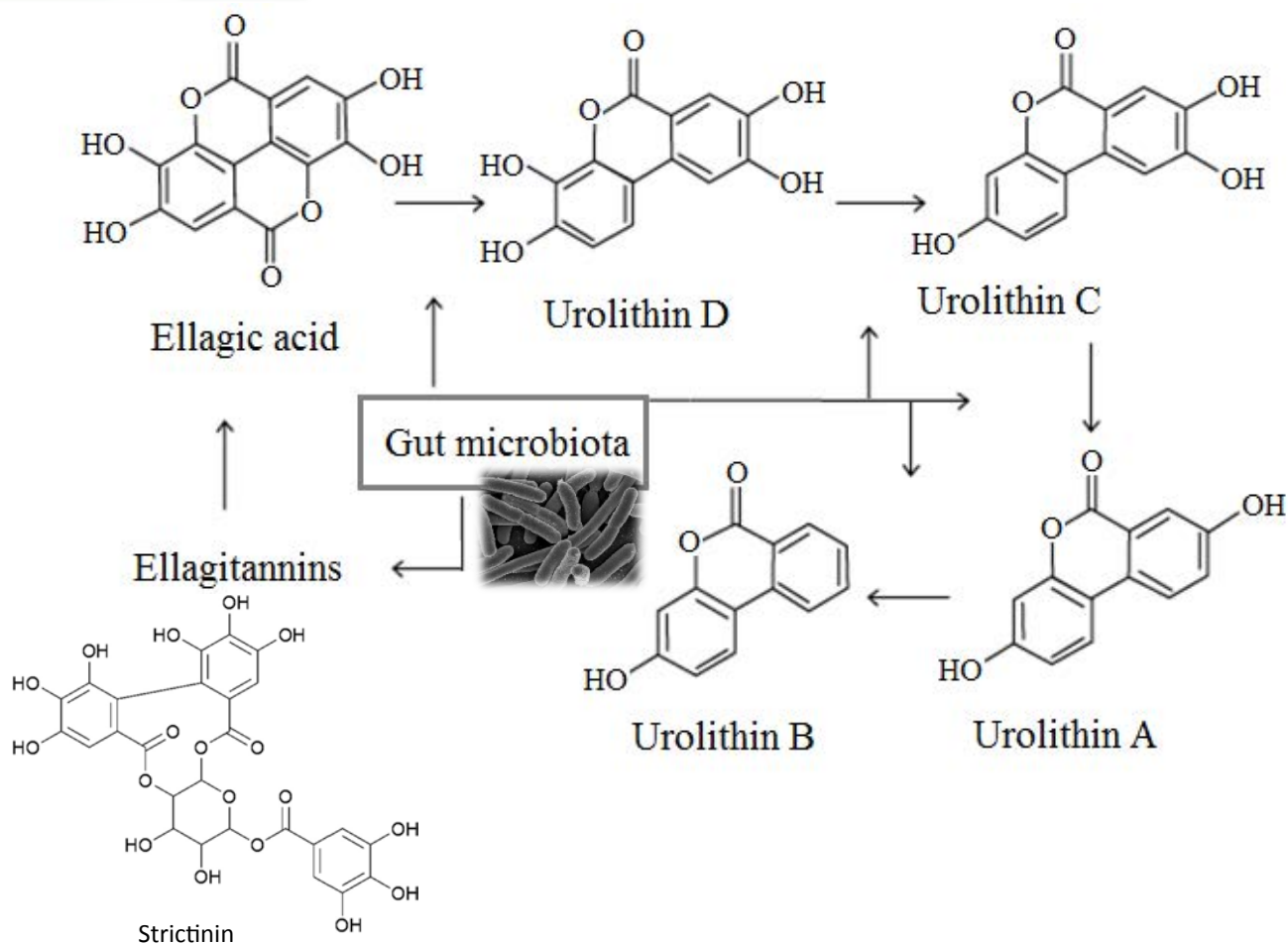


Absorption and metabolism of flavonoids

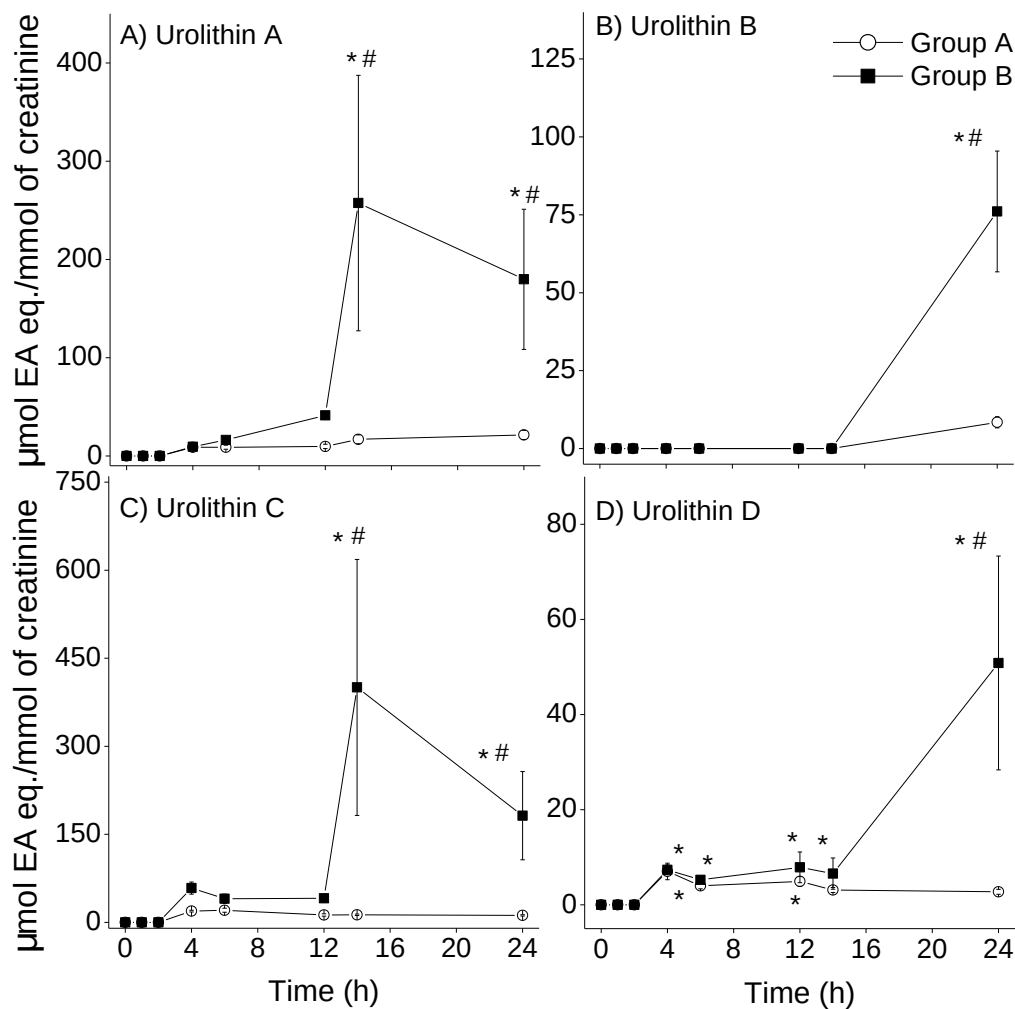




UROLITHINS FROM ELLAGITANNINS

