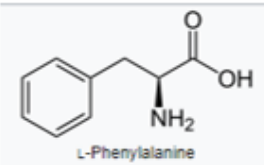
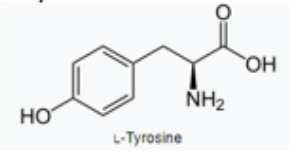
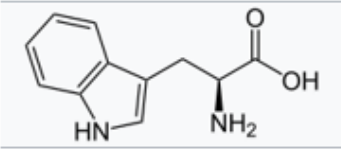
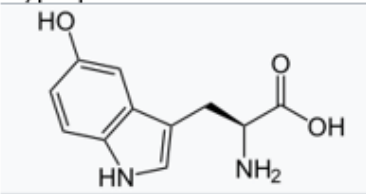
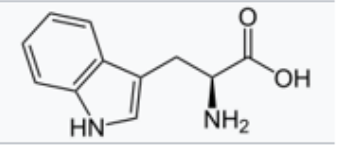
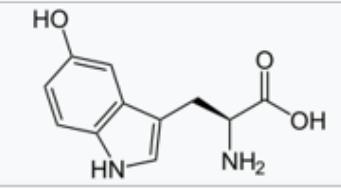
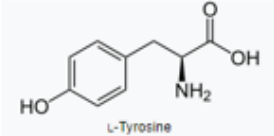
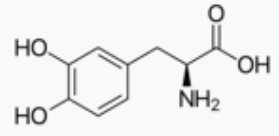


TABLE 1. UNIPROT INFORMATION

Accession number	P00439	Q8IWU9	P17752	P07101
Protein	Phenylalanine-4-hydroxylase	Tryptophan 5 hydroxylase 2	Tryptophan 5-hydroxylase 1	Tyrosine 3 <u>monooxygenase</u>
Gene	PAH	TPH2	TPH1	TH
Organism	<i>Homo sapiens</i>	<i>Homo sapiens</i>	<i>Homo sapiens (Human)</i>	<i>Homo sapiens</i>
Catalytic reaction: substrate and product ¹	Substrate: L-phenylalanine  Product: L-Tyrosine 	Substrate: L-tryptophan  Product: 5-hydroxy-L-tryptophan 	Substrates: L-tryptophan  Products: 5-hydroxy-L-tryptophan 	Substrate: L-tyrosine  Product: L-Dopa 
GO – molecular function (top 3)	(1) iron ion binding (2) phenylalanine 4-monooxygenase activity	1. iron ion binding tryptophan 5-monooxygenase activity	1. Iron ion binding Tryptophan 5-monooxygenase activity	amino acid binding, dopamine <u>binding</u> , enzyme binding
PFAM codes ²	PF01842 PF00351	PF00351	PF00351	PF00351 PF12549

Are these enzymes evolutionary related?

Are these enzymes evolutionary related?

- We will continue working with these enzymes today using BLAST.
- Day 3 activity (to be submitted in Canvas)
 - https://docs.google.com/document/d/1yLMxYkahqGUVz_i9IamwxlO5MmsGzbRcjAnYjyc8ZZk/edit?usp=sharing
- Computer setup
 - https://docs.google.com/document/d/1dKcwJLLf-LplPwKtsGQxAbs4ZiraPzF_JuYWWDO0ueo/edit?usp=sharing
- Day 3 extra activity (save resulting data for next time)
 - <https://docs.google.com/document/d/1WuqFrUHibnBsHGq67wRuuV8obcF5zVvot3R8IWUE-fo/edit?usp=sharing>
- Breakout room until 5:55
- Quiz from 6-6:15