
Effect of Gut Microbiota Biotransformation on Dietary Tannins and Human Health Implications

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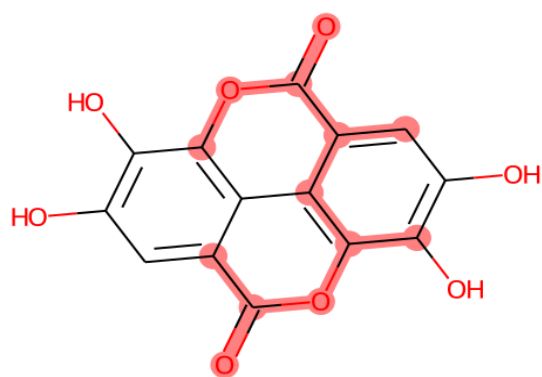
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Table S1. Predictive Model Performances (means of ROC-AUC-score)

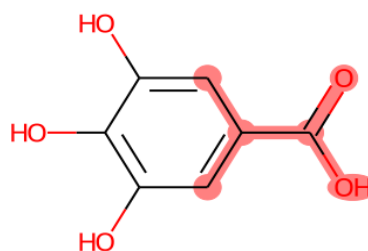
Biological Effect	Training (%)	Testing (%)
Anti-Inflammatory	99.81	83.28
Antioxidant	99.93	83.42
Anticancer	99.90	88.83
Anti-atherosclerotic	99.99	86.44

Table S2. Neural network architecture and parameters

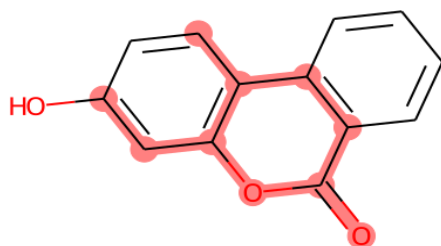
Classifier	dc.models.MultitaskClassifier
n_features	1024
layer_sizes	[500, 1000]
dropouts	[.1]
learning_rate	0.001
weight_init_stddevs	[0.2]
batch_size	311
optimizer	Adam(beta1=0.9, beta2=0.999)



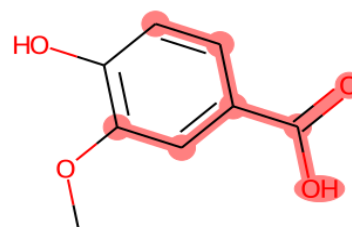
Ellagic acid



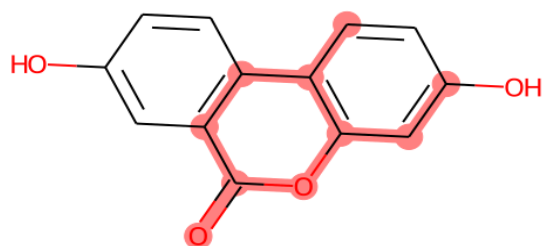
Gallic acid



Urolithin B



Vanillic acid



Urolithin A

Figure S1. Chemical features of gut-biotransformed tannin metabolites vs. anti-inflammatory health effect