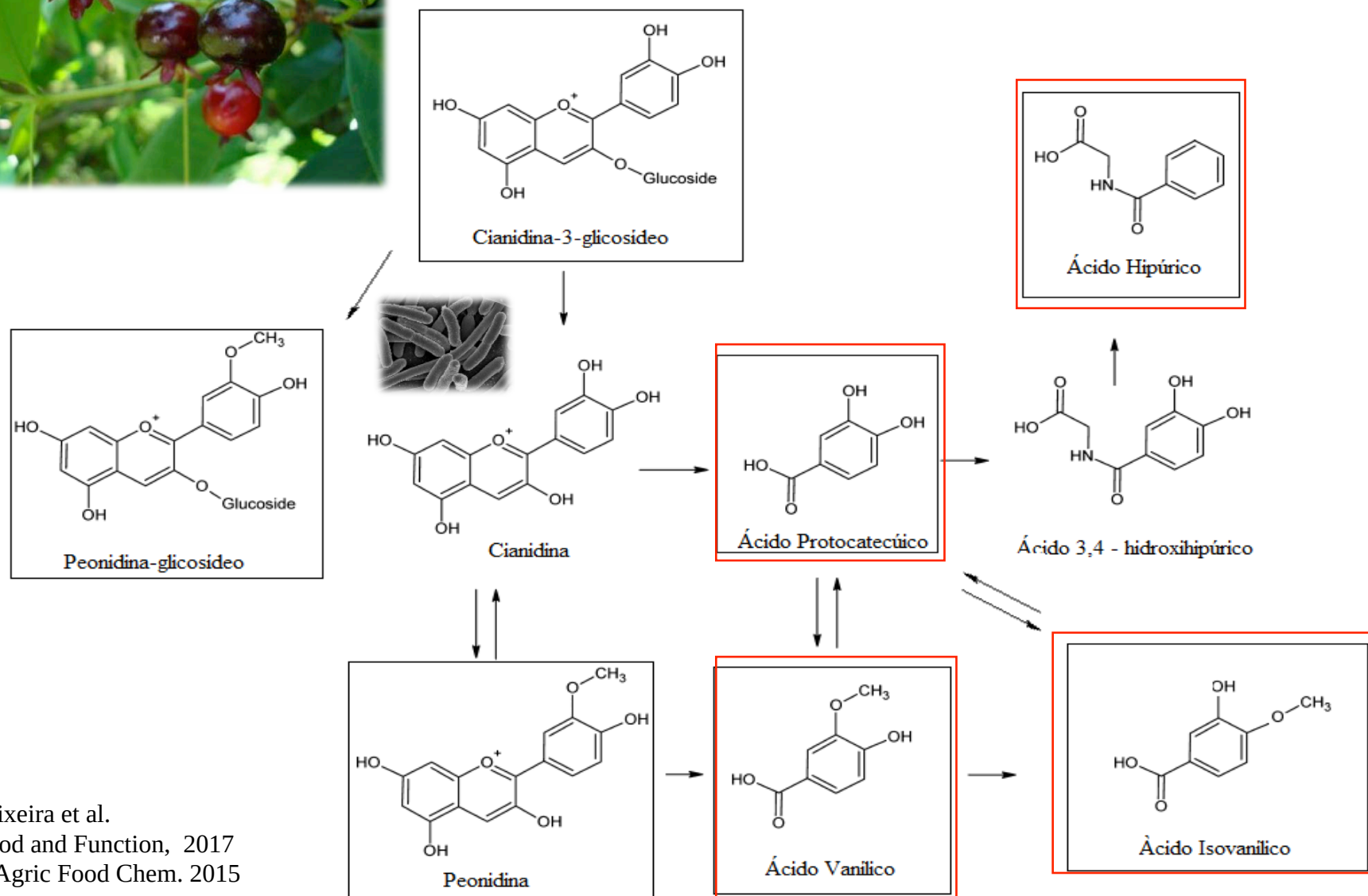


Time course concentration of urolithins in urine after intake of a single dose of grumixama juice



