

How to Use This Table

This table is an abridged guide to P-450 drug interactions which can be greatly exacerbated by common genetic variations (present in half of the population). To appreciate the full benefits of this information, go to www.GeneMedRx.com for a free 30-day trial version of GeneMedRx. This genetics enabled drug interaction software predicts response to medication combinations with optional input of genetic variations.

P450 DRUG-INTERACTIONS TABLE

Substrates (main pathway for metabolism)							
		<i>italics=minor pathway</i>		bold=only pathway			
NAT2	1A2	2D6		2C9	2C19	3A4,5,7	
caffeine caspofungin dapson hydralazine isoniazid nitrazepam procainamide retigabine sulfadiazine zonisamide Sulfonamides: sulfapyridine sulfamethazine sulfadiazine sulfasalazine carcinogenic aromatic and heterocyclic amines benzidine beta- naphthylamine	Analgesics: acetaminophen Antidepressants: <i>amitriptyline</i> brofaramine <i>bupropion</i> <i>clomipramine</i> <i>doxepin</i> fluvoxamine <i>imipramine</i> <i>maprotiline</i> mirtazapine Anti-epileptics: carbamazepine Antipsychotics: chlorpromazine clozapine <i>fluphenazine</i> <i>haloperidol</i> olanzapine <i>perphenazine</i> <i>pimozide</i> <i>thioridazine</i> Cardiovascular: brofaramine flecainide lidocaine mexiletine propafenone propranolol verapamil HIV Antivirals: ritonavir NSAIDs: <i>Naproxen</i> Miscellaneous: caffeine cyclobenzaprine clopidogrel flutamide frovatriptan melatonin metoclopramide ondansetron <i>proguanil</i> quinine rifabutin riluzole ranitidine ropivacaine tacrine teniposide theophylline <i>warfarin</i> zileuton zolmitriptan <i>zolidem</i>	Analgesics: <i>acetaminophen</i> hydrocodone <i>methadone</i> oxycodone tramadol Antidepressants: <i>amitriptyline</i> brofaramine bupropion clomipramine desipramine doxepin fluoxetine fluvoxamine imipramine maprotiline mirtazapine nortriptyline paroxetine trazodone trimipramine venlafaxine Antihistamines: chlorpheniramine Antipsychotics: chlorpromazine fluphenazine haloperidol mesoridazine <i>olanzapine</i> perphenazine risperidone thioridazine Cardiovascular: alprenolol carvedilol flecainide metoprolol mexiletine propafenone propranolol <i>verapamil</i> Anti- ADHD amphetamines atomoxetine	HIV Antivirals: <i>amprenavir</i> delavirdine ritonavir HMG CoA Reductase Inhibitors: simvastatin Miscellaneous: amphetamine buspirone <i>chloroquine</i> <i>cyclobenzaprine</i> dextromethorphan doxorubicin metoclopramide <i>ondansetron</i> ranitidine tacrine tamoxifen timolol	Analgesics: <i>methadone</i> Angiotensin II Blockers: irbesartan losartan Antibiotics: rifampin Antidepressants: <i>amitriptyline</i> <i>bupropion</i> fluoxetine sertraline trimipramine Anti-epileptics: phenytoin Cardiovascular: carvedilol quinidine <i>diltiazem</i> HIV Antivirals: <i>amprenavir</i> Hormone: progesterone HMG CoA Reductase Inhibitors: