

#ret #incomplete

1 | SNP. Project. Write-up.

Resources: [\[\[KBxSNPPCR\]\]](#) Instructions

1.0.1 | Part One

Outline

- basics
- function and regulation
- SNP effect

Writing!

The *COMT* gene, or catechol-O-methyltransferase, encodes the *COMT* enzyme which is responsible for breaking down neurotransmitters in the brain's prefrontal cortex. More specifically, it acts as a catalyst for the transfer of a methyl group from S-adenosylmethionine to dopamine, epinephrine, and norepinephrine. This process, called O-methylation, leads to the degradation of the aforementioned neurotransmitters. The *COMT* enzyme also affects the metabolism of exogenous substances, but that is irrelevant for the mutation at hand. The *COMT* gene itself is 27.22kb long and located on chromosome 22q11.2. It has ubiquitous expression in 27 tissues, including the placenta, the adrenal, and the lung. Val158Met, a common