

Drug Safety Database Print

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Class	Type	Generic name	Brand name	Conclusion	References
ANTI-INFECTIVES	ANTIRETROVIRALS	Abacavir	Ziagen	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): No P450 metabolism
Arthritis	n/a	Abatacept	Orencia	OK!	Protein. Not metab by CYPs (PDR 63:921,2009)
BLOOD RELATED THERAPY	ANTICOAGULANTS	Abciximab	Reopro	OK!	www.drugs-porphyria.org: Not Porphyrinogenic
Cardiovascular agents	BETA BLOCKERS (includes some ophthalmic preparations)	Acebutolol	Many	OK!	web.uct.ac.za/depts/porphyria/: Use Medicine (Balt)1992; 71:1. Safe biocomp.health.unm.edu/p450/metabP450diseasep4.pdf: Substrate/inhibitor of CYP2D6
Central nervous system	NONSTEROIDAL ANTI-INFLAMMATORY AGENTS -NSAIDs (Pain, Arthritis Therapies, etc.)	Acetaminophen	Tylenol	OK!	www.porphyriafoundation.com: Safe PV Tishler MD clinical data & patient reports: Safe Induces constitutive androstene receptor.
Cardiovascular agents	DIURETICS	Acetazolamide	Diamox	OK!	web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients & cell culture
OPHTHALMIC AGENTS (intraocular)	n/a	Acetylcholine	Miochol	OK!	
RESPIRATORY AGENTS	MUCOLYTICS	Acetylcysteine	Mucomyst	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use PV Tishler MD clinical data: Safe Eur J Clin Chem Clin Biochem 1997;35:427. Safe
Dermatologicals	ANTIPSORIATICS - SYSTEMIC	Acitretin	Soriatane	BAD?	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution
Antineoplastics (Cancer Therapies)	ANTIBIOTICS	Actinomycin D or Dactinomycin	Cosmegen	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.uq.edu.au/porphyria/: Safe in animals
ANTI-INFECTIVES	ANTIVIRALS	Acyclovir	Acyclovir	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe www.uq.edu.au/porphyria/: Safe in cell culture Patient report: Safe

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Arthritis	n/a	adalimumab	Humira	OK!	Protein. Not metab by CYPs (PDR 63:442,2009)
ANTI-INFECTIVES	ANTIVIRALS	Adefovir	Hepsera	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic http://redpoll.pharmacy.ualberta.ca/drugbank/: Not a P450 substrate
Cardiovascular agents	ANTIARRHYTHMICS	Adenosine	Many	OK!	www.drugs-porphyria.org: Not Porphyrinogenic USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): Not metabolized by P450
Anti-infectives	anthelmintics	albendazole	multiple	BAD?	poorly absorbed from GI tract; but signif metabolism by CYP3A4. Poor data.(Eur. J. Clin Pharm 71:528, 2011)
Anti-infectives	ANTIPARASITICS	Albendazole	Many	OK?	web.uct.ac.za/depts/porphyria/: Use with Caution Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4
Respiratory	ASTHMA AND BRONCHODILATOR AGENTS	Albuterol	Ventolin, Proventil, others	OK!	PV Tishler MD clinical data, 3 patient reports: Safe https://online.epocrates.com/front_porch/: Metabolized extensively by P450. Does not transactivate pregnane X receptor (Curr Drug Metab 7:375,2006)
ANTINEOPLASTICS (Cancer Therapies)	INTERLEUKINS	Aldesleukin	Proleukin	OK?	
ANTINEOPLASTICS (Cancer Therapies)	ANTIBODIES	Alemtuzumab	Campath	OK!	www.drugs-porphyria.org: Not Porphyrinogenic http://redpoll.pharmacy.ualberta.ca/drugbank/: Not metabolized
BONES	BISPHOSPHONATES	Alendronate	Fosamax	OK!	USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): Not metabolized Patient reports: safe
Central nervous system agents	NARCOTICS (Pain Therapies)	Alfentanil	Alfenta	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use Substrate ~equally of CYP3A4, 3A5 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Drug Metab Disp 33:303,2005)
Cardiovascular agents	ANTIHYPERTENSIVE - RENIN INHIBITOR	Aliskiren	Tekturna	OK?	~20% metab, mainly by CYP3A4; does not induce CYP3A4 (Pharmacol Rpts 60:623,2008; J clin Pharmacol 48:1323,2008)
Cardiovascular agents	ANTIHYPERTENSIVE-DUAL AGENT	Aliskiren/ Amlodipine	Tekamlo	BAD?	See individual drug listings.
Arthritis	n/a	Allopurinol	Zyloprim	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in animals Patient reports: Safe
Central nervous system	BENZODIAZEPINES	Alprazolam	Xanax	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Unsafe in cell culture Mainly metab by CYP3A4, but does not transactivate pregnane X receptor (USP DI? Drug Info. for the Health Care Pro. - 26th Ed; Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006) >1Patient reports: Safe
Cardiovascular agents	THROMBOLYTIC ENZYMES	Alteplase	Activase	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Caution
Gastrointestinal therapies	GASTROINTESTINAL MOTILITY STIMULANTS	Alvimopan	Entereg	OK?	Hepatic/CYP metab unlikely (Clin Pharmacol Therap 83:770,2008; PDR 63:3293,2009; pkg insert)

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Central nervous system agents	ANTIPARKINSON AGENTS	Amantadine	Symmetrel	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
ANTI-INFECTIVES	ANTIVIRALS	Amantidine	Many	NO INFO	USP DI? Drug Info. for the Health Care Pro. - 26th Ed: not metabolized www.rxlist.com: Primarily secreted as unchanged drug
Central nervous system agents	ANTIMYASTHENIC AGENTS	Ambenonium	Mytelase	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic
ANTINEOPLASTICS (Cancer Therapies)	URINARY TRACT PROTECTIVE AGENTS	Amifostine	Ethylol	OK!	www.drugs-porphyria.org: Not Porphyrinogenic http://redpoll.pharmacy.ualberta.ca/drugbank/: No P450 metabolism
ANTI-INFECTIVES	AMINOGLYCOSIDES	Amikacin	Amikin	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use PV Tishler MD clinical data: Safe
Cardiovascular agents	DIURETICS	Amiloride	Midamor, Moduretic, others	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients
BLOOD RELATED THERAPY	HEMOSTATICS	Aminocaproic Acid	Amicar	OK!	web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients
RESPIRATORY AGENTS	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Aminophylline	Many	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Avoid
Cardiovascular agents	ANTIARRHYTHMICS	Amiodarone	Many	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in cell culture Gen Pharmacol 1999;32:259. Safe Probably mostly metab by CYP3A4. Induces but more strongly inhibits CYP3A4 (J Pharm Pharm Sci 11:147,2008; Clin Pharm Therap 77:63, 2005)
Psychiatric	TRICYCLICS	Amitriptyline	Elavil	OK!	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Probably unsafe Substrate of many CYPs, including CYP3A4, but does not transactivate pregnane X receptor (http://medicine.iupui.edu/clinpharm/ddis/; Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375, 2006) patient reports: safe
Cardiovascular	CALCIUM CHANNEL BLOCKERS	Amlodipine	Norvasc	OK?	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution Not safe in patients (Ann Pharmacother 1997;31:253) Safe at <10mg/d (Br J Clin Pharmacol 1997;43:339) Substrate of & induces CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Induces pregnane X receptor. 4 patient reports: Safe, certainly at 5 mg/day.
Cardiovascular agents	CALCIUM CHANNEL BLOCKERS	Amlodipine/ olmesartan	Azor	BAD?	See amlodipine
Anti-infectives	PENICILLINS	Amoxicillin	Many	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients PV Tishler MD clinical data & patient reports: Safe Pregnane X receptor inducer.
Anti-infectives	PENICILLINS	Amoxicillin/ Clavulanate	Augmentin	OK!	patient report: safe

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ANTI-INFECTIVES	ANTIFUNGALS	Amphotericin B	Amphotec	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic/Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Safe in cell culture
ANTI-INFECTIVES	PENICILLINS	Ampicillin	Many	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients
ANTI-INFECTIVES	PENICILLINS	Ampicillin/Sulbactam	Unasyn	NO INFO	
Anti-infectives	ANTIRETROVIRALS	Amprenavir	Agenerase	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic. Substrate of CYP3A4. Induces CYP3A4 via transactivation of pregnane X receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Arch Toxicol 82:667,2008)
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Anti-Thymocyte Globulin, Lymphocyte Immune Globulin	none	OK?	
IMMUNOLOGIC AGENTS	ANTIVENINS	Antivenin Crotalidae Polyvalent	AntiveninPolyvalent	OK?	
IMMUNOLOGIC AGENTS	ANTIVENINS	Antivenin Latrodectus Mactans	none	OK?	
IMMUNOLOGIC AGENTS	ANTIVENINS	Antivenin Micrurus Fulvius	none	OK?	
OPHTHALMIC AGENTS (intraocular)	n/a	Apraclonidine	Iopidine	OK!	www.drugs-porphyria.org: Not Porphyrinogenic
BLOOD RELATED THERAPY	HEMOSTATICS	Aprotinin	Trasylol	OK!	www.drugs-porphyria.org: Not Porphyrinogenic
Respiratory agents	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Arformoterol	Brovana	OK?	Secondary metab via 4 CYPs (PDR 63:2990,2009)
BLOOD RELATED THERAPY	ANTICOAGULANTS	Argatroban	Argatroban	OK?	USP DI? Drug Info. for the Health Care Pro. - 26th Ed: CYP3A4/5 is not an important elimination pathway
Psychiatric medications	MISC.	Aripiprazole	Abilify	No info	Metab mainly by CYP3A4,2D6 (Curr Drug Metab 9:410,2008)
ANTINEOPLASTICS (Cancer Therapies)	MISC.	Arsenic Trioxide	Trisenox	NO INFO	
Psychiatric	MISC.	Asenapine	Saphris	No info	Metab by CYPs; proportion by CYP3A4 unknown (Drug Metab Disp 39:580, 2011)
ANTINEOPLASTICS (Cancer Therapies)	ENZYMES	Asparaginase	Elspar	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution
Central nervous system agents	NONSTEROIDAL ANTI-INFLAMMATORY AGENTS -NSAIDs (Pain, Arthritis Therapies, etc.)	Aspirin	Many	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients www.porphyriafoundation.com: Safe PV Tishler MD clinical data & patient reports: Safe
Anti-infectives	ANTIRETROVIRALS	Atazanavir	Reyataz	BAD?	USP DI? Drug Info. for the Health Care Pro. - 26th Ed: Extensively metabolized by CYP3A4 Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4

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Cardiovascular agents	BETA BLOCKERS (includes some ophthalmic preparations)	Atenolol	Tenormin	OK!	www.drugs-porphyrina.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: safe in patients PV Tishler MD clinical data & patient reports: Safe Medicine (Balt) 1992;71:1. Safe
Cardiovascular	ANTIHYPERLIPIDEMIC AGENTS	Atorvastatin	Lipitor	OK?	www.drugs-porphyrina.org: Patient report - safe Mainly metab by CYP3A4, but very low likelihood of CYP3A4 induction (Clin Pharmacol Therap 80:565,2006; Curr Drug Metab 7:375,2006) 4 patient reports: Safe
ANTI-INFECTIVES	ANTIMALARIALS	Atovaquone	Mepron	OK!	www.drugs-porphyrina.org: Probably Not Porphyrinogenic www.porphyrina-europe.com: Safe http://www.pharmgkb.org/: Not much is metabolized
GASTROINTESTINAL THERAPIES	ANTISPASMODICS	Atropine	Many	OK!	www.drugs-porphyrina.org: Probably Not Porphyrinogenic www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients www.porphyrinafoundation.com: Safe
Arthritis	n/a	Auranofin	Ridaura	OK?	www.drugs-porphyrina.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in patients
Arthritis	n/a	Aurothioglucose	Solganal	OK!	www.drugs-porphyrina.org: Not Porphyrinogenic
ANTINEOPLASTICS (Cancer Therapies)	ANTIMETABOLITES	Azacitidine	Vidaza	NO INFO	
Respiratory agents	ANTIHISTAMINES	Azetadine	Optimine, Trinalin, others	No info	
Immunologic agents	IMMUNOSUPPRESSIVE AGENTS	Azathioprine	Imuran	OK?	www.drugs-porphyrina.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in animals J Clin Pharmacol 2001;41:113. Safe Not metab by CYPs (www.clinicalpharmacology-ip.com)
Anti-infectives	MACROLIDES	Azithromycin	Zithromax	OK?	www.drugs-porphyrina.org: Probably Not Porphyrinogenic www.porphyrina-europe.com: Safe. 2 patient reports: safe web.uct.ac.za/depts/porphyria/: Use with Extreme Caution USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): Metabolized in liver, but 50% in bile unchanged & 35% metabolized by demethylation Patient reports: safe
ANTI-INFECTIVES	MISCELLANEOUS	Aztreonam	Azactam	OK?	www.drugs-porphyrina.org: Probably Not Porphyrinogenic http://redpoll.pharmacy.ualberta.ca/drugbank/: Metabolized via hydrolysis
ANTI-INFECTIVES	MISCELLANEOUS	Bacitracin	Many	OK?	
Anesthetics	MUSCLE RELAXANTS	Baclofen	Many	OK?	www.drugs-porphyrina.org: Probably Not Porphyrinogenic http://www.bio.net/bionet/hypermail/neur-sci/2005-July/060879.html: Ca. 85% is excreted unchanged, and ca. 15% of the dose is metabolized primarily by deamination
Respiratory agents	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Beclomethasone (Inhalant)	Beclovent, Vanceril, others	OK!	www.uq.edu.au/porphyria/: Safe in patients PV Tishler MD clinical data: Safe
GASTROINTESTINAL THERAPIES	ANTISPASMODICS	Belladonna Alkaloids	Many	BAD?	web.uct.ac.za/depts/porphyria/: Avoid
Cardiovascular agents	ACE INHIBITORS	Benazepril	Lotensin	OK!	Patient report: safe
ANESTHETICS	LOCAL	Benzocaine	Many	NO INFO	

