

Table S1: 2D & 3D Structures of compounds from *Artemisia monosperma*

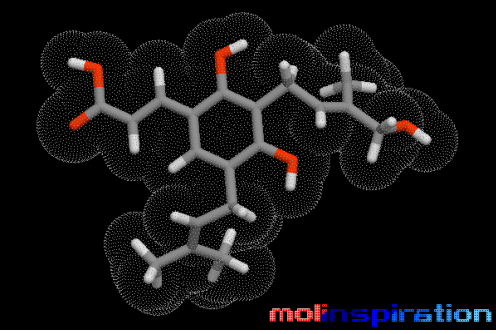
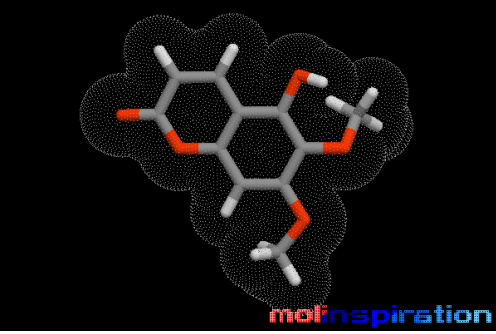
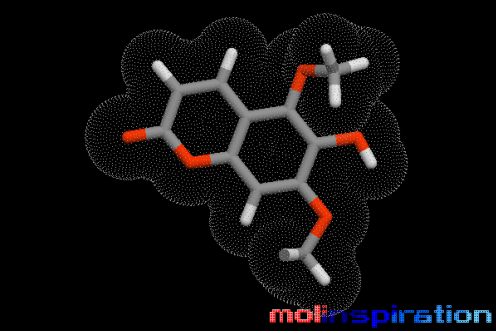
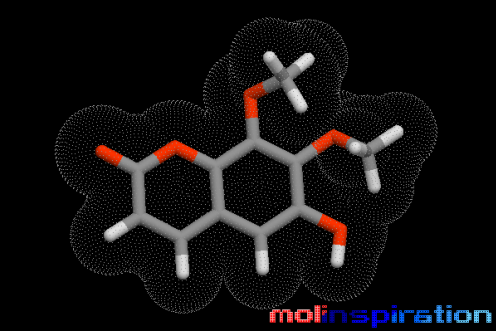
Compounds	3-D Structure
4,6-Dihydroxy-3-(3-Methyl-2-Butenyl)-5-(4-Hydroxy-3-Methyl-2-Butenyl)Cinnamic Acid	
5-Hydroxy-6,7-Dimethoxycoumarin (Tomentin)	
6-Hydroxy-5,7-Dimethoxychromen-2-One (Fraxinol)	
6-Hydroxy-7,8-Dimethoxycoumarin	

Table S2: Bioavailability Radar analysis of screened compounds using SwissADME

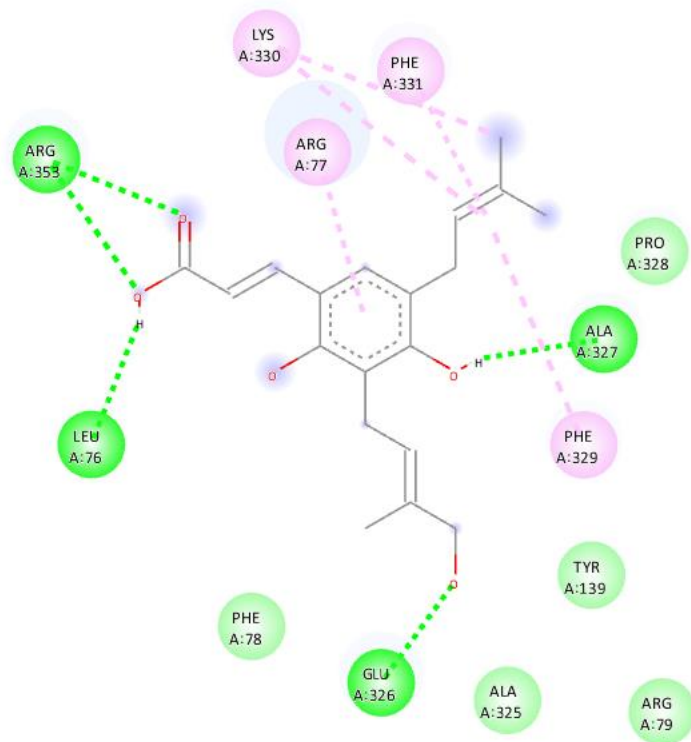
Compounds	Bioavailability Radar
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<p>4,6-Dihydroxy-3-(3-Methyl-2-Butenyl)-5-(4-Hydroxy-3-Methyl-2-Butenyl)Cinnamic Acid</p>	
<p>5-Hydroxy-6,7-Dimethoxycoumarin (Tomentin)</p>	
<p>6-Hydroxy-5,7-Dimethoxychromen-2-One (Fraxinol)</p>	
<p>6-Hydroxy-7,8-Dimethoxycoumarin</p>	

Table S3: Various 2D Ligand interactions generated by compounds of *Artemisia monosperma* with Complex of ERK2 with catechol (PDB: 4ZXT) at the catalytically active site