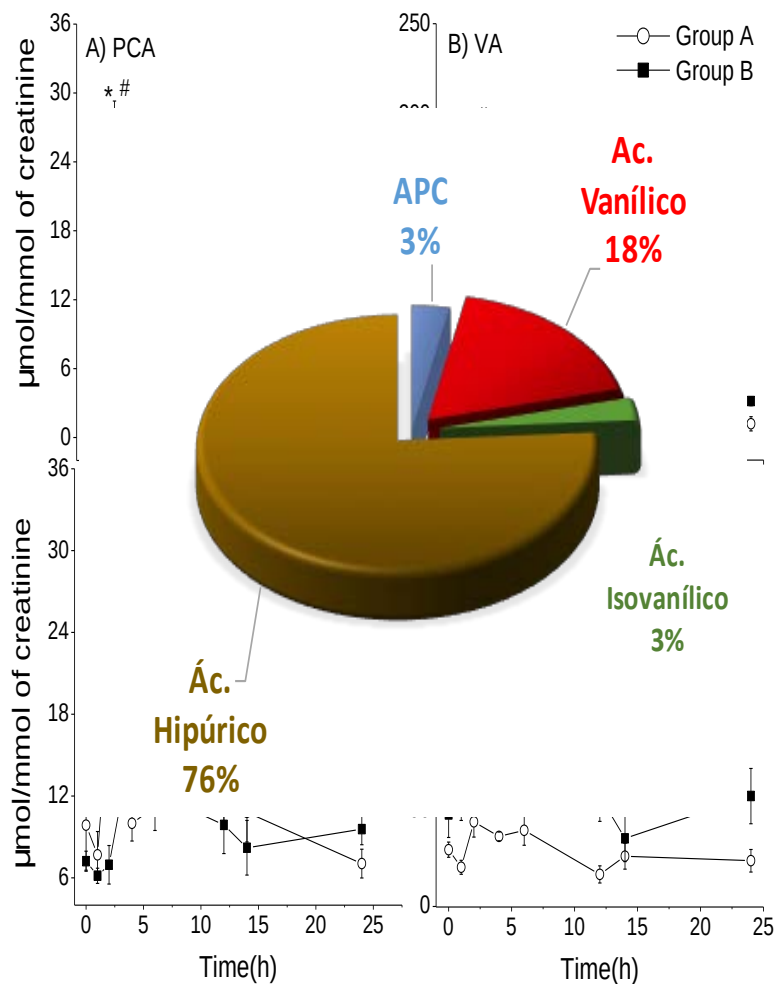
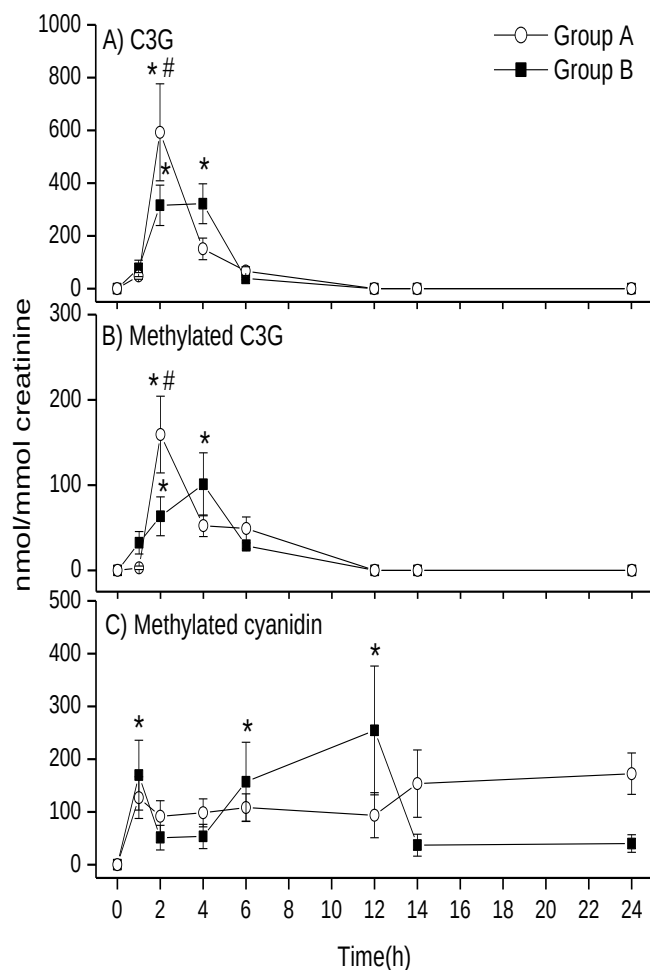