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Respiratory	ANTITUSSIVES (Cough Therapies)	Benzonatate	Tessalon, etc.	OK?	patient report: safe
Central nervous system agents	ANTIPARKINSON AGENTS	Benzotropine	Cogentin	NO INFO	
Cardiovascular agents	CALCIUM CHANNEL BLOCKERS	Bepridil	Vascor	BAD!	www.uq.edu.au/porphyria/ : Unsafe in cell culture Williams DA: Op. Cit.: Substrate of CYP3A4
HORMONES, HORMONE-LIKE	CORTICOSTEROIDS	Betamethasone	Many	OK!	www.drugs-porphyria.org : Not Porphyrinogenic web.uct.ac.za/depts/porphyria/ : Use with Caution
OPHTHALMIC AGENTS (intraocular)	n/a	Betaxolol	Many	OK!	
Cardiovascular agents	BETA BLOCKERS (includes some ophthalmic preparations)	Betaxolol	Many	OK!	www.drugs-porphyria.org : Possibly Porphyrinogenic
URINARY TRACT	ANTISPASMODICS	Bethanechol	Urecholine	NO INFO	
ANTINEOPLASTICS (Cancer Therapies)	ANGIOGENESIS INHIBITORS	Bevacizumab	Avastin	OK?	
OPHTHALMIC AGENTS (intraocular)	n/a	Bimatoprost	Lumigan	OK!	
Hormones	ORAL CONTRACEPTIVES	Birth Control Pills	Many	BAD!	web.uct.ac.za/depts/porphyria/ : Use with Extreme Caution www.uq.edu.au/porphyria/ : Unsafe in patients www.porphyriafoundation.com : Unsafe Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007) 1Patient report: Safe. 3 patient reports: unsafe - ethinyl estradiol/drospirenone (Yasmin), ethinyl estradiol-desogestrel (Orthocoept), ethinyl estradiol-norgestimate (Orcho Cyclen) unsafe
Gastrointestinal	LAXATIVES	Bisacodyl	Dulcolax	OK!	www.drugs-porphyria.org : Probably Not Porphyrinogenic www.porphyria-europe.com : Safe web.uct.ac.za/depts/porphyria/ : Use with Caution PV Tishler MD clinical data: Safe
BLOOD RELATED THERAPY	ANTICOAGULANTS	Bivalirudin	Angiomax	OK?	USP DI? Drug Info. for the Health Care Pro. - 26th Ed: Clearance from plasma does not seem to involve liver
ANTINEOPLASTICS (Cancer Therapies)	ANTIBIOTICS	Bleomycin	Blenoxane	OK!	www.drugs-porphyria.org : Not Porphyrinogenic http://redpoll.pharmacy.ualberta.ca/drugbank/ : Metabolized by CYP1A1
Cardiovascular agents	ANTIARRHYTHMICS	Bretylium	Bretylol	OK?	
OPHTHALMIC AGENTS (intraocular)	n/a	Brimonidine	Alphagan	OK!	www.drugs-porphyria.org : Not Porphyrinogenic
Central nervous system agents	Anti-Glaucoma	Brinzolamide/ Brimonidine	Simbrinza	BAD!	Brinzolamide is a sulfonamide, and thus this is contraindicated
Central nervous system agents	ANTIPARKINSON AGENTS	Bromocriptine	Parlodel	BAD!	www.drugs-porphyria.org : Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/ : Use with Extreme Caution www.uq.edu.au/porphyria/ : Unsafe in cell culture Metab by CYP3A4 (Clin Therapeutics 28:1065,2006)
Antidiabetics	Dopamine Agonist	Bromocriptine	Cycloset	BAD!	See Bromocriptine, brand name Parlodel, in Central Nervous System Agents, Antiparkinson agents.
Respiratory	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Budesonide	Pulmicort, Rhinocort, Entocort	OK!	www.drugs-porphyria.org : Not Porphyrinogenic PV Tishler MD clinical data & patient report: Safe Metab by CYP3A

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Cardiovascular agents	DIURETICS	Bumetanide	Bumex	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients Patient report: Safe
ANESTHETICS	LOCAL	Bupivacaine	Many	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in animals Medicine (Balt) 1992;71:1. Safe
Central nervous system agents	NARCOTICS (Pain Therapies)	Buprenorphine	Buprenex, Suboxone, Subutex	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe www.uq.edu.au/porphyria/: Safe in patients PV Tishler MD clinical data: Safe Ann Fr Anesth Reanim 1989;8:525. Safe Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
Psychiatric	MISC.	Bupropion	Wellbutrin, Zyban	OK?	www.drugs-porphyria.org: Unlikely Porphyrinogenic. USP DI? Drug Info. for the Health Care Pro. - 26th Ed: Metabolized primarily by CYP2B6 (also CNS Drugs 2012; 26:39) & CYP2D6; Moderately transactivates pregnane X receptor but has low probability of inducing CYP3A4 (Curr Drug Metab 9:598,2008; http://medicine.iupui.edu/clinpharm/ddis/)
Antineoplastics (Cancer Therapies)	ALKYLATING AGENTS	Busulfan	Myleran	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4
Central nervous system agents	HYPNOTICS (Sleeping Medications)	Butabarbital	Butisol	BAD!	www.porphyria-europe.com: Unsafe. See phenobarbital
Central nervous system agents	HYPNOTICS (Sleeping Medications)	Butalbital	Fiorinal	BAD!	See phenobarbital
Central nervous system agents	NARCOTICS (Pain Therapies)	Butorphanol	Stadol	OK!	
Hormones, hormone-like	PARATHYROID	Calcitonin	Miacelcin, Calcimar, Fortical	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use www.porphyria-europe.com: Safe Patient report: Safe
Cardiovascular	ANGIOTENSIN II RECEPTOR ANTAGONISTS	Candesartan Cilexetil	Atacand	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe, Metab by CYP2C9.
Antineoplastics (Cancer Therapies)	ANTIMETABOLITES	Capecitabine	Xeloda	OK?	Not metab by CYP. Metab to 5-fluorouracil, which does not induce CYPs (Drug Metab Disp 32:762,2004; Canad J Physiol Pharmacol 74:150,1996)
ANTINEOPLASTICS (Cancer Therapies)	ANTIMETABOLITES	Capecitabine	Xeloda	NO INFO	
Cardiovascular agents	ACE INHIBITORS	Captopril	Capoten	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic. Patient report: safe No transactivation of pregnane X receptor (Curr Drug Metab 6:375,2006)

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Central nervous system	ANTICONVULSANTS	Carbamazepine	Tegretol	BAD!	www.drugs-porphyria.org: Porphyrinogenic www.porphyria-europe.com: unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in patients Unsafe/risky in patients (Epilepsia 33:108,1992; Neurology 32:1409,1982; Neurology 45:1216,1995). Major metab by CYP3A4. Induces CYP3A4 via transactivation of constitutive androstane receptor & kpregnane X receptor. Also induces CYP2C9, other CYPs. (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Arch toxicol 82:667,2008; Clin Therapeutics 30:1385,2008) Patient report: Safe (low dose)
ANTI-INFECTIVES	ANTIFUNGALS	Carbamide Peroxide	Debrox	OK?	www.drugs-porphyria.org: Not Porphyrinogenic
ANTI-INFECTIVES	PENICILLINS	Carbenicillin	Geopen	NO INFO	
Antineoplastics	ALKYLATING AGENTS	Carboplatin	Paraplatin	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution No P450 metabolism. Does not induce CYP3A4 or transactivate pregnane X receptor (USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006); Cancer Chemother Pharmacol 64:35,2009). Publ report: safe (Exp Opin Drug Saf 2008; 7:159)
ANTINEOPLASTICS (Cancer Therapies)	NITROSOUREAS	Carmustine	Bicnu	NO INFO	
Cardiovascular agents	BETA BLOCKERS (includes some ophthalmic preparations)	Carteolol	Many	OK!	web.uct.ac.za/depts/porphyria/: Use
ANTI-INFECTIVES	ANTIFUNGALS	Caspofungin	Cancidas	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.rxlist.com: Metabolized by hydrolysis and N-acetylation
ANTI-INFECTIVES	CEPHALOSPORINS	Cefaclor	Ceclor	OK!	web.uct.ac.za/depts/porphyria/: Use with Caution
ANTI-INFECTIVES	CEPHALOSPORINS	Cefazolin	Ancef	OK!	web.uct.ac.za/depts/porphyria/: Use with Caution
ANTI-INFECTIVES	CEPHALOSPORINS	Cefepime	Maxipime	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution
Anti-infectives	CEPHALOSPORINS	Cefotaxime	Claforan	OK?	Probably not metab by CYP
ANTI-INFECTIVES	CEPHALOSPORINS	Cefotetan	Cefotan	OK!	USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): Not metabolized by P450
ANTI-INFECTIVES	CEPHALOSPORINS	Cefoxitin	Mefoxin	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution
Anti-infectives	CEPHALOSPORINS	Cefpodoxime Proxetil	Vantin	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution. Patient report: safe
Anti-infectives	CEPHALOSPORIN	Ceftaroline Fosamil	Teflaro	No info	Incomplete information re metabolism (Drugs 69:809, 2009)
Anti-infectives	CEPHALOSPORINS	Ceftazidime	Fortaz	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution. Patient report: safe
ANTI-INFECTIVES	CEPHALOSPORINS	Ceftriaxone	Rocephin	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution
ANTI-INFECTIVES	CEPHALOSPORINS	Cefuroxime	Zinacef	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution

Class	Type	Generic name	Brand name	Conclusion	References
Arthritis	n/a	Celecoxib	Celebrex	BAD?	www.drugs-porphyrina.org: Possibly porphyrinogenic. Metab.~80% by CYP2D9, <25% by CYP3A4; transactivates pregnane X receptor & induces CYP3A4 (Clin Pharmacokinetics 42:283, 2003; Durg Metab Disp 33:1567,2005; Clin Pharm Therap 80:298,2006)
ANTI-INFECTIVES	CEPHALOSPORINS	Cephalexin	Keflex	OK!	www.drugs-porphyrina.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution Patient reports: Safe
Arthritis	n/a	Certolizumab Pegol	Cimzia	OK!	Protein + polyethylene glycol. Not metab by CYPs (PDR 63:3127,2009)
Respiratory	ANTI-HISTAMINES	Cetirizine	Zyrtec	OK!	Mainly excreted unchanged. Does not induce CYPs (Cur Med Therap 15:2193,2008; Med Letter 49:97,2007). 1 patient report: safe.
ANTINEOPLASTICS (Cancer Therapies)	ANTIBODIES	Cetuximab	Erbix	OK?	
Central nervous system	HYPNOTICS (Sleeping Medications)	Chloral Hydrate	Many	OK!	www.porphyrina-europe.com: Safe www.uq.edu.au/porphyria/: Safe in patients Peter V. Tishler, MD, clinical experience: safe patient report: safe
ANTINEOPLASTICS (Cancer Therapies)	NITROGEN MUSTARDS	Chlorambucil	Leukeran	BAD!	www.drugs-porphyrina.org: Possibly Porphyrinogenic. Insufficient data on metabolism. Conflicting references. Considered better tolerated than other alkylating agents generally avoided. One case report of uneventful use in a 54 yr old patient with IAP. web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in animals
Anti-infectives	MISCELLANEOUS	Chloramphenicol	Many	BAD!	www.drugs-porphyrina.org: Porphyrinogenic www.porphyrina-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in patients Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP2C9
Central nervous system agents	BENZODIAZEPINES	Chlordiazepoxide	Librium	BAD!	web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in patients Medicine (Balt) 1992;71:1. Safe
ANESTHETICS	LOCAL	Chloroprocaine	Nesacaine	NO INFO	
Anti-infectives	ANTIMALARIALS	Chloroquine	Many	OK?	www.drugs-porphyrina.org: Possibly Porphyrinogenic, Compare the 8-aminoquinoline primaquine: Inducer of CYPs 1A1, 1A2 and 1B1. No data pointing to clinically significant CYP-inducing properties. Conflicting references. One report of possible porphyrinogenicity. www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Probably safe Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4
Respiratory	ANTI-HISTAMINES	Chlorpheniramine	Chlor-Trimeton, others	OK!	www.uq.edu.au/porphyria/: Safe in patients Metab by CYP2D6, CYP3A4, 2D9 (Pharmacogenetics 1999;9:71; J Pharm Pharmacol 49:257,1997) Patient report: Safe

Class	Type	Generic name	Brand name	Conclusion	References
Psychiatric	PHENOTHIAZINES	Chlorpromazine	Thorazine	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients PV Tishler MD clinical data: Safe JAMA 1965;194:1042. Safe in patients Substrate of CYP3A4. Does not or does moderately transactivate pregnane X receptor. and does transactivate constitutive androgen receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006; Xenobiotica 37:1196,2007; J Pharmacol Exp Therap 320:72, 2007)
Cardiovascular agents	ANTIHYPERLIPIDEMIC AGENTS	Cholestyramine	Questran	OK!	Not absorbed from GI tract
HORMONES, HORMONE-LIKE	PITUITARY	Chorionic Gonadotropin	Pregnyl	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic
ANTI-INFECTIVES	CMV AGENTS	Cidofovir	Vistide	OK?	
Gastrointestinal	H-2 ANTAGONISTS, PPIs (Reflux, Ulcer Therapies)	Cimetidine	Tagamet	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Probably unsafe Clin Chim Acta 1995;234:171. Safe in patients Ann Int Med 2005; 143:694. Safe and possibly therapeutic during acute attack. PV Tishler, MD clinical data & patient reports: Safe Substrate % inhibitor of CYP3A4 but does not transactivate pregnane X receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006)
Anti-infectives	FLUOROQUINOLONES	Ciprofloxacin	Cipro	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Safe in Patients PV Tishler MD clinical data & patient reports: Safe J Appl Toxicol 2005;25:339. Inhibits CYP3A
Antineoplastics (Cancer Therapies)	ALKYLATING AGENTS	Cisplatin	Platinol, Blastolem, others	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients Does not induce CYP3A4 or trnasactivate pregnane X receptor (Cancer Chemother Pharmacol 64:35,2009).
Psychiatric	SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs)	Citalopram	Celexa	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic. Substrate of CYP3A. web.uct.ac.za/depts/porphyria/: Use with Caution. 1 Patient report: safe. 1 patient report: unsafe
ANTINEOPLASTICS (Cancer Therapies)	ANTIMETABOLITES	Cladribine	Leustatin	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic http://redpoll.pharmacy.ualberta.ca/drugbank/: Not P450 substrate
Anti-infectives	MACROLIDES	Clarithromycin	Biaxin	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic. Inhibitor of CYP3A4 but forms irreversible complexes less readily than erythromycin. Some clinical experience of non-porphyrinogenicity. Two references state non-porphyrinogenicity. web.uct.ac.za/depts/porphyria/: Use with Caution www.uspharmacist.com: Inhibitor of CYP3A4 Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007: Substrate & inhibitor of CYP3A4 Sinz: Cur Drug Metab 2006; 7:375: no human pregnane X receptor activation
Cardiovascular agents	CALCIUM CHANNEL BLOCKERS	Clevidipine	Cleviprex	OK?	Unlikely inducer of CYPs at therapeutic doses (Drug Metab Disp 34:734,2006)

Class	Type	Generic name	Brand name	Conclusion	References
Anti-infectives	MISCELLANEOUS	Clindamycin	Cleocin	BAD?	www.drugs-porphyria.org: Porphyrinogenic web.uct.ac.za/depts/porphyria/: Avoid Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of & induces CYP3A4 Patient report: Safe
Cardiovascular agents	ANTIHYPERTENSIVE AGENTS	Clofibrate	Atromid-S	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Safe in cell culture
HORMONES, HORMONE-LIKE	OVULATION STIMULANTS	Clomiphene	Clomid	OK!	web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients
Central nervous system agents	ANTICONVULSANTS	Clonazepam	Klonopin	BAD!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: safe web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Probably unsafe www.porphyriafoundation.com: unsafe Epilepsia 1992;33:108. porphyrogenic but safe in low dosages Neurology 1982;32:1409. safe in low dosages Greatly induces CYP2B. Substrate of but does not induce CYP3A or 2C9 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Drug Metab Dispos 25:750,1997)
Cardiovascular agents	ANTIADRENERGICS	Clonidine	Catapres	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in patients and cell culture
Blood related therapy	ANTICOAGULANTS	Clopidogrel	Plavix	OK?	Metab by a number of CYPs. CYP3A4 and 2C19 are probably the most important, but their relative contributions are unknown. Does not induce CYP3A4 (Drug Metab Pharmacokinet 23:412,2008; Drug Metab Rev 37:99,2005; WC Lau, Pers Commun; MP Knadler, Pers Commun)
Anti-infectives	ANTIFUNGALS	Clotrimazole	none	OK?	www.drugs-porphyria.org: Probably Not /Possibly Porphyrinogenic Comp Biochem Physiol C Toxicol Pharmacol 2005;140:403. Induces CYP3A. Did not affect expression of PXR and MDR1 in zebrafish. Inhibits constitutive androstene receptor.
Psychiatric	MISC.	Clozapine	Clozaril	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic. Metab. mainly by CYP1A2, to lesser extent by CYP3A & other CYPs. Induces CYP 3A, 2C9. Minimal transactivation of pregnane X receptor (Eur J Pharm Sci 20:451, 2003; Curr Drug Metab 11:516, 2010; Toxicol Lett 82:203, 2011)
Central nervous system agents	NARCOTICS (Pain Therapies)	Codeine	Many	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients PV Tishler MD clinical data & patient report: Safe Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
Arthritis	n/a	Colchicine	Colsalide	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients Int J Biochem 1985;17:937. Safe in patients Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)

