

CYTOCHROME P-450 ISOZYMES: SUBSTRATES, INDUCERS AND INHIBITORS

	Substrates	Inducers	Inhibitors
CYP3A4	Ketoconazole Itraconazole <i>Statins</i> : Atorvastatin, Lovastatin, Simvastatin <i>Benzodiazepines</i> : Alprazolam, Diazepam, Midazolam <i>Ca²⁺ Channel Blockers</i> : Diltiazem, Nifedipine, Verapamil <i>Antihypertensives</i> : Losartan, Verapamil Theophylline (<i>antiasthmatic</i>) Carbamazepine (<i>anticonvulsant</i>) Cyclosporine (<i>immunosuppressant</i>) Erythromycin (<i>antibiotic</i>) <i>SSRIs</i> : Citalopram, Sertraline	Griseofulvin Rifampin (<i>anti-infective</i>) Phenytoin (<i>anticonvulsant</i>)	Ketoconazole Itraconazole Voriconazole Fluconazole Cimetidine (<i>H⁺ pump inhibitor</i>) Grapefruit Juice
CYP2C9	<i>NSAIDs</i> : Diclofenac, Ibuprofen <i>Beta blockers</i> : Metoprolol, Propranolol Phenytoin (<i>anticonvulsant</i>) Torsemide (<i>diuretic</i>) S-Warfarin (<i>anticoagulant</i>) Glipizide (<i>sulfonylurea</i>) Losartan (<i>antihypertensive</i>)	Griseofulvin Phenobarbital (<i>barbiturate</i>) Rifampin (<i>anti-infective</i>) Phenytoin (<i>anticonvulsant</i>)	Fluconazole Voriconazole Ketoconazole Ritonavir (<i>protease inhibitor</i>) Amiodarone (<i>antiarrhythmic</i>) Cimetidine (<i>H⁺ pump inhibitor</i>) Fluoxetine (<i>SSRI</i>) Metronidazole (<i>anti-infective</i>)
CYP2C19	<i>H⁺ pump inhibitor</i> : omeprazole, pantoprazole Propranolol (<i>beta blocker</i>) Nelfinavir (<i>protease inhibitor</i>) Diazepam (<i>benzodiazepine</i>) Imipramine (<i>antidepressant</i>)		Fluconazole Voriconazole Ritonavir (<i>protease inhibitor</i>) Omeprazole (<i>H⁺ pump inhibitor</i>) <i>SSRIs</i> : Fluoxetine, Fluvoxamine, Sertraline