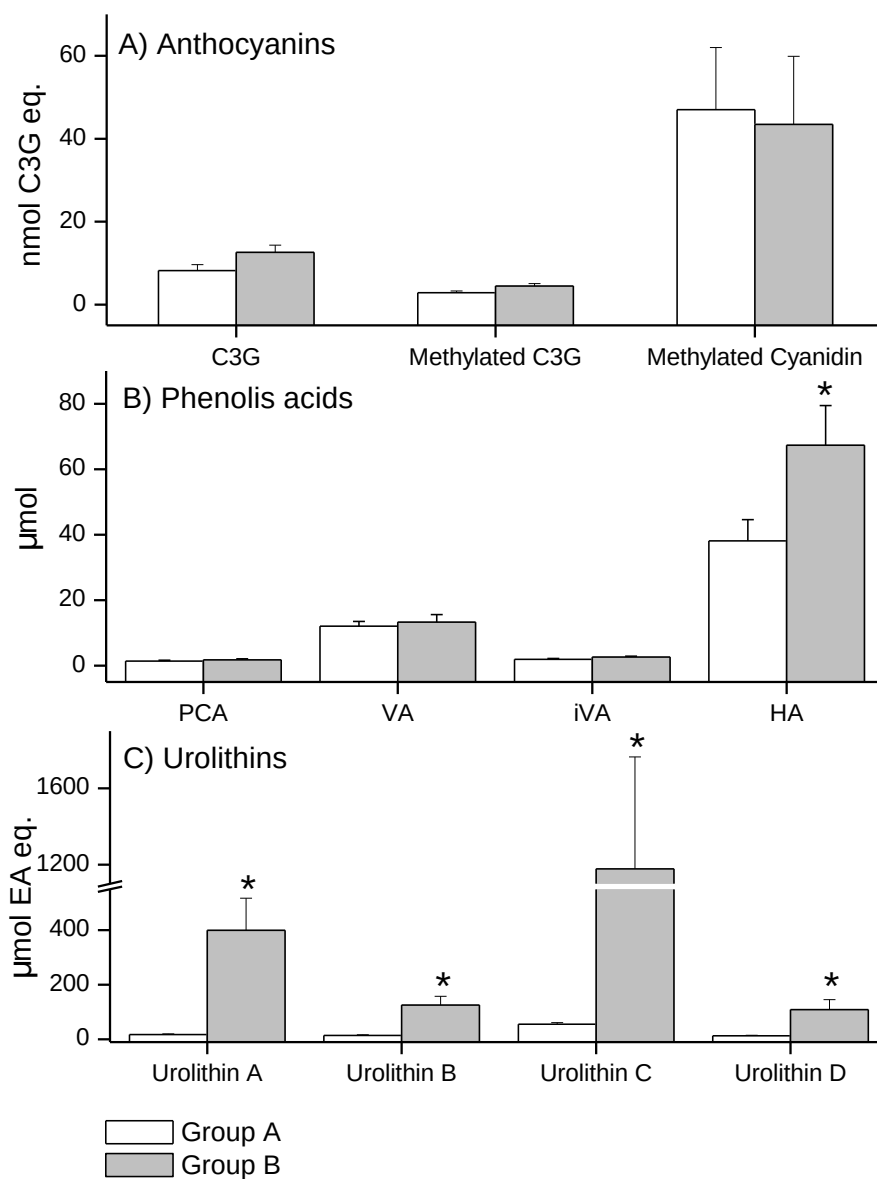
EXCRETION OF ANTHOCYANINS





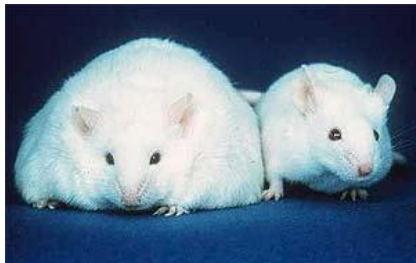
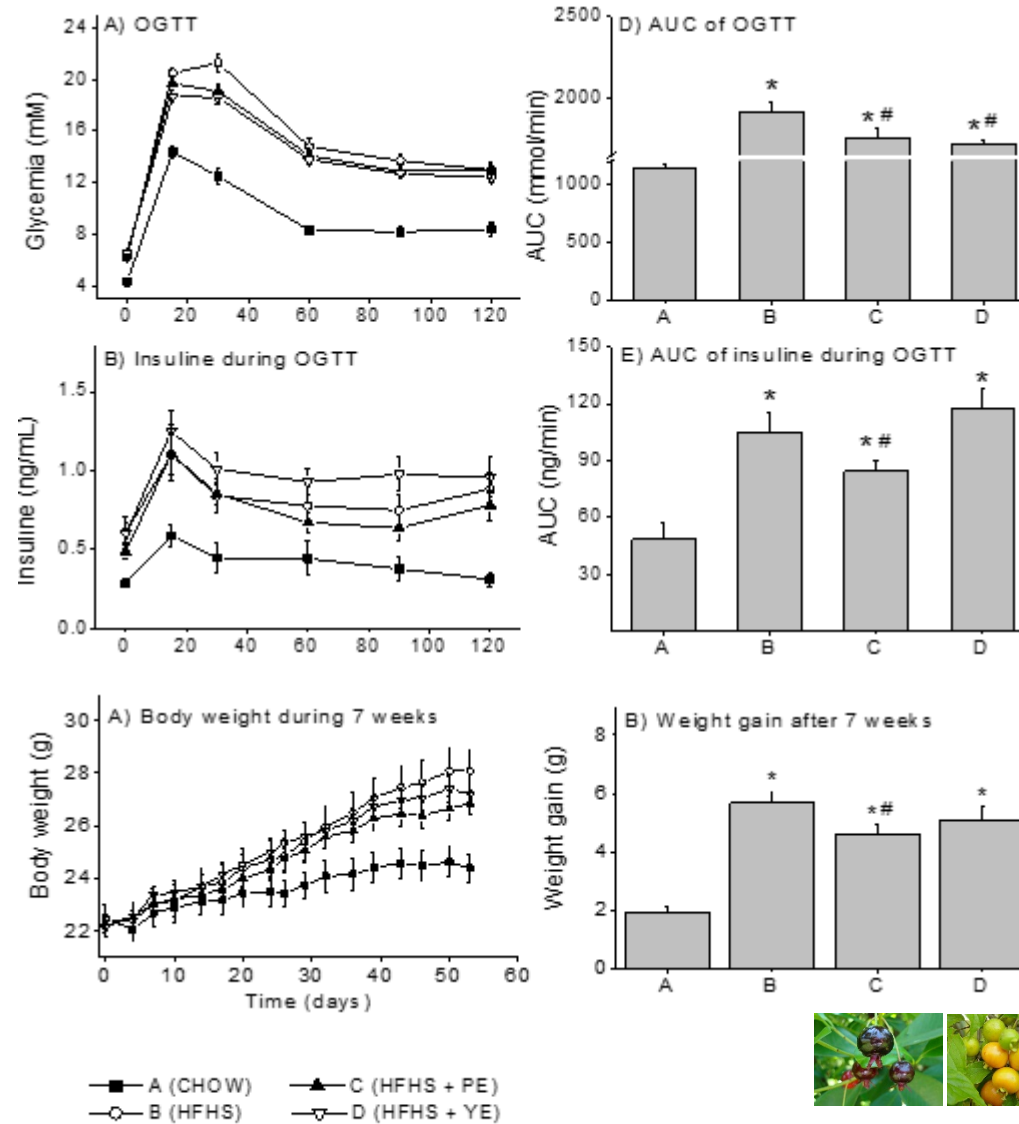
Time course concentration of anthocyanins and phenolic acids in urine after intake of a single dose of grumixama juice