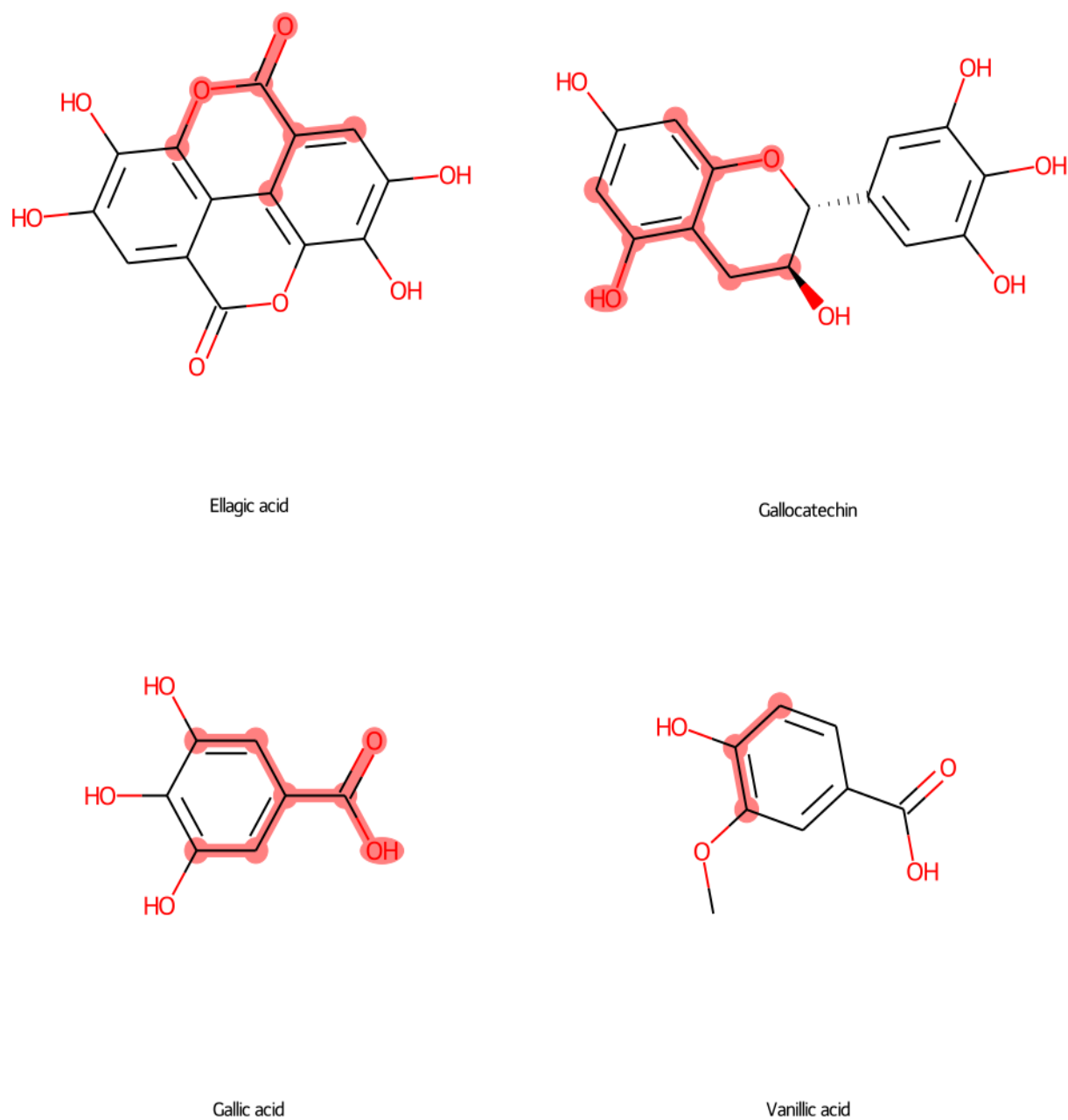


Figure S2. Chemical features of gut-biotransformed tannin metabolites vs. antioxidant health effect