Class	Type	Generic name	Brand name	Conclusion	References
Cardiovascular	ANTHYPERLIPIDEMIC AGENTS	Colestipol	Colestid	OK!	Not absorbed. Patient reports: safe
HORMONES, HORMONE-LIKE	CORTICOSTEROIDS	Cortisone	Many	OK!	
Respiratory agents	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Cromolyn	Intal, others	OK?	
BLOOD RELATED THERAPY	HEMATOPOIETICS	Cyanocobalamin	Vitamin B12	OK!	www.drugs-porphyrina.org: Probably Porphyrinogenic PV Tishler, MD clinical data: Safe
Gastrointestinal therapies	ANTIEMETICS (Vomiting Therapies)	Cyclizine	Merezine	OK!	www.drugs-porphyrina.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients
Anesthetics	MUSCLE RELAXANTS	Cyclobenzaprine	Flexeril	BAD?	www.drugs.com: Metabolized by CYP3A4; forms ligand with PXR Williams DA. Drug metabolism. In: Foye?s Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4
OPHTHALMIC AGENTS (intraocular)	n/a	Cyclopentolate	Cyclogyl	OK!	www.drugs-porphyrina.org: Probably Not Porphyrinogenic
Antineoplastics	NITROGEN MUSTARDS	Cyclophosphamide	Cytoxan	OK?	www.drugs-porphyrina.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Unsafe in animals S Afr Med J 1984;65:924. Safe in patients Mainly metab by CYP2B6, ~10% by CYP3A4. Minimally/moderately transactivates pregnane X receptor; strong constitutive androstane receptor activator. Does not induce CYP3A4, but does induce CYP2C9, CYP2B6 (Biochem Pharmacol 59:961,2000; Cancer Chemother Pharmacol 64:35,2009; Curr Drug Metab 9:598,2008; J Pharmacol Exp Therap 320:72, 2007) Patient report: Safe
Immunologic agents	IMMUNOSUPPRESSIVE AGENTS	Cyclosporine	Sandimmune	OK?	www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in animals J Clin Pharmacol 2001;41:113. Safe Major metab by CYP3A4,3A5. Does not transactivate pregnane X receptor (Biochem Pharmacol 68:1889,2004; Curr Drug Metab 7:375,2006)
RESPIRATORY AGENTS	ANTIHISTAMINES	Cyproheptadine	Periactin	OK!	www.drugs-porphyrina.org: Possibly Porphyrinogenic
Antineoplastics (Cancer Therapies)	ANTIMETABOLITES	Cytarabine	Alexan, Cytarabin, Cytocin, others	OK!	www.drugs-porphyrina.org: Probably Not Porphyrinogenic www.rxlist.com: Not P450 substrate
IMMUNOLOGIC AGENTS	IMMUNE GLOBULINS	Cytomegalovirus	none	OK?	(web.uct.ac.za/depts/porphyria/: Use)
Blood related	ANTICOAGULANTS	Dabigatran	Pradaxa	OK!	No appreciable P450 metab. (Drug Metab Disp 36:386, 2008)
ANTINEOPLASTICS (Cancer Therapies)	MISC.	Dacarbazine	Dtic-Dome	BAD?	www.drugs-porphyrina.org: Possibly Porphyrinogenic. Not porphyrinogenic in chick embryo model. Like chloroambucil, melphalan, may be safer than other alkylating agents.
BLOOD RELATED THERAPY	ANTICOAGULANTS	Dalteparin	Fragmin	OK!	www.drugs-porphyrina.org: Not Porphyrinogenic

Class	Type	Generic name	Brand name	Conclusion	References
Hormones, hormone-like	ANDROGENS	Danazol	Danocrine	BAD!	www.drugs-porphyrina.org: Probably Porphyrinogenic www.porphyrina-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in patients www.porphyrinafoundation.com: Unsafe J Clin Endocrinol Metab 1981;52:549. Exacerbates acute porphyria J Clin Endocrinol Metab 1979;48:123. Unsafe in patients
OPHTHALMIC AGENTS (intraocular)	n/a	Dapiprazole	Rev-Eyes	OK!	
Anti-infectives	MISCELLANEOUS	Dapsone	Leprostatic	BAD!	www.porphyrina-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in patients Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4 & CYP2C9
ANTI-INFECTIVES	MISCELLANEOUS	Daptomycin	Cubicin	NO INFO	
Urinary tract	ANTISPASMODICS	Darifenacin	Enablex	BAD?	Significantly metab by CYP3A4, 2D6. No evidence of CYP induction (Clin Pharmacokinet 45:325,2006)
ANTIDOTES	n/a	Deferoxamine	Desferal	OK!	www.drugs-porphyrina.org: Not Porphyrinogenic www.rxlist.com: Mostly metabolized by plasma enzymes
Anti-infectives	ANTIRETROVIRALS	Delavirdine	Rescriptor	BAD!	www.drugs-porphyrina.org: Probably Porphyrinogenic Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4
ANTI-INFECTIVES	TETRACYCLINES	Demeclocycline	Declomycin	NO INFO	www.drugs-porphyrina.org: Probably Porphyrinogenic
Antineoplastics	MISC.	Denosumab	Xgeva	OK!	Antibody for skeletal mets., osteoporosis.
Anesthetics	GENERAL	Desflurane	Suprane	OK!	www.drugs-porphyrina.org: Probably Not Porphyrinogenic
HORMONES, HORMONE-LIKE	PITUITARY	Desmopressin	DDAVP	OK!	www.drugs-porphyrina.org: Not Porphyrinogenic
Dermatologicals	Dermatitis, allergy, psoriasis	desoximetasone	topicort	OK?	Topical corticosteroid. 1 patinet report: safe
Psychiatric	ANTI-DEPRESSANT	Desvenlafaxine	Pristiq	OK?	<5% metab by CYP3A4 (PDR 63:3247,2009). No CyP3A4 inhibition. (CNS Drugs 2012;26:39)
Hormones	CORTICOSTEROIDS	Dexamethasone	Decadron	OK?	www.drugs-porphyrina.org: Possibly Porphyrinogenic www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use Substrate of CYP3A4. Induces CYP3A4, 2C9 via transactivation of pregnane X receptor (modest). Patient report: Safe. MAY BE UNSAFE if used for prolonged periods. (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Arch Toxicol 82:667,2008)
Psychiatric	MISC.	Dexmedetomidine	Precedex	OK?	~14% metab. by CYP2A6, remainder by glucuronidation.
Psychiatric medications	MISC.	Dextroamphetamine	Dexedrine	BAD?	Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
Central nervous system agents	AMPHETAMINES	Dextroamphetamine	Dexedrine	OK?	
Respiratory	ANTITUSSIVES (Cough Therapies)	Dextromethorphan	Many	OK!	www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use Metab by CYP3A4.

Class	Type	Generic name	Brand name	Conclusion	References
CONTRAST MEDIA	n/a	Diatrizoate Meglumine	Hypaque	OK!	
Central nervous system	BENZODIAZEPINES	Diazepam	Valium	OK?	www.drugs-porphyrina.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Unsafe in patients Medicine (Balt) 1992;71:1. Safe Substrate of CYP3A4,2B6,2C9. Modest transactivator of pregnane X receptor, but low prediction of CYP3A4 inducibility (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006; Curr Drug Metab 9:598,2008) 2 Patient reports: Safe
Cardiovascular agents	MISC.	Diazoxide	Hyperstat	OK!	www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in cell culture
ANESTHETICS	LOCAL	Dibucaine	Nupercainal	NO INFO	
Central nervous system agents	NONSTEROIDAL ANTI-INFLAMMATORY AGENTS -NSAIDs (Pain, Arthritis Therapies, etc.)	Diclofenac	Voltaren	BAD?	www.drugs-porphyrina.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in patients www.porphyrinafoundation.com: Unsafe PV Tishler MD clinical data: Safe Biomed Pharmacother 43:135,1989 - Unsafe in cell culture Limited metab by CYP2C9, ?2C8 (Drug Metab Disp 33:1567, 2005)
Anti-infectives	PENICILLINS	Dicloxacin	Many	OK?	www.drugs-porphyrina.org: Not Porphyrinogenic. Induces CYP3A.
Gastrointestinal	ANTISPASMODICS	Dicyclomine	Bental, others	OK!	www.uq.edu.au/porphyria/: Safe in patients Patient reports: Safe
ANTI-INFECTIVES	ANTIRETROVIRALS	Didanosine	Videx	OK?	www.drugs-porphyrina.org: Probably Not Porphyrinogenic
ANTINEOPLASTICS (Cancer Therapies)	HORMONAL AGENTS	Diethylstilbestrol	Many	NO INFO	
Cardiovascular agents	CARDIAC GLYCOSIDES	Digoxin	Lanoxin	OK!	www.drugs-porphyrina.org: Not Porphyrinogenic www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Safe in patients Medicine (Balt) 1992;71:1. Safe
Cardiovascular	CALCIUM CHANNEL BLOCKERS	Diltiazem	Cardizem	BAD?	www.drugs-porphyrina.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Probably unsafe Substrate of & inhibitor of CYP3A4. Modest transactivation of pregnane X receptor, but low probability of CYP3A4 induction (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; http://medicine.iupui.edu/clinpharm/ddis/; Curr Drug Metab 7:375,2006)
Gastrointestinal therapies	ANTIEMETICS (Vomiting Therapies)	Dimenhydrinate	Dramamine	BAD!	www.porphyrina-europe.com: unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in patients
ANTIDOTES	n/a	Dimercaprol	BAL	OK!	web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe
Respiratory	ANTIHISTAMINES	Diphenhydramine	Benadryl	OK!	www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use Patient reports: Safe
GASTROINTESTINAL THERAPIES	ANTIDIARRHEAL AGENTS	Diphenoxylate	Lomotil	OK!	www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients

Class	Type	Generic name	Brand name	Conclusion	References
Immunologic agents	TOXOIDS	Diphtheria + Tetanus Toxoids & Acellular Pertussis Adsorbed, Hepatitis B (recombinant) & Inactivated Poliovirus Vaccine Combined	Pediatrix	OK!	All component parts of this vaccine are safe individually as well.
BLOOD RELATED THERAPY	ANTICOAGULANTS	Dipyridamole	Persantine	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in cell culture
Cardiovascular agents	ANTIARRHYTHMICS	Disopyramide	Norpace	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Probably safe
Psychiatric medications	AGENTS FOR CHEMICAL DEPENDENCY	Disulfiram	Antabuse	OK?	www.drugs-porphyria.org: Probably Porphyrinogenic Eur J Clin Chem Clin Biochem 1997;35:427. Safe in patients Major metabolism by CYP3A4/3A5. Inhibits but probably does not induce CYPs (Alcohol Clin Exp Res 22:1212,1998; Arch Toxicol 82:667,2008)
Central nervous system agents	ANTICONVULSANTS	Divalproex	Depakote	OK?	Dimer of valproic acid. See Valproic acid.
Cardiovascular agents	VASOPRESSORS	Dobutamine	Dobutrex, others	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
Antineoplastics	MITOTIC INHIBITORS	Docetaxel	Taxotere, etc.	OK?	www.drugs-porphyria.org: Probably Porphyrinogenic. Metab mainly by CYP3A4. Does not induce CYP3A, 2C9; weakly inhibits 3A. No to minimal transactivation of human pregnane X receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Pharmacogenetics 8:391,1998; Cur Drug Metab 7:375,2006; Cancer Chemother Pharmacol 64:35,2009. pt report published: safe (Expert Opin Drug Saf 2008; 7:159. Patient report: safe.
Psychiatric medications	ANTIDEMENTIA AGENTS	Donepezil	Aricept	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic www.drugs.com: ~80% metab via CYP2D6, 3A4 (www.clinicalpharmacology-ip.com; Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
Cardiovascular agents	VASOPRESSORS	Dopamine	Intropin, others	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
Anti-infectives	PENEM ANTIBIOTICS	Doripenem	Doribax	OK!	Not a CYP substrate (Clin Therapeut 31:42,2009)
OPHTHALMIC AGENTS (intraocular)	n/a	Dorzolamide	Trusopt	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.drugs.com: excreted primarily as unchanged drug
ANESTHETICS	MUSCLE RELAXANTS	Doxacurium	Nuromax	NO INFO	
Cardiovascular	ANTIADRENERGICS	Doxazosin	Cardura	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution PV Tishler MD clinical data: Safe Br J Clin Pharmacol 1997;43:339. Safe at <10mg/d. patient report: safe (5 yrs)
Psychiatric medications	TRICYCLICS	Doxepin	Sinequan, Adepin, others	OK?	Medicine (Balt)1992;71:1. Safe Patient report: Safe
Antineoplastics	TROPOISOMERASE INHIBITORS	Doxorubicin	Doxil, Adriamycin	OK!	Does not induce CYPs or transactivate pregnane X receptor(Canad J Physiol Pharmacol 77:589,1999; Cancer Chemother Pharmacol 64:35,2009). Publ. report: safe (Exp Opin Drug Saf 2008; 7:159)

Class	Type	Generic name	Brand name	Conclusion	References
Anti-infectives	TETRACYCLINES	Doxycycline	Vibramycin, others	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic/Probably Not Porphyrinogenic. Induces P-grenane X receptor. web.uct.ac.za/depts/porphyria/: Avoid 2 patient reports: safe 1 patient report: unsafe
Gastrointestinal	ANTIEMETICS (Vomiting Therapies)	Dronabinol	Marinol	BAD?	Major metab by CYP3A4 & 2C9 (Williams DA. Induces pregnane X receptor. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
ANTI-INFECTIVES	SEPSIS SYNDROME AGENTS - NON-ANTIBIOTIC	Drotrecogin alfa	Xigris	OK?	www.drugs-porphyria.org: Not Porphyrinogenic
Psychiatric	ANTI-DEPRESSANT	Duloxetine	Cymbalta	OK?	~97% metab by CYP1A2, 2D6 (Drug Metab Disp 31:1142,2003). No effect on activity of CYP3A4 or 2C9 (CNS Drugs 2012; 26:39) 2 Patient reports:safe. Report of questionable patient: unsafe.
Urinary tract	PROSTATIC HYPERTROPHY	Dutasteride	Avodart	BAD?	Extensively metab by CYP3A4,3A5 (PDR 63:1359,2009). 2 patient reports: unsafe
ANTIDOTES	n/a	Edetate	Many	OK!	
Central nervous system agents	ANTIMYASTHENIC AGENTS	Edrophonium	Tensilon	OK!	
Anti-infectives	ANTIRETROVIRALS	Efavirenz	Sustiva	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic Metab mainly by CYP2B6, with minor role for CYP3A4. Induces CYP2B6,3A4 via transactivation of constitutive androstane receptor & pregnane X receptor (Pharmacogenet Genomics 19:300, 2009; Arch Toxicol 82:667,2008; J Pharmacol Exp Therap 320:72,2007; Clin. Pharmacol. Ther. 91: 475, 2012).
Anti-infectives	ANTIRETROVIRALS	Emtricitabine	Emtriva, Truvada	OK?	Blum MR: C Clin Pharm 2007; 47:751 - Primarily eliminated via renal excretion; 60-70% recovered unchanged.
Cardiovascular	ACE INHIBITORS	Enalapril (Enalaprilat)	Vasotec	OK!	www.drugs-porphyria.org: Not Porphyrinogenic 2 Patient reports: Safe No transactivation of pregnane X receptor (Curr Drug Metab 6:375,2006)
ANTI-INFECTIVES	ANTIRETROVIRALS	Enfuvirtide	Fuzeon	OK?	
BLOOD RELATED THERAPY	ANTICOAGULANTS	Enoxaparin	Lovenox	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
Central nervous system agents	ANTIPARKINSON AGENTS	Entacapone	Comtan, Stalevo	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic. Not metab by CYPs (PDR 63:2208, 2009)
Cardiovascular agents	VASOPRESSORS	Ephedrine	Many	OK!	www.drugs-porphyria.org: Not Porphyrinogenic
Cardiovascular agents	DIURETICS	Eplerenone	Inspra	BAD?	~95% metab, mainly by CYP3A4. (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; J Clin Pharmacol 45:810,2005; Am J Therapeutics 16:255,2009)
BLOOD RELATED THERAPY	HEMATOPOIETICS	Epoetin Alfa	Epogen	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe
Cardiovascular	ANGIOTENSIN RECEPTOR ANTAGONISTS	Eprosartan	Teveten	OK!	98% excreted unchanged, 2% as glucuronide.
Blood related therapy	ANTICOAGULANTS	Eptifibatide	Integrilin	OK!	www.drugs-porphyria.org: Not Porphyrinogenic Clin Ther 1998;20:307. Polypeptide; deamidation probably via hydrolysis, not involving P450