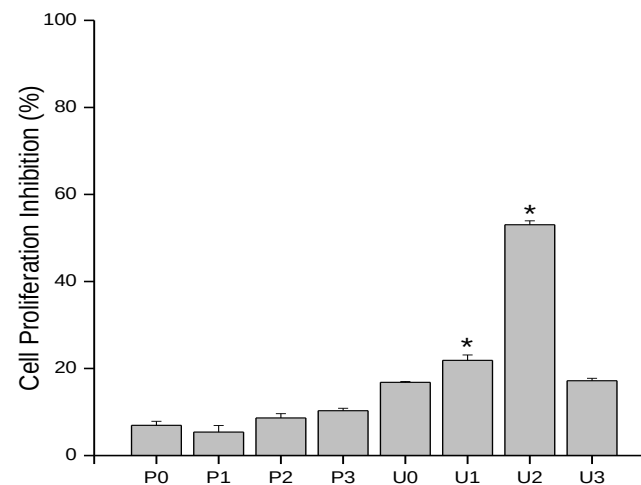
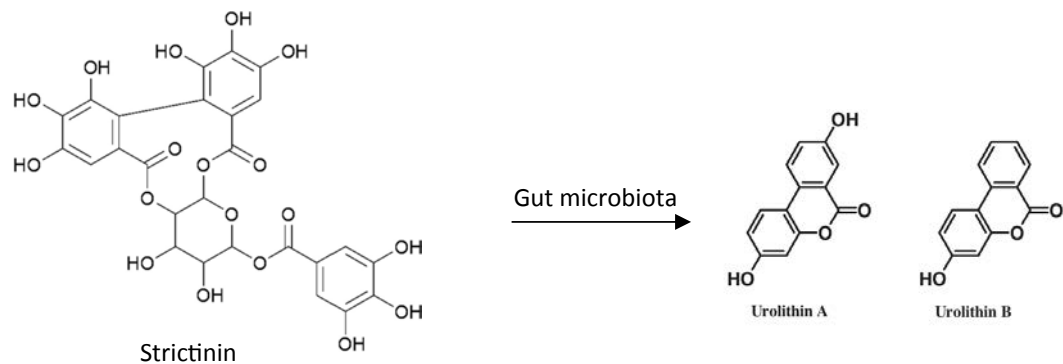
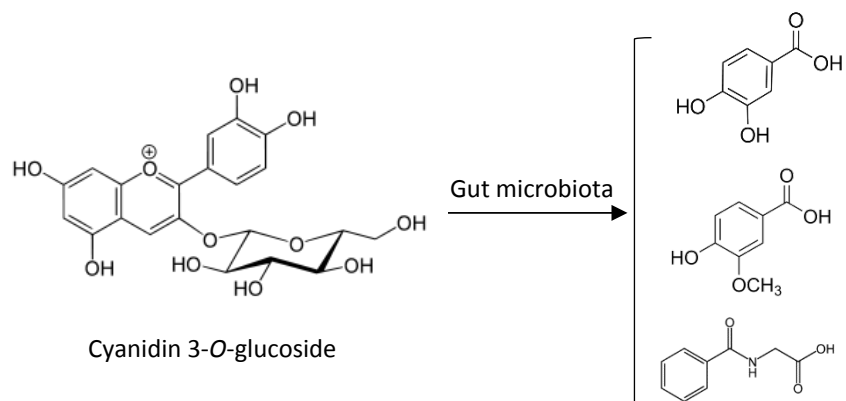