fluvastatin <i>lovastatin</i> NSAIDs: celecoxib diclofenac ibuprofen indomethacin mefenamic acid meloxicam naproxen piroxicam suprofen Oral Hypoglycemics: glimepiride glipizide glyburide tolbutamide Proton Pump Inhibitors: omeprazole Miscellaneous: cyclophosphamide dextromethorphan <i>dapsone</i> esomeprazole <i>halofantrine</i> <i>phenobarbital</i> mephobarbital sildenafil sulfamethoxazole torsemide valproic acid warfarin zafirlukast zileuton <i>zolidem</i>	Analgesics: methadone Antidepressants: amitriptyline clomipramine citalopram <i>doxepin</i> fluoxetine imipramine maclobemide sertraline trimipramine Anti-epileptics: diazepam mephenytoin phenobarbitone phenytoin primidone S-mephenytoin Antipsychotics: <i>perphenazine</i> <i>thioridazine</i> Benzodiazepines: <i>alprazolam</i> diazepam Cardiovascular: propranolol HIV Antivirals: nelfinavir Hormone: <i>progesterone</i> NSAIDs: <i>Indomethacin</i> Oral Hypoglycemics: glyburide tolbutamide Proton Pump Inhibitors: <i>esomeprazole</i> lansoprazole omeprazole pantoprazole Miscellaneous: carisoprodol cyclophosphamide <i>dextromethorphan</i> <i>dapsone</i> mephobarbital nilutamide phenobarbital proguanil quinine ranitidine tamoxifen	Analgesics: <i>acetaminophen</i> fentanyl methadone tramadol Angiotensin II Blockers: <i>irbesartan</i> losartan Antibiotics: azithromycin clarithromycin dirithromycin erythromycin rifabutin rifampin Antidepressants: <i>bupropion</i> clomipramine imipramine <i>fluoxetine</i> fluvoxamine mirtazapine nefazodone nortriptyline sertraline trazodone venlafaxine Anti-epileptics: carbamazepine diazepam ethosuximide <i>felbamate</i> tiagabine Antihistamines: astemizole terfenadine Antipsychotics: haloperidol <i>perphenazine</i> pimozide risperidone Benzodiazepines: alprazolam diazepam triazolam Cardiovascular: amlodipine amiodarone carvedilol diltiazem eplerenone felodipine lercanidipine <i>lidocaine</i> nifedipine nifedipine <i>nisoldipine</i> <i>propafenone</i> quinidine verapamil HIV Antivirals: amprenavir delavirdine <i>efavirenz</i> indinavir nelfinavir ritonavir saquinavir	HMG CoA Reductase Inhibitors: atorvastatin cerivastatin lovastatin <i>pravastatin</i> simvastatin Hormone: progesterone testosterone Immune Modulators: cyclosporine tacrolimus NSAIDs: diclofenac meloxicam Oral Hypoglycemics: glyburide Proton Pump Inhibitors: esomeprazole omeprazole pantoprazole Steroid hydrocortisone prednisone Miscellaneous: bromocriptine buspirone caffeine chloroquine cisapride clopidogrel <i>cocaine</i> cyclobenzaprine <i>cyclophosphamide</i> dapsone dextromethorphan doxorubicin fluconazole <i>flutamide</i> halofantrine irinotecan itraconazole mifepristone ketoconazole pioglitazone <i>proguanil</i> quinine rosiglitazone salmeterol sildenafil sirolimus tamoxifen taxol teniposide ticlopidine vincristine <i>warfarin</i> zaleplon zolidem zileuton

