

**SUBSTRATES**

1A2	2B6	2C8	2C9	2C19	2D6	2E1	3A4,5,7
amitriptyline caffeine clomipramine clozapine cyclobenzaprine estradiol fluvoxamine haloperidol imipramine N-DeMe mexillette naproxen olanzapine ondansetron phenacetin_ acetaminophen→NAPQI propranolol riluzole ropivacaine tacrine theophylline tizanidine verapamil (R)warfarin zileuton zolmitriptan	bupropion cyclophosphamide efavirenz ifosfamide methadone	paclitaxel torsemide amodiaquine cerivastatin repaglinide	NSAIDs: diclofenac ibuprofen lornoxicam meloxicam S-naproxen_Nor piroxicam suprofen  Oral Hypoglycemic Agents: tolbutamide glipizide  Angiotensin II Blockers: losartan irbesartan  Sulfonylureas: glyburide glibenclamide glipizide glimepiride tolbutamide  amitriptyline celecoxib fluoxetine fluvastatin glyburide nateglinide phenytoin-4-OH2 rosiglitazone tamoxifen torsemide S-warfarin	Proton Pump Inhibitors: lansoprazole omeprazole pantoprazole rabeprazole  Anti-epileptics: diazepam→Nor phenytoin(O) S-mephenytoin phenobarbitone  amitriptyline carisoprodol citalopram chloramphenicol clomipramine cyclophosphamide hexobarbital imipramine N-DeMe indomethacin R-mephobarbital moclobemide nelfinavir nilutamide primidone progesterone proguanil propranolol teniposide R-warfarin→8-OH	Beta Blockers: carvedilol S-metoprolol propafenone timolol  Antidepressants: amitriptyline clomipramine desipramine imipramine paroxetine  Antipsychotics: haloperidol perphenazine risperidone→9OH thioridazine zuclopentixol  alprenolol amphetamine aripiprazole atomoxetine bufuralol chlorpheniramine chlorpromazine codeine (→O-desMe) debrisoquine dexfenfluramine dextromethorphan duloxetine encainide flecainide fluoxetine fluvoxamine lidocaine metoclopramide methoxyamphetamine mexillette minaprine nebivolol nortriptyline ondansetron oxycodone perhexiline phenacetin phenformin promethazine propranolol sparteine tamoxifen tramadol venlafaxine	Anesthetics: enflurane halothane isoflurane methoxyflurane sevoflurane  acetaminophen→ NAPQI aniline2 benzene chlorzoxazone ethanol N,N-dimethyl formamide theophylline→ 8-OH	Macrolide antibiotics: clarithromycin erythromycin (not 3A5) NOT azithromycin telithromycin  Anti-arrhythmics: quinidine→3OH (not 3A5)  Benzodiazepines: alprazolam diazepam→3OH midazolam triazolam  Immune Modulators: cyclosporine tacrolimus (FK506)  HIV Antivirals: indinavir nelfinavir ritonavir saquinavir  Prokinetic: cisapride  Antihistamines: astemizole chlorpheniramine terfenadine  Calcium Channel Blockers: amlodipine diltiazem felodipine lercanidipine nifedipine2 nisoldipine nitrendipine verapamil  HMG CoA Reductase Inhibitors: atorvastatin cerivastatin lovastatin NOT pravastatin simvastatin  Steroid 6beta-OH: estradiol hydrocortisone progesterone testosterone  Miscellaneous: alfentanil aprepitant aripiprazole buspirone cafergot caffeine_TMU cilostazol cocaine codeine- Ndemethylation dapson dexamethasone dextromethorphan docetaxel domperidone eplerenone fentanyl finasteride gleevec haloperidol irinotecan LAAM lidocaine methadone nateglinide ondansetron pimozide propranolol quetiapine quinine risperidone NOT rosuvastatin salmeterol sildenafil sirolimus tamoxifen taxol terfenadine trazodone vincristine zaleplon ziprasidone zolpidem

## INHIBITORS

1A2	2B6	2C8	2C9	2C19	2D6	2E1	3A4,5,7
fluvoxamine ciprofloxacin cimetidine amiodarone fluoroquinolones furafylline interferon methoxsalen mibefradil	thiotepa ticlopidine	gemfibrozil trimethoprim glitazones montelukast quercetin	fluconazole amiodarone fenofibrate fluvastatin fluvoxamine isoniazid lovastatin phenylbutazone probenecid sertraline sulfamethoxazole sulfaphenazole teniposide voriconazole zafirlukast	PPIs: lansoprazole omeprazole pantoprazole rabeprazole chloramphenicol cimetidine felbamate fluoxetine fluvoxamine indomethacin ketoconazole modafinil oxcarbazepine probenecid ticlopidine topiramate	bupropion fluoxetine paroxetine quinidine duloxetine terbinafine amiodarone cimetidine sertraline celecoxib chlorpheniramine chlorpromazine citalopram clemastine clomipramine cocaine diphenhydramine doxepin doxorubicin escitalopram halofantrine histamine H1 receptor antagonists hydroxyzine levomepromazine methadone metoclopramide mibefradil midodrine moclobemide perphenazine ranitidine red-haloperidol ritonavir ticlopidine tripeleminamine	diethyl- dithiocarbamate disulfiram	HIV Antivirals: indinavir nelfinavir ritonavir clarithromycin itraconazole ketoconazole nefazodone saquinavir telithromycin aprepitant erythromycin fluconazole grapefruit juice verapamil diltiazem cimetidine amiodarone NOT azithromycin chloramphenicol ciprofloxacin delaviridine diethyl- dithiocarbamate fluvoxamine gestodene imatinib mibefradil mifepristone norfloxacin norfluoxetine star fruit voriconazole

## INDUCERS

1A2	2B6	2C8	2C9	2C19	2D6	2E1	3A4,5,7
broccoli brussel sprouts char-grilled meat insulin methylcholanthrene modafinil nafcillin beta-naphthoflavone omeprazole tobacco	phenobarbital rifampin	rifampin	rifampin secobarbital	carbamazepine norethindrone NOT pentobarbital prednisone rifampin	dexamethasone rifampin	ethanol isoniazid	HIV Antivirals: efavirenz nevirapine barbiturates carbamazepine efavirenz glucocorticoids modafinil nevirapine oxcarbazepine phenobarbital phenytoin pioglitazone rifabutin rifampin St. John's wort troglitazone