Class	Type	Generic name	Brand name	Conclusion	References
HORMONES, HORMONE-LIKE	PITUITARY	Ergonovine	Ergotrate	OK!	
Central nervous system agents	MIGRAINE THERAPY	Ergotamine	Cafergot	BAD!	www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in patients www.porphyriafoundation.com: Unsafe Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
Antineoplastics (Cancer Therapies)	ENZYME INHIBITORS	Erlotinib	Tarceva	OK?	Williams DA. ~70% metab by CYP3A4. Modestly transactivates pregnane X receptor but does not induce CYP3A4 (Eur J Clin Pharmacol 64:31,2008; Cancer Chemother Pharmacol 64:35,2009)
Anti-infectives	PENEM ANTIBIOTICS	Ertapenem	Invanz	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.rxlist.com: Does not appear to undergo hepatic metabolism
Anti-infectives	MACROLIDES	Erythromycin	Many	BAD!	www.drugs-porphyria.org: Porphyrinogenic www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in patients Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007: Substrate of, induces & inhibits CYP3A4. Patient report: Unsafe
Psychiatric	SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs)	Escitalopram	Lexapro	No info	Major metabolism by CYP2C19, CYP3A4; no inhibition of CYP3A4 (CNS Drugs 2012; 26:39)
Cardiovascular agents	BETA BLOCKERS (includes some ophthalmic preparations)	Esmolol	Brevibloc	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use
Gastrointestinal therapies	H-2 ANTAGONISTS, PPIs (Reflux, Ulcer Therapies)	Esomeprazole	Nexium	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic. www.porphyria.uct.ac.za: Use with extreme caution. PV Tishler MD clinical data & patient report: Safe. Major metabolic path via CYP2C19, minor via CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007) .
Central nervous system agents	BENZODIAZEPINES	Estazolam	Prosom	OK?	www.uq.edu.au/porphyria/: Cell culture - probably safe PV Tishler MD clinical data: Safe Metab. almost exclusively by CYP3A4 (https://online.epocrates.com/front_porch/; Xenobiotica 35:455,2005)
ANTINEOPLASTICS (Cancer Therapies)	HORMONAL AGENTS	Estramustine	Emcyt	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic
HORMONES, HORMONE-LIKE	ESTROGENS	Estrogens, Conjugated	Many	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic
Hormones, hormone-like	ESTROGENS	Estropipate	Ogen, Ortho-est	No info	
Central nervous system agents	HYPNOTICS (Sleeping Medications)	Eszopiclone	Lunesta	OK?	Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
Arthritis	n/a	etanercept	Enbrel	OK!	Protein. Not metab by CYPs (PDR 63:569,2009)
Cardiovascular agents	DIURETICS	Ethacrynic Acid	Edecrin	OK!	www.uq.edu.au/porphyria/: Safe in patients http://www.emedicine.com/MED/topic1880.htm: Safe in porphyria

Class	Type	Generic name	Brand name	Conclusion	References
ANTI-INFECTIVES	ANTIMYCOBACTERIAL AGENTS	Ethambutol	Myambutol	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
Central nervous system agents	HYPNOTICS (Sleeping Medications)	Ethchlorvynol	Placidyl	BAD!	
Hormones	ESTROGENS	Ethinyl Estradiol	Many	OK?	web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Probably safe PV Tishler MD clinical data & patient report: Safe Horm Metab Res 1995;27:379. Safe in patients Mass. College of Pharmacy database: Substrate & inhibitor of CYP3A4. Inducer of pregnane X receptor.
CONTRAST MEDIA	n/a	Ethiodized Oil	Ethiodol	OK!	
Central nervous system agents	ANTICONVULSANTS	Ethosuximide	Zarontin	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in patients www.porphyriafoundation.com: Unsafe Unsafe in animals (Neurology 1981;31:480) Substrate of CYP3A4, but does not transactivate pregnane X receptor. Minor metab by CYP2C9, other CYPs (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375, 2006; Clin Therapeutics 30:1385,2008)
ANESTHETICS	LOCAL	Ethyl chloride	Ethyl Chloride	OK!	
ANESTHETICS	GENERAL	Etomidate	Amidate	BAD!	www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in animals Br J Anaesth 1985;57:420. Unsafe in animals
Antineoplastics	MITOTIC INHIBITORS	Etoposide	Eposin, Etopophos, Vepesid	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic www.uq.edu.au/porphyria/: Safe in patients Extensively metab by & induces CYP3A4. Transactivates pregnane X receptor & induces CYP3A4 in several studies, but not in one study (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Mol Pharmacol 2002;62:439; Clin Therapeutics 30; 1385,2008; Cancer Chemother Pharmacol 64:35,2009)
Antidiabetics	GLP-1 Receptor Agonist	Exenatide	Byetta	OK?	Drug is a peptide, with peptide metabolism. Physicians' Desk Reference 2010; 64:648
Cardiovascular agents	ANTHYPERLIPIDEMIC AGENTS	Ezetimibe	Zetia, Vitorin	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): Undergoes minimal oxidation. Extensively metabolized but not by CYP (PDR 63:2149,2009) Patient report: Safe
ANTI-INFECTIVES	ANTIVIRALS	Famciclovir	Famvir	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
Gastrointestinal	H-2 ANTAGONISTS, PPIs (Reflux, Ulcer Therapies)	Famotidine	Pepcid	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Safe in patients Patient reports: Safe
Central nervous system agents	ANTICONVULSANTS	Felbamate	Felbatol	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic www.porphyriafoundation.com: Unsafe Metab mainly by CYP3A4, also 2C9, others. Induces CYP3A4 but does not transactivate pregnane X receptor (Fundam Clin Pharmacol 14:301,2000; Curr Drug Metab 7:375,2006; Clin Therapeutics 30:1385,2008)

Class	Type	Generic name	Brand name	Conclusion	References
Cardiovascular	CALCIUM CHANNEL BLOCKERS	Felodipine	Plendil	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution Substrate of & inducer of CYP3A4. Modest transactivator of pregnane X receptor, metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006)
Cardiovascular agents	DOPAMINE D1 RECEPTOR AGONISTS	Fenoldopam	Corlopam	No info	
Central nervous system	NARCOTICS (Pain Therapies)	Fentanyl	Duragesic	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in animals Substrate of & induces CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007).Induces pregnane X receptor Patient reports: Safe
CONTRAST MEDIA	n/a	Ferumoxides	Endorem	OK!	
Respiratory	ANTIHISTAMINES	Fexofenadine	Allegra	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): Ca. 1% metabolized by P450, ~5% total. Patient reports: Safe
Blood related therapy	HEMATOPOIETICS	Filgrastim (G-CSF)	Neupogen	OK!	(G-C web.uct.ac.za/depts/porphyria/) www.drugs-porphyria.org: Not Porphyrinogenic
Urinary tract	PROSTATIC HYPERTROPHY (also Baldness)	Finasteride	Proscar, Propecia	OK!	www.drugs-porphyria.org:Possibly porphyrinogenic. www.porphyria.uct.ac.za: Use only with extreme caution. Metab mainly by CYP3A4. Little activation of pregnane X receptor (Huskey SW: Drug Metab Disp 1996; 24:695; Sinz M. Cur Drug Metab 2006; 7:375)
Cardiovascular agents	ANTIARRHYTHMICS	Flecainide	Tambocor, others	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic. Metabolized by CYP2D6. No data pointing to CYP-induction (http://medicine.iupui.edu/clinpharm/ddis/)
ANTINEOPLASTICS (Cancer Therapies)	ANTIMETABOLITES	Floxuridine	FUDR	OK?	
Anti-infectives	Penicillins	flucloxacillin	Floxapen, etc.	BAD?	Not metabolized by or inhibits CYP3A, 2C9, but induces CYP3A, PXR
Anti-infectives	ANTIFUNGALS	Fluconazole	Diflucan	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution Inhibits Cyt3A,2C9, and pregnane X receptor. 3 Patient reports: Unsafe.
ANTI-INFECTIVES	ANTIFUNGALS	Flucytosine	Ancobon	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in cell culture www.porphyriafoundation.com: Safe
Antineoplastics (Cancer Therapies)	ANTIMETABOLITES	Fludarabine	Fludara, others	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.rxlist.com: Not P450 substrate
HORMONES, HORMONE-LIKE	CORTICOSTEROIDS	Fludrocortisone	Florinef	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution
Respiratory agents	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Flunisolide (Inhalant)	Aerobid, Nasalide, Nasarel	No info	
OPHTHALMIC AGENTS (intraocular)	n/a	Fluorescein	Many	OK!	www.drugs-porphyria.org: Not Porphyrinogenic

Class	Type	Generic name	Brand name	Conclusion	References
Antineoplastics	ANTIMETABOLITES	Fluorouracil, 5-Fluorouracil	Many	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution. Safe in patients. Does not induce CYP3A4 or transactivate pregnane X receptor (S Afr Med J 65:924,1984; Cancer Chemother Pharmacol 64:35,2009). Pub rpt: safe (Exp Opin Drug Saf 2008; 7:159). Patient report:as skin cream, safe
Psychiatric	SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs)	Fluoxetine	Prozac	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Safe in patients Substrate of CYP2C9 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007) Does not induce pregnane X receptor (Toxicol Lett 203:82, 2011) Patient reports: safe
PSYCHIATRIC MEDICATIONS	PHENOTHIAZINES	Fluphenazine	Prolixin	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
Central nervous system agents	BENZODIAZEPINES	Flurazepam	Dalmane	BAD!	web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in patients
Antineoplastics (Cancer Therapies)	ANTIANDROGENS	Flutamide	Eulexin	BAD!	www.drugs-porphyria.org: Possibly Porphyrinogenic. Possibly metabolised by P450. Possibly ALAS-inducer. Metabolized by CYP3A or CYP2C9. Modestly transactivates pregnane X receptor and markedly induces CYP3A4 (J Gastroenterol 2006;41:231; Cancer Chemother Pharmacol 64:35,2009) Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4
Respiratory	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Fluticasone	Flovent	OK!	www.drugs-porphyria.org: Not Porphyrinogenic PV Tishler MD clinical data & patient reports: Safe Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
Respiratory	Asthma Treatment	Fluticasone	Advair	OK?	fluticasone = corticosteroid; salmeterol, brochodilator, metab via CYP3A. Used by inhalation. 1 patient report: safe.
Cardiovascular	ANTIHYPERLIPIDEMIC AGENTS	Fluvastatin	Lescol	OK?	Mainly metab by CYP2C9, also 3A4. Minimal transactivation of pregnane X receptor (Clin Pharmacol Therap 80:565,2006; Curr Drug Metab 7:375,2006)
Psychiatric	SSELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs)	Fluvoxamine	Luvox	OK?	Prob ~65% metab by CYP2D6 + alcohol dehydrogenase (Xenobiotica 37:169,2007). Inhibits CYP3A4.
Blood related	ANTICOAGULANTS	Fondaparinux	Arixtra	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic USP DI? Drug Info. for the Health Care Pro. - 26th Ed: 77% eliminated unchanged. Patient report: safe
Respiratory	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Formoterol	Foradil, Perforomist	OK?	Secondary metab via 4 CYPs (PDR 63:1025,2009), inc. CYP2C9
ANTI-INFECTIVES	CMV AGENTS	Fosamprenavir	Lexiva	BAD?	
ANTI-INFECTIVES	CMV AGENTS	Foscarnet	Foscavir	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): No P450 metabolism
Anti-infectives	MISCELLANEOUS	Fosfomycin	Monurol	OK?	Mainly not metabolized (Ann Pharmacother 32:215,1998) patient report: safe

Class	Type	Generic name	Brand name	Conclusion	References
Central nervous system agents	ANTICONVULSANTS	Fosphenytoin	Cerebyx	BAD!	www.drugs-porphyria.org: Porphyrinogenic Metab mainly by CYP2C9, also CYP3A4, others. Induces CYP2C9,3A4 (Clin Therapeutics 30:1385,2008. Same as Phenytoin.
Cardiovascular	DIURETICS	Furosemide	Lasix	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Unsafe in patients PV Tishler MD clinical data & patient reports: Safe Medicine (Balt) 1992;71:1. Safe
Central nervous system	ANTICONVULSANTS	Gabapentin	Neurontin	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use PV Tishler MD clinical data & patient reports: Safe Not a substrate for & does not induce CYPs (Fundam Clin Pharmacol 14:301,2000; Clin Therapeutics 30:1385,2008)
Diagnostic	Imaging	Gadobutrol	Gadavist	OK!	MRI contrast agent that is not metabolized
CONTRAST MEDIA	n/a	Gadopentetate Dimeglumine	Magnevist	OK!	
ANTI-INFECTIVES	ANTIVIRALS	Ganciclovir	Cytovene	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
Antineoplastics	Mitotic Inhibitors	Gefitinib	Iressa	OK?	Well absorbed. Metabolized by CYP3A. Does not induce/inhibit CYP3a, 2C9.
Cardiovascular agents	ANTHYPERLIPIDEMIC AGENTS	Gemfibrozil	Lopid	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Caution Metab by CYP2C8. Minimally transactivates pregnane X receptor (Drug Metab Disp 34:191,2006; Curr Drug Metab 7:375,2006)
ANTI-INFECTIVES	AMINOGLYCOSIDES	Gentamicin	Many	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients and animals
Antidiabetics	Sulfonylureas	Glimepiride	Amaryl	BAD?	www.drugs-porphyria.org: Possibly porphyrinogenic. Substrate of CYP2C9. Significantly transactivates pregnane X receptor but has a low probability of inducing CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Meeta 7:375,2006)
Antidiabetics	Sulfonylureas	Glipizide	Glucotrol	BAD?	www.drugs-porphyria.org: Possibly porphyrinogenic. www.porphyria-europe.com: Safe. web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Unsafe in patients. Metab by CYP2C9(Pharmacogenetics 9:71,1999)
Antidiabetics	Sulfonylureas/ Biguanides	Glipizide/ Metformin	Metaglip	BAD?	See Glipizide
Antidiabetics	Sulfonylureas	Glyburide	Micronase, Diabeta, others	OK?	Medicine (Balt) 71:1,1992 - Safe. Major metab by CYP2C9, minor metab by CYP3A4. No evidence for CYP induction (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed Lemke T and Williams TA. Baltimore, Williams & Wilkins, 6th ed, 2007; Clin Pharm Therap 85:78,2008)
Antidiabetics	Sulfonylureas/ Biguanides	Glyburide/ Metformin	Glucovance	OK?	See Glyburide
Arthritis	n/a	Gold Sodium Thiomalate	Myochrysin	BAD!	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in animals
Arthritis	n/a	Golimumab	Simponi	OK!	Protein. No CYP metabolism