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Inhibitors (reduces or blocks the ability of the pathway to metabolize the substrates)							
NAT2	1A2	2D6	2C9	2C19	3A4,5,7		
Analgesics: acetaminophen	Antidepressants: fluvoxamine fluoxetine paroxetine sertraline Antipsychotics: olanzapine perphenazine Antibiotics: ciprofloxacin enoxacin grepafloxacin norfloxacin ofloxacin sparfloxacin Cardiovascular: amiodarone lidocaine mexiletine propafenone HIV Antivirals: delavirdine efavirenz Miscellaneous: anastrozole caffeine cimetidine estradiol grapefruit juice oral contraceptives tacrine ticlopidine valproic acid zileuton	Analgesics: methadone Antidepressants: amitriptyline bupropion clomipramine desipramine fluoxetine fluvoxamine imipramine nortriptyline paroxetine sertraline venlafaxine Antihistamines: astemizole azelastine chlorpheniramine terfenadine Antipsychotics: chlorpromazine clozapine fluphenazine haloperidol chloropromazine perphenazine risperidone thioridazine Cardiovascular: amiodarone flecainide nicardipine nifedipine propranolol quinidine	HIV Antivirals: delavirdine efavirenz indinavir nelfinavir ritonavir saquinavir HMG CoA Reductase Inhibitors: atorvastatin cerivastatin fluvastatin NSAIDs: celecoxib diclofenac Proton Pump Inhibitors: lansoprazole Miscellaneous: chloroquine cimetidine cisapride cocaine doxorubicin metoclopramide methadone tamoxifen terbinafine timolol	Angiotensin II Blockers: irbesartan losartan Antidepressants: fluoxetine fluvoxamine paroxetine sertraline Cardiovascular: amiodarone nicardipine HIV Antivirals: delavirdine efavirenz ritonavir HMG CoA Reductase Inhibitors: atorvastatin fluvastatin simvastatin Oral Hypoglycemics: glyburide Proton Pump Inhibitors: esomeprazole lansoprazole omeprazole pantoprazole NSAIDs: ketoprofen Miscellaneous: anastrozole cimetidine clopidogrel fluconazole ketoconazole modafinil isoniazid sulfamethoxazole teniposide valproic acid zafirlukast	Antidepressants: amitriptyline fluoxetine fluvoxamine imipramine paroxetine sertraline Anti-epileptics: carbamazepine felbamate topiramate Cardiovascular: amiodarone nicardipine nifedipine Proton Pump Inhibitors: esomeprazole lansoprazole omeprazole sertraline HIV Antivirals: amprenavir delavirdine efavirenz ritonavir HMG CoA Reductase Inhibitors: cerivastatin fluvastatin lovastatin simvastatin Miscellaneous: clopidogrel cimetidine fluconazole indomethacin isoniazid modafinil nilutamide oral contraceptives oxcarbazepine pioglitazone ticlopidine torseamide valproic acid zafirlukast	Analgesics: fentanyl Antibiotics: ciprofloxacin clarithromycin dalfoipristin enoxacin erythromycin norfloxacin telithromycin troleandomycin Antihistamines: astemizole terfenadine Antidepressants: fluoxetine fluvoxamine nefazodone paroxetine sertraline Antipsychotics: pimozide Benzodiazepines: diazepam Cardiovascular: amiodarone amlodipine diltiazem irbesartan nicardipine nifedipine quinidine verapamil HIV Antivirals: amprenavir delavirdine efavirenz indinavir nelfinavir ritonavir saquinavir	HMG CoA Reductase Inhibitors: atorvastatin cerivastatin fluvastatin lovastatin Immune Modulators: cyclosporine tacrolimus Oral Hypoglycemics: glyburide Proton Pump Inhibitors: esomeprazole lansoprazole omeprazole Miscellaneous: anastrozole bromocriptine cimetidine fluconazole grapefruit juice irinotecan isoniazid itraconazole ketoconazole mifepristone oral contraceptives sirolimus teniposide valproic acid zafirlukast
Inducers (increases the ability of the pathway to metabolize the substrates)							
NAT2	1A2	2D6	2C9	2C19	3A4,5,7		
	broccoli brussel sprouts cabbage cauliflower esomeprazole insulin modafinil nafcillin phenobarbital quinine rifampin ritonavir St. John's wort taxol	phenobarbital	dexamethosone phenobarbital primidone rifampin ritonavir St. John's wort	dexamethosone pentobarbital prednisone rifampin ritonavir St. John's wort	Analgesics: methadone Antiepileptics: carbamazepine felbamate oxcarbazepine phenobarbital phenytoin primidone topiramate HIV Antivirals: efavirenz nevirapine Antipsychotics: thioridazine	Miscellaneous: cyclophosphamide barbiturates dexamethosone modafinil phenobarbital pioglitazone prednisone rifabutin rifampin rifapentine ritonavir St. John's wort tamoxifen	

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