



Indiana University
Cytochrom P450 Drug Interaction Table:
Abbreviated "Clinically Relevant" Table



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SUBSTRATES

1A2	2B6	2C8	2C9	2C19	2D6	2E1	3A4,5,7
clozapine cyclobenzaprine duloxetine fluvoxamine haloperidol imipramine mexiletine nabumetone naproxen olanzapine riluzole tacrine ² theophylline tizanidine triamterene zileuton zolmitriptan	artemisinin bupropion ¹ cyclophosphamide efavirenz ¹ ifosfamide ketamine meperidine methadone nevirapine propofol selegiline	paclitaxel torsemide amodiaquine ² cerivastatin repaglinide	NSAIDs: diclofenac ibuprofen naproxen piroxicam Oral Hypoglycemics: tolbutamide glipizide glyburide Angiotensin II Blockers: losartan irbesartan Others: celecoxib fluvastatin phenytoin rosiglitazone torsemide valproic acid warfarin zafirlukast	PPIs: esomeprazole lansoprazole omeprazole pantoprazole Anti-epileptics: diazepam phenytoin phenobarbitone Others: amitriptyline carisoprodol citalopram clomipramine clopidogrel cyclophosphamide imipramine labetalol proguanil voriconazole	Beta Blockers: carvedilol S-metoprolol propafenone timolol Antidepressants: amitriptyline clomipramine desipramine duloxetine fluoxetine imipramine paroxetine Antipsychotics: haloperidol risperidone thioridazine	Anesthetics: enflurane halothane isoflurane methoxyflurane sevoflurane Others: acetaminophen → N APQI aniline benzene chlorzoxazone ethanol N,N-dimethyl formamide theophylline → 8-OH	Macrolide antibiotics: clarithromycin erythromycin (not 3A5) NOT azithromycin telithromycin Anti-arrhythmics: quinidine → 3-OH (not 3A5) Benzodiazepines: alprazolam diazepam → 3OH midazolam triazolam Immune Modulators: cyclosporine tacrolimus (FK506) sirolimus



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					Others: aripiprazole atomoxetine codeine dextromethorphan doxepine flecainide mexiletine ondansetron oxycodone risperidone tamoxifen		HIV Antivirals: indinavir ritonavir saquinavir nevirapine Prokinetics: cisapride Antihistamines: astemizole chlorpheniramine



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INHIBITORS

- A Strong inhibitor is one that causes a > 5-fold increase in the plasma AUC values or more than 80% decrease in clearance.
- A Moderate inhibitor is one that causes a > 2-fold increase in the plasma AUC values or 50-80% decrease in clearance.
- A Weak inhibitor is one that causes a > 1.25-fold but < 2-fold increase in the plasma AUC values or 20-50% decrease in clearance.

1A2	2B6	2C8	2C9	2C19	2D6	2E1	3A4,5,7
amiodarone ■ cimetidine efavirenz fluoroquinolones fluvoxamine ¹ ticlopidine	clopidogrel thiotepa ticlopidine ² voriconazole	■ gemfibrozil montelukast ¹	■ amiodarone efavirenz ■ fluconazole ² isoniazid metronidazole paroxetine sulfamethoxazole voriconazole	cimetidine esomeprazole felbamate fluoxetine fluvoxamine isoniazid ketoconazole lansoprazole omeprazole oral contraceptives pantoprazole ticlopidine ² voriconazole	■ bupropion ■ fluoxetine ■ paroxetine ■ quinidine ¹ ■ duloxetine ■ amiodarone ■ cimetidine aripiprazole diphenhydramine chlorpheniramine clomipramine doxepin haloperidol methadone ritonavir terbinafine	disulfiram	HIV Antivirals: ■ indinavir ■ nelfinavir ■ ritonavir ■ clarithromycin ■ itraconazole ■ ketoconazole ■ nefazodone ■ erythromycin ■ grapefruit juice ■ verapamil ² ■ suboxone ■ diltiazem ■ cimetidine amiodarone NOT azithromycin fluvoxamine troleandomycin voriconazole



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INDUCERS

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carbamazepine chargrilled meat rifampin tobacco	artemisinin carbamazepine efavirenz nevirapine phenobarbital phenytoin rifampin		carbamazepine nevirapine phenobarbital rifampin St. John's Wort	efavirenz rifampin ritonavir St. John's Wort		ethanol isoniazid	carbamazepine efavirenz nevirapine phenobarbital phenytoin pioglitazone rifabutin rifampin St. John's Wort troglitazone



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GENETICS

1A2	2B6	2C8	2C9	2C19	2D6	2E1	3A4,5,7
			Haplotypes: *2=PM *3=PM	Haplotypes: *2=PM (99% in Asians) *3=PM (87% in Whites)	Haplotypes: *2=EM (similar to WT) *3=PM (truncates protein) *4=PM (non-functional) *5=PM (whole gene del.) *6=PM (truncates protein) *9=IM/EM (reduces func.) *10=IM (reduces func.) *17=IM (reduces func.) *29=IM (reduces func.) *41=IM (reduces func.)		

Metabolizer Phenotypes:

PM = Poor

IM = Intermediate

EM = Extensive

UM = Ultrarapid

Source:

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<http://medicine.iupui.edu/CLINPHARM/ddis/clinical-table>