Class	Type	Generic name	Brand name	Conclusion	References
HORMONES, HORMONE-LIKE	LHRH/GNRH AGONISTS	Goserelin	Zoladex	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic
Anti-infectives	ANTIFUNGALS	Griseofulvin	Many	BAD!	www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in patients www.porphyriafoundation.com: Unsafe. Induces CYP3A
Respiratory agents	EXPECTORANTS	Guaifenesin	Robitussin	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution PV Tishler MD clinical data & patient report: Safe
Central nervous system agents	ANTIMYASTHENIC AGENTS	Guanidine	Guanidine	NO INFO	
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Haemophilus B	none	OK?	
Psychiatric medications	MISC.	Haloperidol	Haldol	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic. www.porphyria-europe.com: Safe. web.uct.ac.za/depts/porphyria/: Use. www.uq.edu.au/porphyria/: Probably unsafe. Substrate mainly of 3A4, also 3A5, 3A7. Moderate activation of human pregnane X receptor & low prediction of clinical induction. (Chem Res Toxicol 2006; 19:914; Cur Drug Metab 2006; 7:375)
BLOOD RELATED THERAPY	ANTICOAGULANTS	Heparin	Many	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Hepatitis A	none	OK?	www.drugs-porphyria.org: Not Porphyrinogenic
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Hepatitis B	none	OK!	www.drugs-porphyria.org: Not Porphyrinogenic
IMMUNOLOGIC AGENTS	IMMUNE GLOBULINS	Hepatitis B	none	OK?	(web.uct.ac.za/depts/porphyria/: Use) www.drugs-porphyria.org: Not Porphyrinogenic
OPHTHALMIC AGENTS (intraocular)	n/a	Homatropine	Many	OK!	
Cardiovascular agents	VASODILATORS	Hydralazine	Apresoline	BAD!	www.drugs-porphyria.org: Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in patients
Cardiovascular agents	DIURETICS	Hydrochlorothiazide	Many	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Safe in patients PV Tishler MD clinical data & patient reports: Safe
Central nervous system agents	NARCOTICS (Pain Therapies)	Hydrocodone	Vicodin, others	OK!	see Respiratory Agents/antitussive Agents
Respiratory agents	ANTITUSSIVES (Cough Therapies)	Hydrocodone	Many	OK!	Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4 Patient reports: Safe
Hormones, hormone-like	CORTICOSTEROIDS	Hydrocortisone	Many	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Probably safe Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
Central nervous system agents	NARCOTICS (Pain Therapies)	Hydromorphone	Dilaudid	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic

Class	Type	Generic name	Brand name	Conclusion	References
ANTI-INFECTIVES	ANTIMALARIALS	Hydroxychloroquine	Plaquenil	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic. Partly CYP-metabolized. Compare the 8-aminoquinoline primaquine: Inducer of CYPs 1A1, 1A2 and 1B1
Blood related	Plasma Replacement	Hydroxyethyl starch	Voluven	OK!	Not metabolized in any injurious way.
ANTINEOPLASTICS (Cancer Therapies)	MISC.	Hydroxyurea	Hydrea	OK?	S Afr Med J 1984;65:924. Safe in patients
Respiratory agents	ANTIHISTAMINES	Hydroxyzine	Atarax, Vistaril	BAD!	www.drugs-porphyria.org: Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in patients
Gastrointestinal	ANTISPASMODICS	Hyoscyamine	Levsin, others	OK!	3 patient reports: safe
Bones	Bisphosphonates	Ibandronate	Boniva	OK?	Bisphosphonates are not metabolized.
Central nervous system	NONSTEROIDAL ANTI-INFLAMMATORY AGENTS -NSAIDs (Pain, Arthritis Therapies, etc.)	Ibuprofen	Advil, Motrin	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe. Metab by CYP2C9,2C8. PV Tishler MD clinical data & patient reports: Safe at low dose used intermittently, BUT one acute attack at high, prolonged dose (Drug Metab Disp 33:1567, 2005) patient reports: safe
Cardiovascular agents	ANTIARRHYTHMICS	Ibutilide	Corvert	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic Circulation 1998;97:493. Metabolic pathway does not seem to involve CYP3A4 or CYP2D6
Antineoplastics (Cancer Therapies)	ANTIBIOTICS	Idarubicin	Idamycin	BAD?	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution
Antineoplastics (Cancer Therapies)	NITROGEN MUSTARDS	Ifosfamide	Ifex	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution Substrate of CYP3A4. Modestly transactivates pregnane X receptor. Does not induce CYP3A4 but does induce CYP2B6(Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Cancer Chemother Pharmacol 64:35,2009; Curr Drug Mdetab 9:598,2008)
Psychiatric	MISC.	Loperidone	Fenapt	No info	99% metab, mainly by CYP2D6, less so by CYP3A4 (Curr Drug Metab 11:516, 2010)
Antineoplastics	ENZYME INHIBITORS	Imatinib	Gleevac	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic Metab by CYP3A4, less by 2C9; induces and inhibits both. Does not transactivate pregnane X receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Cancer Chemother Pharmacol 64:35,2009)
Anti-infectives	PENEM ANTIBIOTICS	Imipenem/Cilastatin	Primaxin	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): Not metabolized by P450
Psychiatric	TRICYCLICS	Imipramine	Tofranil	OK?	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Probably unsafe Metab by CYP2C19, 2D6, 3A4. (http://medicine.iupui.edu/clinpharm/ddis/; Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
IMMUNOLOGIC AGENTS	IMMUNE GLOBULINS	Immune Globulin IV	none	OK?	(web.uct.ac.za/depts/porphyria/: Use) www.drugs-porphyria.org: Not Porphyrinogenic

Class	Type	Generic name	Brand name	Conclusion	References
Anti-infectives	ANTIRETROVIRALS	Indinavir	Crixivan	BAD!	www.drugs-porphyrina.org : Porphyrinogenic web.uct.ac.za/depts/porphyria/ : Use with Extreme Caution Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate,inducer and inhibitor of CYP3A4; pregnane X receptor inducer
Central nervous system agents	NONSTEROIDAL ANTI-INFLAMMATORY AGENTS -NSAIDs (Pain, Arthritis Therapies, etc.)	Indomethacin	Indocin	OK!	web.uct.ac.za/depts/porphyria/ : Use www.uq.edu.au/porphyria/ : Probably safe. ~50% metab by CYP2C9 (Drug Metab Disp 33:1567, 2005). Medicine (Balt) 71:1, 1992 - Safe in some, not safe in others
Gastrointestinal therapies	ANTI-INFLAMMATORY AGENTS	Infliximab	Remicade	OK!	www.drugs-porphyrina.org : Not Porphyrinogenic Protein; no CYP metab
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Influenza	none	OK!	www.drugs-porphyrina.org : Not Porphyrinogenic
Antidiabetics	Insulin	Insulin detmir	Levemir	OK!	Insulin analog; insulins are ok.
Antidiabetics	Insulins	Insulins	Insulin	OK!	www.drugs-porphyrina.org : Not porphyrinogenic. www.porphyrina-europe.com : Safe. web.uct.ac.za/depts/porphyria/ : Use. www.uq.edu.au/porphyria/ : Safe in patients
ANTINEOPLASTICS (Cancer Therapies)	MISC.	Interferon Alfa-2A	Roferon-A	OK!	www.drugs-porphyrina.org : Not Porphyrinogenic web.uct.ac.za/depts/porphyria/ : Use with Caution USP DI? Drug Info. for the Health Care Pro. - 26th Ed: Liver metabolism is minor pathway http://medicine.iupui.edu/flockhart/table.htm : Inhibitor of CYP1A2
ANTINEOPLASTICS (Cancer Therapies)	MISC.	Interferon Alfa-2B	Intron A	OK!	www.drugs-porphyrina.org : Not Porphyrinogenic web.uct.ac.za/depts/porphyria/ : Use with Caution http://medicine.iupui.edu/flockhart/table.htm : Inhibitor of CYP1A2
ANTI-INFECTIVES	ANTIVIRALS	Interferon alfa-2B/Ribavirin	Rebetron	OK!	???
ANTINEOPLASTICS (Cancer Therapies)	MISC.	Interferon Gamma-1B	Actimmune	OK!	www.drugs-porphyrina.org : Not Porphyrinogenic web.uct.ac.za/depts/porphyria/ : Use with Caution http://medicine.iupui.edu/flockhart/table.htm : Inhibitor of CYP1A2
CONTRAST MEDIA	n/a	Iodipamide Meglumine	Chlorografin, Sinografin	OK!	
Contrast media	n/a	Iodixanol	Visipaque	OK!	www.drugs-porphyrina.org : Not Porphyrinogenic www.fda.gov/medwatch/SAFETY/2003/03DEC_PI/Visipaque_PI.pdf : No metabolism
ANTI-INFECTIVES	ANTIPARASITICS	Iodoquinol	Yodoxin	NO INFO	
CONTRAST MEDIA	n/a	Iohexol	Omnipaque	OK!	www.drugs-porphyrina.org : Not Porphyrinogenic
CONTRAST MEDIA	n/a	Iopanoic Acid	Telepaque	OK!	
CONTRAST MEDIA	n/a	Iopromide	Ultravist	OK!	www.drugs-porphyrina.org : Not Porphyrinogenic
ANTIDOTES	n/a	Ipecac	Many	OK?	
Respiratory agents	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Ipratropium	Atrovent	OK!	www.drugs-porphyrina.org : Probably Not Porphyrinogenic http://www.bidocs.com/rene/nrt/Prescribing+Information/PIs/Atrovent+Nasal+03/ATR03.pdf : Metabolized via hydrolysis patient report: safe

Class	Type	Generic name	Brand name	Conclusion	References
Cardiovascular agents	ANGIOTENSIN II RECEPTOR ANTAGONISTS	Irbesartan	Avapro, Avalide	OK!	www.drugs-porphyrina.org: Probably Not Porphyrinogenic Mostly not metab by CYPs. Some metab by CYP2C9, but doesnot induce any CYP (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; PDr 63:892,2009)
Antineoplastics	TOPOSIOMERASE INHIBITORS	irinotecan	Camptosar	BAD?	Major metab by & inhibits CYP3A4, also by CYP2B6. Strongly induces both CYPs in some studies, but neither induces CYP3A4 or transactivates pregnane X receptor in another study (Clin Cancer Res 7:2182,2001; Clin Therapeutics 30:1385,2008; Cancer Chemother Pharmacol 64:35,2009)
ANESTHETICS	GENERAL	Isoflurane	Forane	OK!	www.drugs-porphyrina.org: Probably Not Porphyrinogenic www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Unsafe in animals
Central nervous system agents	MIGRAINE THERAPY	Isometheptene/ Dichloralphenazone	Midrin, others	BAD?	Isometheptene www.uq.edu.au/porphyria/: Unsafe in animals Dichloralphenazone www.uq.edu.au/porphyria/: Unsafe in patients
ANTI-INFECTIVES	ANTIMYCOBACTERIAL AGENTS	Isoniazid	Many	BAD!	www.drugs-porphyrina.org: Probably Porphyrinogenic. Inhibitor of CYP 1A2, 2A6, 2C19, 3A4. Several references warn against its use web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Probably unsafe
Cardiovascular agents	ANTIANGINAL AGENTS	Isosorbide Dinitrate	Imdur	OK!	www.drugs-porphyrina.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution
Dermatologicals	ACNE	Isotretinoin	Accutane, Sotret, Amnesteem, Claravis	BAD?	web.uct.ac.za/depts/porphyria/: Use with Extreme Caution Substrate of CYP3A4. Minimally transactivates pregnane X receptor, and has low proability of inducing CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006)
Anti-infectives	ANTIFUNGALS	Itraconazole	Sporanox	BAD!	www.drugs-porphyrina.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. substrate & inhibitor of CYP3A4
ANTI-INFECTIVES	ANTIPARASITICS	Ivermectin	Stromectol	BAD?	Xenabiotica 1998; 28: 313. Metabolized extensively by CYP3A4
Antineoplastics (Cancer Therapies)	MISC.	Ixabepilone	Ixempra	BAD?	Highly metab by and induces CYP3A4; weakly transactivates pregnane X receptor (Clin Cancer Res 14:2701,2008; S Mani, pers commun)
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Japanese Encephalitis	none	OK?	
GASTROINTESTINAL THERAPIES	ANTIDIARRHEAL AGENTS	Kaolin-Pectin	Kaopectate	OK!	web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients
ANESTHETICS	GENERAL	Ketamine	Ketalar	BAD!	www.drugs-porphyrina.org: Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Probably safe Br J Anaesth 1985;57:420. Safe in animals

Class	Type	Generic name	Brand name	Conclusion	References
Anti-infectives	ANTIFUNGALS	Ketoconazole	Many	BAD!	www.drugs-porphyria.org: Porphyrinogenic www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in cell culture Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate & inhibitor of CYP3A4. Inhibitor of pregnane X receptor & constit. androstene receptor.
Central nervous system agents	NONSTEROIDAL ANTI-INFLAMMATORY AGENTS -NSAIDs (Pain, Arthritis Therapies, etc.)	Ketoprofen	Orudis, Oruvail, others	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Caution Probably not metab by CYPs PV Tishler MD clinical data: Safe (Drug Metab Disp 33:1567,2005)
Central nervous system agents	NONSTEROIDAL ANTI-INFLAMMATORY AGENTS -NSAIDs (Pain, Arthritis Therapies, etc.)	Ketorolac Tromethamine	Toradol	BAD!	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution Eksp Klin Farmakol. 2005;68:56. CYP2C substrate
Cardiovascular	BETA BLOCKERS (includes some ophthalmic preparations)	Labetalol	Normodyne, Trandate	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients patient report: safe
ANTI-INFECTIVES	ANTIRETROVIRALS	Lamivudine	Epivir	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.drugs.com: 70% excreted as unchanged drug in urine
Gastrointestinal therapies	H-2 Antagonists, PPIs (Reflux, Ulcer Therapies)	Lansoprazole	Pravacid	OK?	www.drugs-porphyria.org: Probably porphyrinogenic. www.porphyria.uct.ac.za: Use but with caution. Metabolism mainly via CYP2C19. Sinz M: Cur Drug Metab 2006; 7:375: Moderate activation of pregnane X receptor but low prediction of clinical induction.
Antineoplastics (Cancer Therapies)	ENZYME INHIBITORS	Lapatinib	Tykerb	OK?	Metab mainly by CYP3A4,3A5. No evidence for CYP induction (Drugs 67:2101,2007)
OPHTHALMIC AGENTS (intraocular)	n/a	Latanoprost	Xalatan	OK!	www.drugs-porphyria.org: Not Porphyrinogenic
Arthritis	n/a	Leflunomide	Arava	No info	Prob metab by CYPs (www.clinicalpharmacology-ip.com)
Blood related therapy	ANTICOAGULANTS	Lepirudin	Refludan	OK!	Polypeptide. Not metab by CYPs
Antineoplastics (Cancer Therapies)	AROMATASE INHIBITORS	Letrozole	Femara	BAD?	www.drugs-porphyria.org: Possibly Porphyrinogenic. Administered in rather low dose. CYP 3A4 and 2A6-mediated metabolism. Not an inhibitor of CYP19. (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
HORMONES, HORMONE-LIKE	LHRH/GNRH AGONISTS	Leuprolide	Lupron	OK?	Protein, metabolized by proteolysis
Antineoplastics (Cancer Therapies)	IMMUNOMODULATORS	Levamisole	Ergamisol	No info	
Central nervous system agents	ANTICONVULSANTS	Levetiracetam	Keppra	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe Not a substrate for & does not induce CYPs (Fundam Clin Pharmacol 14:301,2000; Clin Therapeutics 30:1385,2008)
n/a	n/a	Levobunolol	Betagan, others	OK!	
Respiratory agents	ANTI-HISTAMINES	Levocetirizine	Xyzal	OK!	Mainly excreted unchanged. Does not induce CYPs (Curr Med Therap 15:2193, 2008; Med Letter 49:97,2007)