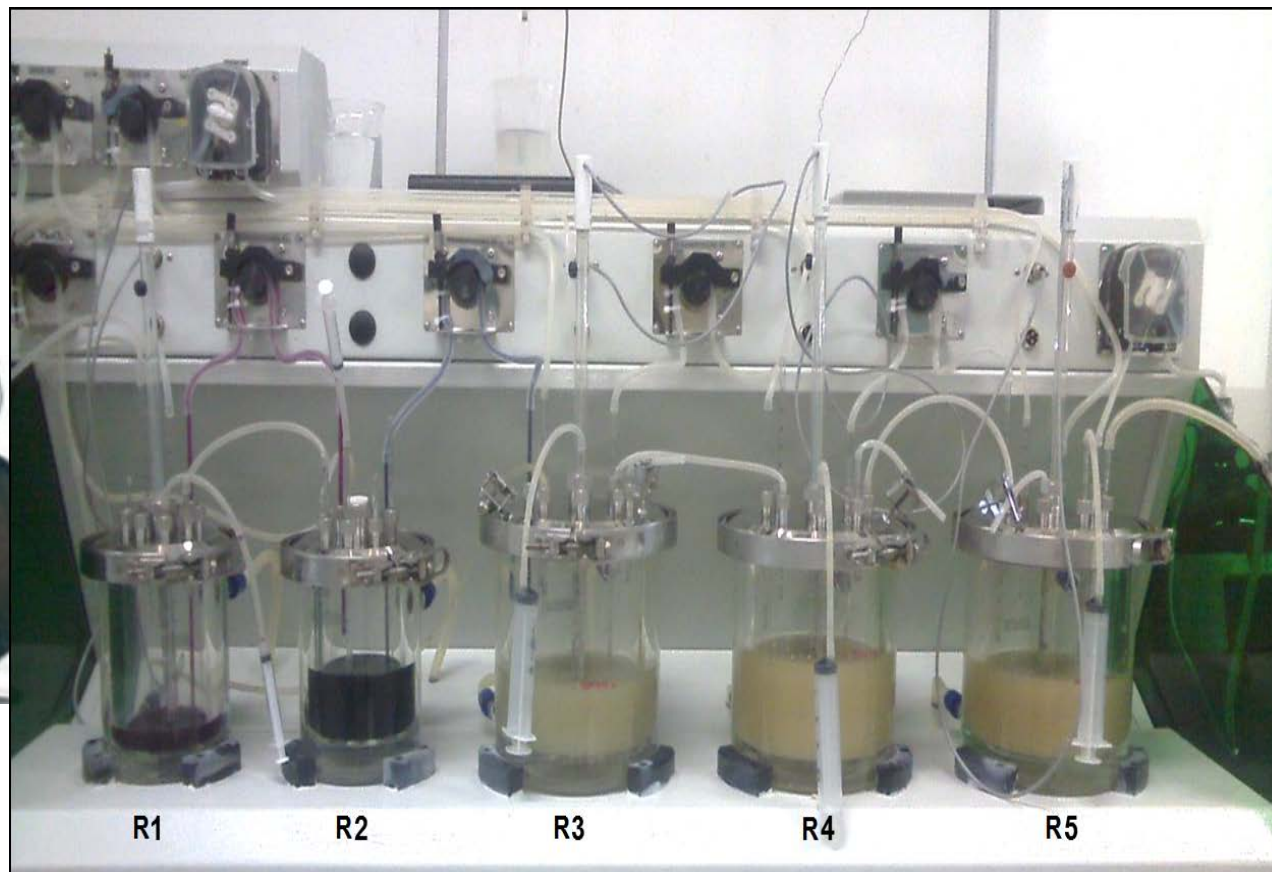


Insuline Resistance– Animal model

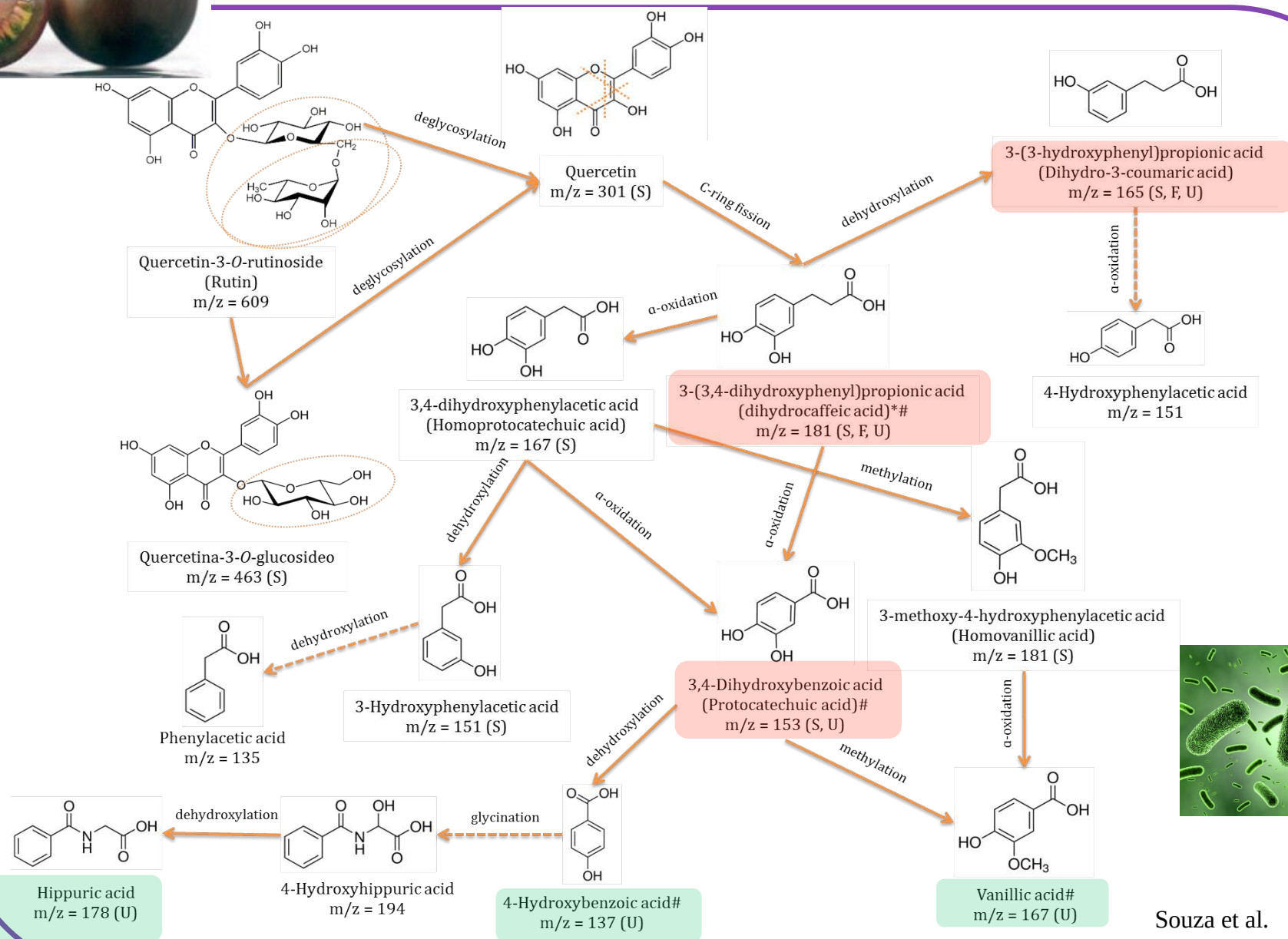


Inhibition of MDA-MB 231 human breast cancer cells





Proposed Route of Anthocyanin Metabolization in vitro and in vivo



Thank You !!!!!