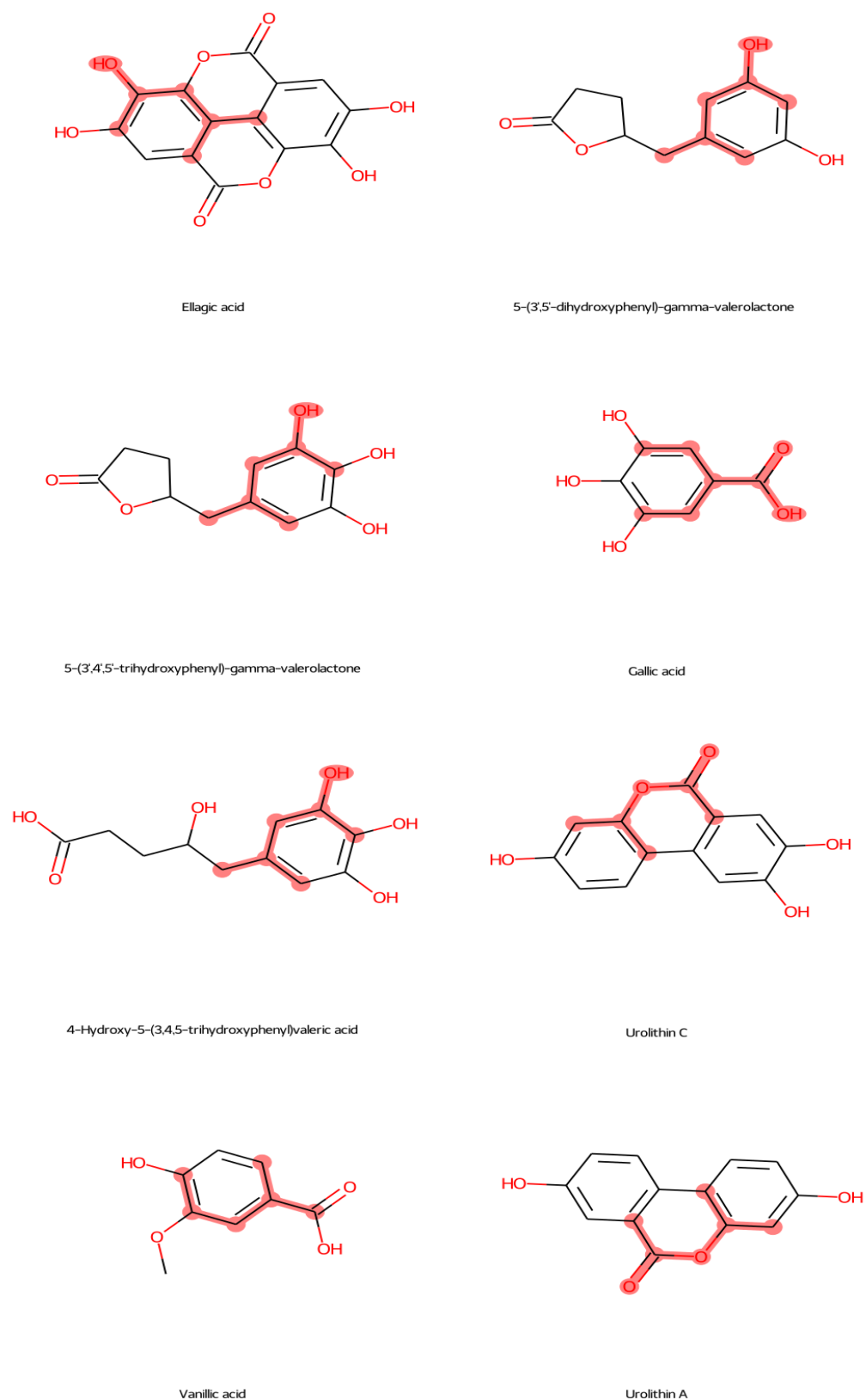
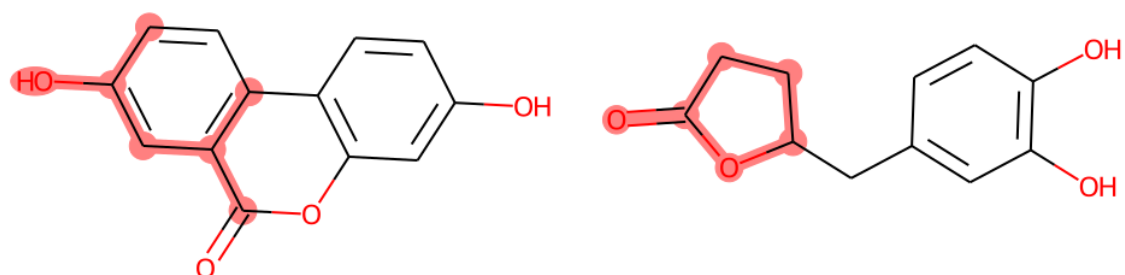


Figure S3. Chemical features of gut-biotransformed tannin metabolites vs. anticancer health effect



Urolithin A

5-(3,4'-Dihydroxyphenyl)-gamma-valerolactone

Figure S4. Chemical features of gut-biotransformed tannin metabolites vs. anti-atherosclerotic health effect