Class	Type	Generic name	Brand name	Conclusion	References
Central nervous system agents	ANTIPARKINSON AGENTS	Levodopa	Many	OK!	web.uct.ac.za/depts/porphyria/: Use with Caution USP DI? Drug Info. for the Health Care Pro. - 26th Ed: Not P450 substrate http://www.ukmi.nhs.uk/NewMaterial/html/docs/entacapo.pdf : Main metabolic pathway does not involve P450
Central nervous system agents	ANTIPARKINSON AGENTS	Levodopa/ Carbidopa	Sinemet	OK!	
Anti-infectives	FLUOROQUINOLONES	Levofloxacin	Levaquin	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic PV Tishler MD clinical data & patient report: Safe Drug Metab Disp 1996;24:1134. Undergoes limited metabolism http://biocomp.health.unm.edu/p450/metabP450diseasep3.pdf : Substrate of CYP1 family
Hormones	PROGESTINS	Levonorgestrel	Many	BAD!	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution. Metab by CYP3A4.
HORMONES, HORMONE-LIKE	THYROID	Levothyroxine	Levoxyl, Synthroid	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use PV Tishler MD clinical data & patient reports: Safe
Cardiovascular agents	ANTIARRHYTHMICS	Lidocaine	Xylocaine	OK?	www.drugs-porphyria.org: Porphyrinogenic metab by CYP3A4, 1A2. May inhibit its metab (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007: Pharmacol 1990; 255:1385; Curr Drug Metab 5:543, 2004)
Antidiabetics	DPP-4 Inhibitor	Linagliptin	Tradjenta, Jentadueto	OK?	>75% excreted unchanged. Major metabolite created via CYP3A4, which is not induced (Drug Metab Disp 2010; 38:667).
ANTI-INFECTIVES	MISCELLANEOUS	Linezolid	Zyvox	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic; insufficient data on metabolism but no indications for P450 interaction in vivo. USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): Not metabolized by P450
HORMONES, HORMONE-LIKE	THYROID	Liothyronine	Cytomel	OK!	web.uct.ac.za/depts/porphyria/: Use
Antidiabetics	GLP-1 Receptor Agonist	Liraglutide	Victoza	OK?	Polypeptide-fatty acid, metabolized enzymatically. Drug Metab Disp 2010; 38:1944.
Cardiovascular	ACE INHIBITORS	Lisinopril	Prinivil	OK!	www.drugs-porphyria.org: Not Porphyrinogenic P4 atient reports: Safe No transactivation of pregnane X receptor (Curr Drug Metab 6:375,2006)
Psychiatric medications	MISC.	Lithium	Eskalith, Lithobid	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients
ANTINEOPLASTICS (Cancer Therapies)	NITROSOUREAS	Lomustine	Ceenu	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic http://redpoll.pharmacy.ualberta.ca/drugbank/ : CYP3A4 substrate
GASTROINTESTINAL THERAPIES	ANTIARRHEAL AGENTS	Loperamide	Imodium	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in cell culture Patient report: Safe

Class	Type	Generic name	Brand name	Conclusion	References
Anti-infectives	ANTIRETROVIRALS	Lopinavir/Ritonavir	Kaletra	BAD!	Lopinavir www.drugs-porphyria.org : Probably Porphyrinogenic USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): Metabolized mainly by CYP3A, but metabolized by CYP2D6 if used with ritonavir. Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4 Ritonavir www.drugs-porphyria.org : Porphyrinogenic web.uct.ac.za/depts/porphyria/ : Use with Extreme Caution. Substrate of & inhibits CYP3A via human pregnane X receptor transactivation (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T CYP2C9, pregnane X receptor Combination: Induces CYP2C9
Respiratory	ANTIHISTAMINES	Loratadine	Claritin	OK!	www.drugs-porphyria.org : Probably Not Porphyrinogenic www.porphyria-europe.com : Safe web.uct.ac.za/depts/porphyria/ : Use with Caution Substrate of CYP3A4, 2C9. Moderate transactivator of pregnane X receptor, but low probability of inducing CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006) 3 Patient reports: safe
Central nervous system agents	BENZODIAZEPINES	Lorazepam	Ativan	OK!	www.drugs-porphyria.org : Probably Not Porphyrinogenic www.porphyria-europe.com : Safe web.uct.ac.za/depts/porphyria/ : Use www.uq.edu.au/porphyria/ : Probably safe Not metab by CYPs (Curr Drug Metab 9:827,2008) PV Tishler MD clinical data: Safe Medicine (Balt) 1992;7:1. Safe
Cardiovascular	ANGIOTENSIN II RECEPTOR ANTAGONISTS	Losartan	Cozaar	OK!	www.drugs-porphyria.org : Possibly Porphyrinogenic. >2 clinical reports: safe. Substrate of mainly CYP2C9, lesser of CYPs 3A4, 3A5. No data pointing to CYP induction. Safe in cell culture. (Biochem Pharmacol 1999;58:887;Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
Cardiovascular	Antihyperlipidemic Agents	Lovastatin	Mevacor, etc	BAD?	Readily absorbed by liver. Metabolized by & induces CYP3A, 2C9. Induces PXR.
Gastrointestinal therapies	GASTROINTESTINAL MOTILITY STIMULANTS	Lubiprostone	Amitiza	OK?	No CYP metabolism or induction (PDR 63:3082,2007)
Anti-infectives	ANTIRETROVIRALS	Maraviroc	Selzentry	OK?	~50% meetab but does not induce CYP3A4 (Brit J Clin Pharmacol 65S:5,2008; and 66:498,2008)
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Measles, Mumps & Rubella	none	OK!	www.drugs-porphyria.org : Not Porphyrinogenic
Anti-infectives	ANTIPARASITICS	Mebendazole	Vermox	OK?	www.drugs-porphyria.org : Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/ : Use with Caution
Anti-infectives	anthelmintics	mebendazole	multiple	No info	Poorly absorbed from GI tract. Probably metabolised by P450.
ANTINEOPLASTICS (Cancer Therapies)	NITROGEN MUSTARDS	Mechlorethamine	Mustargen	NO INFO	
Gastrointestinal	ANTIEMETICS (Vomiting Therapies)	Meclizine	Antivert, Bonine	OK!	>3 patient reports: safe. Induces & inhibits constitutive androstene receptor.
HORMONES, HORMONE-LIKE	PROGESTINS	Medroxyprogesterone	Provera	BAD!	www.drugs-porphyria.org : Porphyrinogenic web.uct.ac.za/depts/porphyria/ : Use with Extreme Caution

Class	Type	Generic name	Brand name	Conclusion	References
ANTI-INFECTIVES	ANTIMALARIALS	Mefloquine	Lariam	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic. Substrate for CYP 3A4. No clinical observations pointing to CYP-induction. Compare the other methanolquinoline quinine: Inducer of CYPs 1A1, 1A2 and 2C9. Activator/stimulator of CYP 3A4. Inhibitor of CYPs e.g. 1A1 (potent).
ANTINEOPLASTICS (Cancer Therapies)	ANTIESTROGENS	Megestrol	Megace	BAD!	
ANTINEOPLASTICS (Cancer Therapies)	NITROGEN MUSTARDS	Melphalan	Alkeran	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic. Not porphyrinogenic in experimental rat and chicken systems. Two references safe/probably safe. www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Probably safe
Psychiatric medications	ANTIDEMENTIA AGENTS	Memantine	Namenda	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.rxlist.com: ca. 50% excreted unchanged; no significant metabolic role for CYPs
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Meningococcal	none	OK?	
HORMONES, HORMONE-LIKE	PITUITARY	Menotropins	Repronex	OK!	
Central nervous system agents	NARCOTICS (Pain Therapies)	Meperidine	Demerol	OK!	PV Tishler MD clinical data: Safe JAMA 1965;194:1037. Safe in patients
Anti-infectives	MISCELLANEOUS	Meropenem	Meronem	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.rxlist.com: 70% excreted as unchanged drug
Gastrointestinal therapies	ANTI-INFLAMMATORY AGENTS	Mesalamine	Rowasa, Pentasa, Asacol, others	OK!	<30% absorbed; not metab by CYPs
ANTINEOPLASTICS (Cancer Therapies)	URINARY TRACT PROTECTIVE AGENTS	Mesna	Mesnex	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic
Antidiabetics	Biguanides	Metformin	Glucophage, others	OK!	www.drugs-porphyria.org: Not porphyrinogenic. www.porphyria-europe.com: Safe. web.uct.ac.za/depts/porphyria/: Use. www.uq.edu.au/porphyria/: Safe in animals. Excreted largely unchanged; no hepatic metab (www.clinicalpharmacology-ip.com). Inhibits pregnane X receptor
Diagnostic	n/a	Methacholine	Provocholine, others	OK!	
Central nervous system	NARCOTICS (Pain Therapies)	Methadone	Many	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic www.porphyria-europe.com: safe web.uct.ac.za/depts/porphyria/: Use Metab by CYP3A, less by 2C9.
Anti-infectives	URINARY ANTI-INFECTIVES	Methenamine Mandelate	Many	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use patient report: safe
Hormones, hormone-like	THYROID	Methimazole	Tapazole	No info	Metab by liver, presumably by CYPs; inhibits several CYPs also (Drug Metab Dispos 1997;25:390)
Antineoplastics	ANTIMETABOLITES	Methotrexate	Trexall, Rheumatrex, others	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Unsafe in animals S Afr Med J 1984;65:924. Safe in patients Xenobiotica 1996;26:503. Limited or no interaction with CYP2C9 and CYP3A4 except for inhibition of Cyp3A. No effect on pregnane X receptor (Curr Drug Metab 7:375,2006; Drug Metab Dispos 32:348,2004)
Central nervous system agents	ANTICONVULSANTS	Methsuximide	Celontin	BAD!	www.uq.edu.au/porphyria/: Unsafe in patients Neurology 1981;31:480. Unsafe in animals

Class	Type	Generic name	Brand name	Conclusion	References
Cardiovascular agents	ANTIADRENERGICS	Methyldopa	Aldomet	BAD!	www.drugs-porphyria.org: Porphyrinogenic www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid Patient report: Unsafe
HORMONES, HORMONE-LIKE	PITUITARY	Methylergonovine	Methergine	OK!	
PSYCHIATRIC MEDICATIONS	MISC.	Methylphenidate	Ritalin	OK?	www.drugs.com: Major metabolic route probably does not involve P450
Hormones	CORTICOSTEROIDS	Methylprednisolone	Medrol,others	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use Substrate & inhibitor of CYP3A4. Induces CYP3A4 via transactivation of pregnane X receptor. Patient report: Safe. MAY BE UNSAFE if used for prolonged periods. (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Arch Toxicol 82:667,2008)
HORMONES, HORMONE-LIKE	ANDROGENS	Methyltestosterone	Many	BAD!	web.uct.ac.za/depts/porphyria/: Use with Extreme Caution
Gastrointestinal therapies	GASTROINTESTINAL MOTILITY STIMULANTS	Metoclopramide	Reglan	OK?	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Probably unsafe www.porphyriafoundation.com: Unsafe Lancet 1981;2:91 Not safe However, ~80% not metab by CYP (www.clinicalpharmacology-ip.com)
Cardiovascular agents	DIURETICS	Metolazone	Zaroxolyn	BAD?	web.uct.ac.za/depts/porphyria/: Use with Extreme Caution
Cardiovascular	BETA BLOCKERS (includes some ophthalmic preparations)	Metoprolol	Lopressor	OK!	web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients PV Tishler MD clinical data & patient report: Safe Medicine (Balt)1992;71:1. Safe. Induces CYP3A.
Anti-infectives	ANTIFUNGALS	Metronidazole	Flagyl	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: probably safe J Neurol Neurosurg Psychiat 1997;62:421. Sinz: Cur Drug Metab 2006; 7:375: no human pregnane X receptor activation. Unsafe in patients. 1 patient: safe
Cardiovascular agents	ANTIARRHYTHMICS	Mexiletine	Mexitil	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic. Metabolized by CYP2D6, 1A2. No data pointing to CYP-induction (Clin Pharmacokinet 46:985,2007)
Anti-infectives	ANTIFUNGALS	Micafungin	Mycamine	OK?	Metab by and weakly inhibits CYP3A. 3A is not major path.
Anti-infectives	ANTIFUNGALS	Miconazole	Monistat, others	BAD?	www.drugs-porphyria.org: Probably Not Porphyrinogenic/Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in cell culture
Anesthetics	GENERAL	Midazolam	Versed	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Cell culture - Safe Substrate of CYP3A4. Transactivates pregnane X receptor, but low probability of CYP3A4 induction (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006; Curr Drug Metab 9:827,2008)
Cardiovascular agents	PHOSPHODIESTERASE INHIBITORS	Milrinone	Primacor	No info	

Class	Type	Generic name	Brand name	Conclusion	References
Anti-infectives	TETRACYCLINES	Minocycline	Dynacin, Minocin	No info	www.uq.edu.au/porphyria/ : Safe in cell culture
Cardiovascular agents	VASODILATORS	Minoxidil	Many	BAD?	www.drugs-porphyria.org : Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/ : Use with Extreme Caution
Psychiatric	ANTI-DEPRESSANT	Mirtazapine	Remeron	OK!	www.drugs-porphyria.org : Possibly Porphyrinogenic. 1/4 not metab, 1/3 metab by CYP2D6, rest by CYP3A4, 1A2. Moderate activation of pregnane X receptor but low prediction of clinical induction (Clin Pharmacogenet 38:461,2000; Cur Drug Metab 7:375,2006). Patient reports: safe
Gastrointestinal therapies	PROSTAGLANDINS	Misoprostol	Cytotec	OK?	www.drugs-porphyria.org : Probably Not Porphyrinogenic Not metab by and does not affect CYPs (www.clinicalpharmacology-ip.com)
ANTINEOPLASTICS (Cancer Therapies)	ANTIBIOTICS	Mitomycin	Mutamycin	BAD?	www.drugs-porphyria.org : Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/ : Use with Extreme Caution Insufficient data on metabolism. Little systemic resorption; probably safe for intravesical installation
ANTINEOPLASTICS (Cancer Therapies)	ANTIBIOTICS	Mitoxantrone	Novantrone	BAD?	www.drugs-porphyria.org : Possibly Porphyrinogenic. Insufficient data on metabolism Largely unmetabolized. web.uct.ac.za/depts/porphyria/ : Use with Extreme Caution
Respiratory	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Montelukast	Singulair	OK!	www.drugs-porphyria.org : Possibly Porphyrinogenic Substrate of CYP3A4 & CYP2C9. No inhibition of CYP2C9, 3A4. Moderate transactivation of pregnane X receptor but low prediction of CYP3A4 induction (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375, 2006) Patient report: Safe
Cardiovascular agents	ANTIARRHYTHMICS	Moricizine	Ethmozine	No info	
Central nervous system agents	NARCOTICS (Pain Therapies)	Morphine	Many	OK!	www.drugs-porphyria.org : Not Porphyrinogenic www.porphyria-europe.com : safe web.uct.ac.za/depts/porphyria/ : Use www.uq.edu.au/porphyria/ : Safe in patients PV Tishler MD clinical data: Safe
ANTI-INFECTIVES	FLUOROQUINOLONES	Moxifloxacin	Avelox	OK?	www.drugs-porphyria.org : Probably Not Porphyrinogenic
BLOOD RELATED THERAPY	HEMATOPOIETICS	Multivitamins	Many	OK!	
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Mumps	none	OK!	
ANTI-INFECTIVES	MISCELLANEOUS	Mupirocin	Bactroban	OK?	www.drugs-porphyria.org : Possibly Porphyrinogenic. Probably not significantly absorbed. Probably not metabolized by P450
Immunologic agents	IMMUNOSUPPRESSIVE AGENTS	Mycophenolate Mofetil	CellCept	OK?	J Clin Pharmacol 2001;41:113. Safe ~85% nonmetab by CYP, with minor contribution of CYP3A4/5 (Clin Pharmacokinet 46:13,2007; Therapeutic Drug Monitor 26:600,2004)
Cardiovascular agents	BETA BLOCKERS (includes some ophthalmic preparations)	Nadolol	Corgard	OK!	web.uct.ac.za/depts/porphyria/ : Use
HORMONES, HORMONE-LIKE	LHRH/GNRH AGONISTS	Nafarelin	Synarel	OK!	www.drugs-porphyria.org : Possibly Porphyrinogenic www.porphyria-europe.com : Safe
Anti-infectives	PENICILLINS	Nafcillin	Many	OK?	http://medicine.iupui.edu/flockhart/table.htm : CYP3A inducer.

