

TABLE 2. CFTR Modulator Interactions with Psychotropics

Drug	Specific Effect on CYP450 Subsets	Potential Interaction with Lumacaftor	Potential Interaction with Ivacaftor
Alprazolam	CYP3A4 Substrate	Decreased systemic exposure of alprazolam.	Increased systemic exposure of alprazolam.
Bupropion	CYP3A4 Substrate, CYP2B6 Substrate, CYP2D6 Inhibitor (Strong)	Potential increased exposure of lumacaftor. Decreased systemic exposure of bupropion.	Potential increased exposure of ivacaftor.
Carbamazepine	CYP3A4 Inducer (Strong), CYP2C9 Inducer, CYP1A2 Inducer, CYP2C19 Inducer, CYP2B6 Inducer	Decreased systemic exposure of carbamazepine.	Decreased systemic exposure of ivacaftor. Increased exposure of carbamazepine.
Citalopram	CYP3A4 Substrate, CYP2C19 Substrate, CYP2D6 Inhibitor	Decreased systemic exposure of citalopram.	
Clonazepam	CYP3A4 Substrate	Decreased systemic exposure of clonazepam.	
Escitalopram	CYP3A4 Substrate, CYP2D6 Inhibitor	Decreased systemic exposure of escitalopram.	
Eszopiclone	CYP3A4 Substrate	Decreased systemic exposure of eszopiclone.	
Guanfacine	CYP3A4 Substrate	Decreased systemic exposure of guanfacine.	
Midazolam	CYP3A4 Substrate	Decreased systemic exposure of midazolam.	Increased systemic exposure of midazolam.
Mirtazapine	CYP3A4 Substrate	Decreased systemic exposure of mirtazapine.	
Quetiapine	CYP3A4 Substrate	Decreased systemic exposure of quetiapine.	
Sertraline	CYP2C19 Inhibitor, CYP2D6 Inhibitor (Moderate), CYP2C9 Inhibitor	Decreased systemic exposure of sertraline.	
St. John's Wort	CYP3A4 Inducer (Strong) CYP2D6 Inhibitor		Decreased systemic exposure of ivacaftor.
Topiramate	CYP3A4 Substrate, CYP2C19 Inhibitor	Decreased systemic exposure of topiramate.	
Trazodone	CYP3A4 Substrate	Decreased systemic exposure of trazodone.	
Triazolam	CYP3A4 Substrate	Decreased systemic exposure of triazolam.	Increased systemic exposure of triazolam.
Ziprasidone	CYP3A4 Substrate	Decreased systemic exposure of ziprasidone.	
Zolpidem	CYP3A4 Substrate, CYP2C9 Inducer, CYP2C19 Inducer	Decreased systemic exposure of zolpidem.	

CFTR = cystic fibrosis transmembrane regulator protein CYP = cytochrome CNS = central nervous system

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