Ligands	2D Ligand Interactions with 4ZXT
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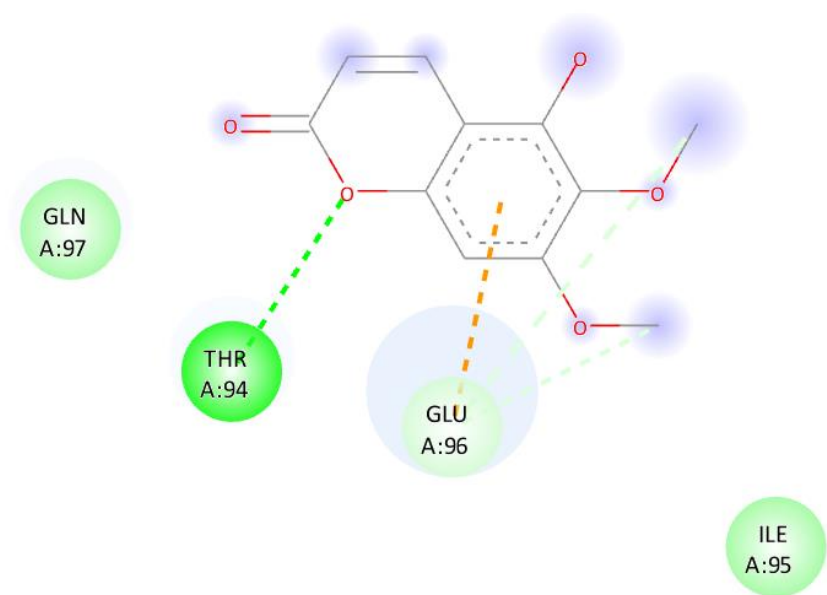
4,6-Dihydroxy-3-(3-Methyl-2-Butenyl)-5-(4-Hydroxy-3-Methyl-2-Butenyl)Cinnamic Acid



Interactions

- | | |
|--|--|
|  van der Waals |  Alkyl |
|  Conventional Hydrogen Bond |  Pi-Alkyl |

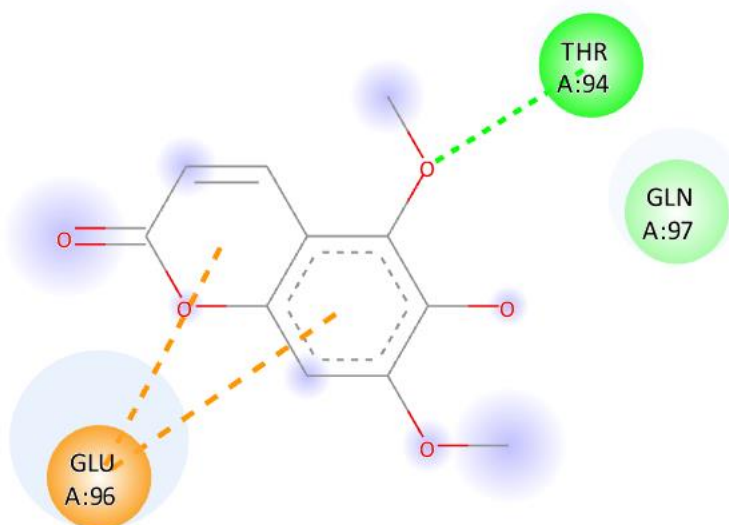
5-Hydroxy-6,7-Dimethoxycoumarin (Tomentin)




Interactions

- | | |
|--|--|
|  van der Waals |  Carbon Hydrogen Bond |
|  Conventional Hydrogen Bond |  Pi-Anion |

6-Hydroxy-5,7-Dimethoxychromen-2-One (Fraxinol)



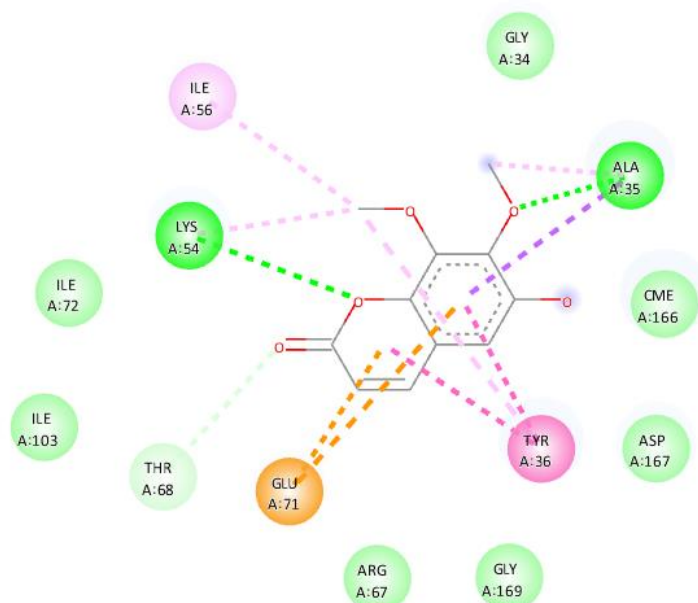
Interactions

 van der Waals

 Conventional Hydrogen Bond

 Pi-Anion


6-Hydroxy-7,8-Dimethoxycoumarin



Interactions


 van der Waals

 Conventional Hydrogen Bond

 Carbon Hydrogen Bond

 Pi-Anion

 Pi-Sigma

 Pi-Pi T-shaped

 Alkyl

 Pi-Alkyl