Class	Type	Generic name	Brand name	Conclusion	References
Central nervous system agents	NARCOTICS (Pain Therapies)	Nalbuphine	Nubain	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
NARCOTIC ANTAGONISTS	n/a	Naloxone	Narcan	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic. Opioid derivative metabolised by a series of CYPs, mainly 3A4. Two references: Use www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
Psychiatric medications	AGENTS FOR CHEMICAL DEPENDENCY	Naltrexone	Vivitrol	OK?	No CYP metabolism (PDR 63:988, 2009)
HORMONES, HORMONE-LIKE	ANDROGENS	Nandrolone	Deca-Durabolin	BAD!	www.drugs-porphyria.org: Porphyrinogenic www.uq.edu.au/porphyria/: Probably unsafe
OPHTHALMIC AGENTS (intraocular)	n/a	Naphazoline	Many	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic
Central nervous system agents	NONSTEROIDAL ANTI-INFLAMMATORY AGENTS -NSAIDs (Pain, Arthritis Therapies, etc.)	Naproxen	Naprosyn, Aleve	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients and animals 20-40% metab by CYP2C9 (<50% of this), other CYPs Patient reports: Safe (Drug Metab Disp 33:1567,2005)
Central nervous system agents	MIGRAINE THERAPY	Naratriptan	Amerge	NO INFO	www.drugs-porphyria.org: Possibly Porphyrinogenic
Cardiovascular agents	BETA BLOCKERS	Nebivolol	Bystolic	OK?	Extensively metab by CYP2D6 (Med Letter 50:17,2008). Patient experience: safe
Anti-infectives	ANTIRETROVIRALS	Nelfinavir	Viracept	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic Williams DA: Op. Cit.: Substrate & inducer of CYP3A4, 2C9
ANTI-INFECTIVES	AMINOGLYCOSIDES	Neomycin	Many	OK?	
Central nervous system agents	ANTIMYASTHENIC AGENTS	Neostigmine	Prostigmine	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
Anti-infectives	ANTIRETROVIRALS	Nevirapine	Viramune	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic. >80% metab, by CYP3A4; also metab by CYP2B6. Induces CYP3A4 & 2B6 via transactivation of constitutive androstane receptor (Arch Toxicol 82:667,2008; Drug Metab Disp 8:895,1999; J Pharmacol Exp Therap 320:72,2007)
Cardiovascular agents	ANTHYPERLIPIDEMIC AGENTS	Niacin	Many	No info	USP DI? Drug Info. for the Health Care Pro. - 26th Ed: Not P450 substrate
Cardiovascular	CALCIUM CHANNEL BLOCKERS	Nicardipine	Cardene	BAD!	Induces CYP3A4, 2C9; inhibits 3A. Transactivates pregnane X receptor (Drug Metab Disp 29:1325,2001)
Cardiovascular	CALCIUM CHANNEL BLOCKERS	Nifedipine	Procardia, Adalat	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in patients www.porphyriafoundation.com: Unsafe Medicine (Balt) 1992;71:1. Safe Clin Sci (Lond) 1985;69:581. Unsafe in cell culture Substrate of CYP3A4. Induces CYP3A4, 2C9 via transactivation of pregnane X receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Drug Metab Disp 29:1325,2001) Patient report: safe
Anti-infectives	ANTIRETROVIRALS	Nilotinib	Tasigna	No info	~30% metab by CYP3A4 (Clin Therapeutics 30:1956,2008)

Class	Type	Generic name	Brand name	Conclusion	References
Cardiovascular agents	CALCIUM CHANNEL BLOCKERS	Nimodipine	Nimotop	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
Anti-infectives	ANTIRETROVIRALS	nirmatrelvir tablets and ritonavir tablets	PAXLOVID	BAD!	PAXLOVID (nirmatrelvir tablets; ritonavir tablets has not been approved, but has been authorized for emergency use by FDA under an EUA, for the treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progression to severe COVID-19, including hospitalization or death. see comments on ritonavir in the drug database.
Anti-infectives	URINARY ANTI-INFECTIVES	Nitrofurantoin	Macrochantin, Macrobid	BAD!	www.drugs-porphyria.org: Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Probably Unsafe
Cardiovascular agents	ANTIANGINAL AGENTS	Nitroglycerin	Many	OK?	Not a CYP substrate (Biochem. J 1993; 292:545)
Cardiovascular agents	VASODILATORS	Nitroprusside	Nipride	OK?	web.uct.ac.za/depts/porphyria/: Use with Caution Redox Rep 2004;9:360: No P450 metabolism
Arthritis	n/a	none	none		
HORMONES, HORMONE-LIKE	SPERMICIDES (VAGINAL)	Nonoxonyl-9	Many	NO INFO	
Hormones	PROGESTINS	Norethindrone	Loestrin	No info	JAMA 1965;194:1037. Safe in patients USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): Undergoes reduction in liver; induces CYP2C9.
Anti-infectives	FLUOROQUINOLONES	Norfloxacin	Noroxin	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Safe in cell culture J Appl Toxicol 2005;25:339. Inhibits CYP3A
Psychiatric medications	TRICYCLICS	Nortriptyline	Aventyl	OK?	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Probably unsafe. Metab by CYP2D6. Does not transactivate pregnane X receptor (http://medicine.iupui.edu/clinpharm/ddis/; Curr Drug Metab 7:375,2006)
Anti-infectives	ANTIFUNGALS	Nystatin	Many	OK!	www.drugs-porphyria.org: Not Porphyrinogenic USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): No P450 metabolism
HORMONES, HORMONE-LIKE	SOMATOSTATIC AGENTS	Octreotide	Sandostatin	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
Psychiatric	Misc.	Olanzapine	Zyprexa	OK?	www.drugs-porphyria.org: Probably not porphyrinogenic. www.porphyria-europe.com: Safe. Minor metab. by CYP1A2, 2D6 ?3A4. Moderate activation of pregnane X receptor & low prediction of clinical induction (Basic Clin Pharmacol Toxicol 100:4,2007; Cur Drug Metab 7:375,2006; Curr Drug Metab 11:516,2010)
Cardiovascular	ANGIOTENSIN II RECEPTOR ANTAGONISTS	Olmesartan	Benicar	OK!	Virtually not metabolized (PDR 63:1009,2009). 1 patient report: safe
Gastrointestinal therapies	ANTI-INFLAMMATORY AGENTS	Olsalazine	Dipentum	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic metab to mesalamine which has no CYP metab

Class	Type	Generic name	Brand name	Conclusion	References
Gastrointestinal	H-2 ANTAGONISTS, PPIs (Reflux, Ulcer Therapies)	Omeprazole	Prilosec	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Substrate & inducer of CYP3A4. Significantly transactivates pregnane X receptor, but has low probability of inducing CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375, 2006; Drug Safety 29:769, 2006) 7 patient reports: safe
Gastrointestinal therapies	ANTIEMETICS (Vomiting Therapies)	Ondansetron	Zofran	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use with Caution PV Tishler MD clinical data & patient reports: Safe Substrate of CYP3A4. Modestly transactivates pregnane X receptor but has a low probability of inducing CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006)
Anti-infectives	ANTIVIRALS	Oseltamivir	Tamiflu	OK?	www.drugs-porphyria.org: Not Porphyrinogenic Not a P450 substrate (USP DI? Drug Info. for the Health Care Pro. - 26th Ed; http://redpoll.pharmacy.ualberta.ca/drugbank/) patient report: safe
ANTI-INFECTIVES	PENICILLINS	Oxacillin	Many	OK?	http://www.rxlist.com/cgi/generic3/oxacillin_cp.htm: Rapidly excreted as unchanged drug
Antineoplastics (Cancer Therapies)	MISC.	oxaliplatin	Eloxatin	OK?	No evidence for CYP metabolism (PDR 63:2731,2009)
HORMONES, HORMONE-LIKE	ANDROGENS	Oxandrolone	Oxandrin	BAD?	
Central nervous system agents	BENZODIAZEPINES	Oxazepam	Serax	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Probably unsafe. Not metab by CYPs (Curr Drug Metab 9:827,2008)
Central nervous system agents	ANTICONVULSANTS	Oxcarbazepine	Trileptal	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid Induces CYP3A4 (Fundam Clin Pharmacol 14:301,2000)
Urinary tract	ANTISPASMODICS	Oxybutynin	Oxytrol, Ditropan	BAD!	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.drugs.com: Metabolized primarily in liver by CYP3A4 Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
Central nervous system agents	NARCOTICS (Pain Therapies)	Oxycodone	Oxycontin, Percocet, Percodan, others	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic www.uq.edu.au/porphyria/: Unsafe in animals PV Tishler MD clinical data & patient reports: Safe
RESPIRATORY AGENTS	NASAL AGENTS - SYSTEMIC AND TOPICAL	Oxymetazoline	Afrin	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.uq.edu.au/porphyria/: Unsafe in patients
HORMONES, HORMONE-LIKE	PITUITARY	Oxytocin	Pitocin	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients

Class	Type	Generic name	Brand name	Conclusion	References
Antineoplastics	MITOTIC INHIBITORS	Paclitaxel	Taxol	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic. Minor metabolism by, & induces CYP3A4. Transactivates and induces pregnane X receptor (Pharmacogenomics 8:803,2007; Clin Cancer Res 11: 6359,2005; Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Cancer Chemother Pharmacol 64:35,2009)
ANTINEOPLASTICS (Cancer Therapies)	KERATINOCYTE GROWTH FACTOR	Palifermin	Kepivance	OK?	
Psychiatric medications	MISC.	Paliperidone	Invega	OK?	60% excreted unchanged. Small amt metab by CYP2D6, ?other CYPs (Drug Metab Disp 36:769,2008)
IMMUNOLOGIC AGENTS	ANTIVIRAL MONOCLONAL ANTIBODIES	Palivizumab	Synagis	OK?	www.drugs-porphyria.org: Not Porphyrinogenic
Gastrointestinal therapies	ANTIEMETICS (Vomiting Therapies)	Palonosetron	Aloxi	OK?	
ANESTHETICS	MUSCLE RELAXANTS	Pancuronium	Pavulon	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Probably safe
Gastrointestinal therapies	H-2 ANTAGONISTS, PPIs (Reflux, Ulcer Therapies)	Pantoprazole	Protonix	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution Metabolized by CYP2C19, 3A4. No evidence for CYP3A4 inducibility (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Drug Safety 29:769,2006) 2 Patient reports: Safe
Psychiatric	SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs)	Paroxetine	Paxil	OK?	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution Does not induce pregnane-X-receptor (Toxicol Lett 203:82, 2011).
Arthritis	Gout Treatment	Pegloticase	Krystexxa	OK!	Protein enzyme, with no metabolic problem
ANTINEOPLASTICS (Cancer Therapies)	ANTIMETABOLITES	Pemetrexed	Alimta	NO INFO	
Arthritis	n/a	Penicillamine	Cuprimine	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: use www.uq.edu.au/porphyria/: Safe in patients
ANTI-INFECTIVES	PENICILLINS	Penicillin	Many	OK!	web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients Patient report: Safe
Central nervous system agents	NARCOTICS (Pain Therapies)	Pentazocine	Talwin	BAD!	web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in patients
Central nervous system agents	HYPNOTICS (Sleeping Medications)	Pentobarbital	Nembutal	BAD!	www.porphyria-europe.com: Unsafe Patient report: Unsafe See Phenobarbital
ANTINEOPLASTICS (Cancer Therapies)	MISC.	Pentostatin	Nipent	NO INFO	
Central nervous system agents	ANTIPARKINSON AGENTS	Pergolide	Permax	No info	metab by CYP3A4 (Clin Therapeutics 28:2065,2006)
PSYCHIATRIC MEDICATIONS	PHENOTHIAZINES	Perphenazine	Trilafon	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution
URINARY TRACT	ANALGESICS	Phenazopyridine	Pyridium	NO INFO	
PSYCHIATRIC MEDICATIONS	MISC.	Phenelzine	Nardil	BAD!	web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in animals

Class	Type	Generic name	Brand name	Conclusion	References
Central nervous system agents	ANTICONVULSANTS	Phenobarbital	Luminal	BAD!	www.drugs-porphyria.org: Porphyrinogenic www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid Strongly activates constitutive androstane receptor, pregnane X receptor, & induces CYP3A4 (BBRC 277:1, 2000; Arch Toxicol 82:667,2008)
RESPIRATORY AGENTS	NASAL AGENTS - SYSTEMIC AND TOPICAL	Phenylephrine	Many	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic
Central nervous system	ANTICONVULSANTS	Phenytoin	Dilantin	BAD!	www.drugs-porphyria.org: Porphyrinogenic www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in patients Unsafe in patients (Neurology 45:1216,1995; Epilepsia 33:108,1992) Substrate & inducer of CYP3A4 & CYP2C9. Strongly activates constitutive androstane receptor & pregnane X receptor, & induces CYP3A4. (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; JBC 279:29295,2004; Arch Toxicol 82:667,2008) 1 Patient report: Safe. 1 patient report: unsafe
Antidotes	n/a	Physostigmine	Antilirium, others	OK?	
OPHTHALMIC AGENTS (intraocular)	n/a	Pilocarpine	Many	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic
Cardiovascular agents	BETA BLOCKERS (includes some ophthalmic preparations)	Pindolol	Visken	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use
Antidiabetics	Thiazolidinediones	Pioglitazone	Actos	BAD?	www.drugs-porphyria.org: Probably porphyrinogenic. USP DI Drug Info. for the Health Care Pro. - 26th ED: Extensively metab by CYP2C8 & 3A4. Induces CYP3A4 & transactivates pregnane X receptor but at concns. higher than usual (Drug Metab Disp 31:439,2003; Curr Drug Metab 7:375,2006; Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Drug Metab Dispos 31:439,2003; Mol Pharmacol 80:518, 2011)
Antidiabetics	Thiazolidinediones/ Biguanides	Pioglitazone/ Metformin	Actoplus Met	BAD?	See Pioglitazone
Anti-infectives	PENICILLINS	Piperacillin	Zosyn, etc.	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use. Patient report: safe
ANTINEOPLASTICS (Cancer Therapies)	ANTIBIOTICS	Plicamycin	Mithracin	NO INFO	
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Pneumococcal	none	OK!	
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Polio	none	OK!	
ANTI-INFECTIVES	MISCELLANEOUS	Polymyxin B	Many	OK?	
ANTI-INFECTIVES	ANTIFUNGALS	Posaconazole	Noxafil	NO INFO	
Central nervous system agents	ANTIPARKINSON AGENTS	Pramipexole	Mirapex	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.rxlist.com: ~90% excreted unchanged. No CYP metab (Eur J Neurol 7 Suppl 1:15,2000)

Class	Type	Generic name	Brand name	Conclusion	References
Cardiovascular	ANTHYPERLIPIDEMIC AGENTS	Pravastatin	Pravachol	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution. Substrate of CYP3A, but excreted mostly unchanged, and does not induce CYPs (Mol Pharmacol 65:1302,2004; Clin Pharm Therap 80:565,2006) Experience of P. Tishler, MD and others - safe
Anti-infectives	ANTIPARASITICS	Praziquantel	Many	BAD!	web.uct.ac.za/depts/porphyria/: Use with Extreme Caution Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4
Cardiovascular agents	ANTIADRENERGICS	Prazosin	Minipress	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Probably safe Medicine (Balt) 1992;71:1. Safe
Hormones, hormone-like	CORTICOSTEROIDS	Prednisolone	Many	OK?	Substrate of CYP3A4. Induces CYP3A4 via transactivation of pregnane X receptor. Patient report: Safe. MAY BE UNSAFE if used for prolonged periods. (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Arch Toxicol 82:667,2008)
Hormones, hormone-like	CORTICOSTEROIDS	Prednisone	Many	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use Substrate of CYP3A4. Weakly transactivates pregnane X receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375, 2006) Patient reports: Safe
Central nervous system	ANTICONVULSANTS	Pregabalin	Lyrica	OK!	>90% non-metabolized (PDR 63:2527,2009). Patient reports: safe
ANESTHETICS	LOCAL	Prilocaine	Citanest	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Unsafe in patients Medicine (Balt) 1992;71:1. Safe
ANTI-INFECTIVES	ANTIMALARIALS	Primaquine	Primaquine	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients
Central nervous system agents	ANTICONVULSANTS	Primidone	Mysoline	BAD!	www.drugs-porphyria.org: Porphyrinogenic www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: Unsafe in patients www.porphyriafoundation.com: Unsafe Neurology 1981;31:480. Unsafe in animals. Metab by CYP3A4 to phenobarbital (BAD!!); induces CYP3A4 (Clin Therapeutics 30:1385,2008)
Arthritis	n/a	Probenecid	Benemid	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Probably unsafe Little to no induction of CYPs and no transactivation of pregnane X receptor (Curr Drug Metab 7:375,2006; Drug Metab Dispos 32:348,2004)
Cardiovascular agents	ANTIARRHYTHMICS	Procainamide	Pronestyl	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in cell culture
ANESTHETICS	LOCAL	Procaine	Many	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients

Class	Type	Generic name	Brand name	Conclusion	References
ANTINEOPLASTICS (Cancer Therapies)	ALKYLATING AGENTS	Procarbazine	Natulan	BAD!	web.uct.ac.za/depts/porphyria/: Use with Extreme Caution S Afr Med J 1984;65:924. Safe in patients
Psychiatric medications	PHENOTHIAZINES	Prochlorperazine	Compazine, Compro, Combid, others	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients PV Tishler MD clinical data: Safe
Hormones	PROGESTINS	Progesterone	Many	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.porphyriafoundation.com: Unsafe Patient report: unsafe. Induces CYP3A, pregnane X receptor
Anti-infectives	ANTIMALARIALS	Proguanil	Malarone (also contains atovaquone)	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic, substrate of CYP2C19, 1A2, 3A4; no clinical observations pointing to CYP induction web.uct.ac.za/depts/porphyria/: Use
RESPIRATORY AGENTS	ANTIHISTAMINES	Promethazine	Phenergan	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Probably unsafe Curr Drug Metab 2003;4:105. Metabolized by CYP2D6
Cardiovascular agents	ANTIARRHYTHMICS	Propafenone	Rhthmol	BAD?	www.drugs-porphyria.org: Possibly Porphyrinogenic Metabolized by CYP2D6, 3A4, others; relative importances not known (Curr Drug Metab 5:543,2004; Clin Pharmacokinet 46:985,2007)
n/a	n/a	Proparacaine	Alcaine, Ophthetic, Ophthaine, others	OK!	
ANESTHETICS	GENERAL	Propofol	Diprivan	OK!	www.porphyria-europe.com: safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients Anaesthesia 1992;47:355 Safe Anaesthesia 1988;43:1022. Safe in patients
Cardiovascular agents	BETA BLOCKERS (includes some ophthalmic preparations)	Propranolol	Inderal	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use PV Tishler MD clinical data & patient report: Safe Safe (Br J Clin Pharmacol 1997;43:339) Safe (Medicine (Balt) 1992;71:1) Substrate of CYP3A4 & other CYPs. Does not transactivate pregnane X receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006; http://medicine.iupui.edu/clinpharm/ddis/)
Hormones, hormone-like	THYROID	Propylthiouracil (PTU)	Procasil, Propacil, others	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients
BLOOD RELATED THERAPY	ANTICOAGULANTS	Protamine	Protamine	OK!	
RESPIRATORY AGENTS	NASAL AGENTS - SYSTEMIC AND TOPICAL	Pseudoephedrine	Sudafed	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients Patient reports: Safe
ANTI-INFECTIVES	ANTIMYCOBACTERIAL AGENTS	Pyrazinamide	Many	BAD!	www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid www.uq.edu.au/porphyria/: unsafe in patients www.porphyriafoundation.com: Unsafe
Central nervous system agents	ANTIMYASTHENIC AGENTS	Pyridostigmine	Mestinon	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution. Patient report: safe

Class	Type	Generic name	Brand name	Conclusion	References
ANTI-INFECTIVES	ANTIMALARIALS	Pyrimethamine	Daraprim	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
Psychiatric	Misc.	Quetiapine	Seroquel	BAD?	www.drugs-porphyria.org: Possibly Porphyrinogenic. Metab. mainly by CYP3A4. No evidence for its induction. (http://medicine.iupui.edu/clinpharm/ddis/; Basic Clin Pharmacol Toxicol 100:4,2007) Patient report: safe
Cardiovascular agents	ANTIARRHYTHMICS	Quinidine	Many	OK?	www.drugs-porphyria.org: Probably Porphyrinogenic Substrate of CYP3A4. Minimal transactivation of pregnane X receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006)
Anti-infectives	ANTIMALARIALS	Quinine Sulfate	Many	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic. Metab. by CYP3A. Inducer of 2C9. Possible activator/stimulator of CYP 3A4. 1Aweb.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients S Afr Med J 1988;74:321. Safe in patients Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4
Gastrointestinal	H-2 ANTAGONISTS, PPIs (Reflux, Ulcer Therapies)	Rabeprazole	Aciphex	OK?	www.drugs-porphyria.org: Probably Porphyrinogenic Major metab is nonenzymatic. Minor metab via CYP2C19,3A4. Modestly transactivates pregnane X receptor, but has low probability of inducing CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006; Drug Safety 29:769, 2006). 1 patient report: safe
IMMUNOLOGIC AGENTS	IMMUNE GLOBULINS	Rabies	none	OK?	(web.uct.ac.za/depts/porphyria/: Use)
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Rabies	none	OK?	
Antineoplastics (Cancer Therapies)	Thyroid Cancer-Specific	Radioactive Iodine (I-131)	none	OK!	Patient experience
Hormones, hormone-like	SELECTIVE ESTROGEN RECEPTOR MODULATORS (SERMs)	Raloxifene	Evista	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic. Chang; Drug Metab Disp 2006; 34:2073: bound to P-glycoprotein & activated by CYP3A4. Sinz M: Cur Drug Metab 2006; 7:375: Little activation of human pregnane X receptor & low prediction of clinical induction.
Anti-infectives	ANTIRETROVIRALS	Raltegravir	Isentress	OK?	No CYP metabolism or induction (Drug Metab Disp 35:1657,2007)
Central nervous system agents	HYPNOTICS (Sleeping Medications)	Ramelteon	Rozerem	BAD?	Patient report - bad. Minor metab. by CYP3A4.
Cardiovascular	ACE INHIBITORS	Ramipril	Altace	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic Patient reports: Safe
Gastrointestinal	H-2 ANTAGONISTS, PPIs (Reflux, Ulcer Therapies)	Ranitidine	Zantac	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Probably unsafe www.porphyriafoundation.com: Safe PV Tishler MD clinical data: Safe
Antidiabetics	Meglitinides	Repaglinide	Prandin	OK?	Metab mainly by CYP2C8, less by CYP3A4. No evidence of inducing CYPs (Clin Pharmacol Therap 77:341,2005; Med Letter 51:41,2009)
Antidiabetics	Meglitinides/ Biguanides	Repaglinide/ Metformin	PrandiMet	OK?	See Repaglinide

Class	Type	Generic name	Brand name	Conclusion	References
Psychiatric	Misc.	resperidone	Resperdal, etc.	OK?	Major metab via CyP2D6. Weak inhibition of Cyp3A, PXR.
Anti-infectives	ANTIVIRALS	Ribavirin	Pegetron (also contains peginterferon)	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic USP DI? Drug Info. for the Health Care Pro. - 26th Ed: not p450 substrate www.rxlist.com: Two pathways of metabolism: (i) reversible phosphorylation in nucleated cells; (ii) degradation via deribosylation and amide hydrolysis to yield a triazole carboxylic acid. Should not involve CYP3A4 or CYP2C9
Anti-infectives	ANTIMYCOBACTERIAL AGENTS	Rifabutin	Mycobutin	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution Substrate of CYP3A4. Induces CYP3A4 via pregnane X receptor transactivation (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Arch Toxicol 82:667,2008; Cur Drug Metab 7:375,2006)
Anti-infectives	antimycobacterial	rifampicin	none		
Anti-infectives	ANTIMYCOBACTERIAL AGENTS	Rifampin	Rifadin	BAD!	Substrate of CYP3A4. Induces CYP3A4 via transactivation of pregnane X receptor (Cur Drug Metab 7:375,2006; Arch Toxicol 82:667,2008)
Anti-infectives	Animycobacterial agents	Rifapentine	Priftin	BAD!	Induces CyP3A, 2C9, ALA synthase (analogous to rifampicin)
Gastrointestinal	ANTIDIARRHEAL AGENTS	Rifaximin	Xifaxan	OK!	>99% excreted in feces unabsorbed/unchanged (PDR 65:2911, 2011). Induces pregnane X receptor.
Bones	Bisphosphonates	Risedronate	Actonel	OK?	Bisphosphonates are not metabolized
Psychiatric	MISC.	Risperidone	Risperdal	OK?	www.drugs-porphyria.org: Probably Porphyrinogenic. Spina E: Basic Clin Pharmacol Toxicol 2007; 100:4: Substrate mainly of CYP2D6, less of 3A4. Sinz M. Cur Durg Metab 2006; 7:375: No activation of pregnane X receptor. Toxicol Lett 203:82, 2011: modest activation of pregnane X receptor (1/5 that of rifampin).
Anti-infectives	ANTIRETROVIRALS	Ritonavir	Norvir	BAD!	www.drugs-porphyria.org: Porphyrinogenic. web.uct.ac.za/depts/porphyria/: Use with Extreme Caution. Substrate of, induces and inhibits CYP3A via human pregnane X receptor transactivation(Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Cur Drug Metab 7:375,2006; Arch Toxicol 82:667,2008)
ANTINEOPLASTICS (Cancer Therapies)	ANTIBODIES	Rituximab	Rituxan	OK!	www.drugs-porphyria.org: Not Porphyrinogenic http://redpoll.pharmacy.ualberta.ca/drugbank/: No liver metabolism
Central nervous system agents	MIGRAINE THERAPY	Rizatriptan	Maxalt	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic No significant interaction with CYPs. Primary metabolism does not involve CYPs (PDR 63:2056,2009; www.cbg-meb.nl/uk/docs/nieuws/par-maxalt.pdf)
Central nervous system	ANTIPARKINSON AGENTS	Ropinirole	Roquid	OK?	~90% metab by CYP1A2, small amt by CYP3A (Clin Pharmacokinet 39:243,2000). 1 patient report: safe.
ANESTHETICS	LOCAL	Ropivacaine	Naropin	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic. Substrate of CYP 1A. Use with care in doses >2 mL (of 10 mg/mL solution) Clin Pharmacol Ther 1998;64:484. Mostly metabolized by CYP1A2
Antidiabetics	Thiazolidinediones	Rosiglitazone	Avandia	BAD?	www.drugs-porphyria.org: Probably porphyrinogenic. Metab by CYP2C9, CYP2C8. Induces CYP3A4 & 2B6, & does transactivate pregnane X receptor (Pharmaceutical Res 23:1089,2006; Eur J Pharm Sci 11:185,2000; Drug Metab Disp 31:439,2003; Curr Drug Metab 7:375,2006) Patient report: Safe

Class	Type	Generic name	Brand name	Conclusion	References
Antidiabetics	Thiazolidinediones/ Biguanides	Rosiglitazone/ Metformin	Avandamet	BAD?	See Rosiglitazone
Cardiovascular	ANTIHYPERTENSIVE AGENTS	Rosuvastatin	Crestor	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.porphyria-europe.com: Safe. Metab by CYP2C9; not metab. by CYP3A4,5. patient report: safe
Central nervous system agents	ANTIPARKINSON AGENTS	Rotigotine	Neupro (patch)	OK?	Metab by multiple CYPs. Does not induce CYP3A4, 2C9 (PDR 63:3149,2009)
Respiratory agents	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Salmeterol	Serevent	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
ANTI-INFECTIVES	ANTIRETROVIRALS	Saquinavir	Fortovase	BAD!	www.drugs-porphyria.org: Possibly Porphyrinogenic. CYP 3A4-metabolized. Inhibitor of CYP 3A4, seemingly not potent. Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4
Antidiabetics	DPP-4 Inhibitors	Saxagliptin	Onglyza, Kombiglyze XR	No info	Primarily metab. by CYP3A4/5 (Clin Pharmacokinet 49:573, 2010)
Antidiabetics	DPP-4 Inhibitors/ Biguanides	Saxagliptin/ Metformin	Kombiglyze XR	No info	See Saxagliptin
Gastrointestinal therapies	ANTIEMETICS (Vomiting Therapies)	Scopolamine	Transderm-Scop, Scopace, Meldemar, others	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use
Central nervous system agents	HYPNOTICS (Sleeping Medications)	Secobarbital	Seconal	BAD!	www.porphyria-europe.com: Unsafe Induces CYP3A4 (Arch Toxicol 82:667,2008) See Phenobarbital
Central nervous system agents	ANTIPARKINSON AGENTS	Selegiline	Emsam, Eldepryl, Zelapar	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution Metab by CYP2B6, which may involve pregnane X receptor
GASTROINTESTINAL THERAPIES	LAXATIVES	Senna	Senokot	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients
Psychiatric medications	SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs)	Sertraline	Zoloft	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic Substrate of CYP3A4 but minimally transactivates pregnane X receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006.
GASTROINTESTINAL THERAPIES	PHOSPHATE BINDER AGENTS	Sevelamer	Renagel	OK?	www.drugs-porphyria.org: Not Porphyrinogenic
ANESTHETICS	GENERAL	Sevoflurane	Ultane	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution Pediat Anesthes 2005;15:426. Safe USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): Only 5% is metabolized, primarily by CYP2E1 (not CYP3A or 2C9)
Cardiovascular	IMPOTENCE AGENTS	Sildenafil	Viagra	BAD?	www.drugs-porphyria.org: Possibly Porphyrinogenic Major metab by CYP3A4, less by CYP2C9; weak inhibitors of both (Drug Metab Disp 36:986,2008). Patient report: Safe

Class	Type	Generic name	Brand name	Conclusion	References
Cardiovascular	ANTHYPERLIPIDEMIC AGENTS	Simvastatin	Zocor, others	OK?	www.drugs-porphyrina.org: Patient experience - safe web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in animals Unsafe in cell culture (Biomed Pharmacother 43:135,1989). Mainly metab by CYP3A4, but very low likelihood of CYP3A4 induction (Clin Pharm Therap 80:565,2006; Curr Drug Metab 7:375,2006); strong pregnane xenobiotic activator (J Pharm Exp Therap 320:72, 2007). Patient reports: Safe
Immunologic	IMMUNOSUPPRESSIVE AGENTS	Sirolimus	Rapamune	BAD?	www.drugs-porphyrina.org: Possibly Porphyrinogenic metab mainly by & induces CYP3A4, also CYP3A5 (Drug Metab Disp 35:350,2007. Induces pregnane X receptor.
Antidiabetics	DPP-4 Inhibitors	Sitagliptin	Januvia	OK?	~80% not metab; rest mainly by CYP3A4 (Drug Metab Disp 35:523,2007)
Antidiabetics	DPP-4 Inhibitors/ Biguanidess	Sitagliptin/ Metformin	Janumet	OK?	See Sitagliptin
Gastrointestinal	POTASSIUM REMOVING RESINS	Sodium Polystyrene Sulfonate	Kayexalate	OK!	patient report: safe
Urinary tract	ANTISPASMODICS	Solifenacin	Vesicare	OK?	Metab primarily by CYP3A4. No evidence of any CYP induction (Br J Clin Pharmacol 59:647,2004)
Antineoplastics (Cancer Therapies)	ENZYME INHIBITORS	Sorafenib	Nexavar	No info	~50% metab by CYP3A4, ~50% not metab (PDR 63:784,2009)
Cardiovascular agents	BETA BLOCKERS (includes some ophthalmic preparations)	Sotalol	Betapace, others	OK!	www.drugs-porphyrina.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use Medicine (Balt) 1992;71:1. Safe
Cardiovascular	DIURETICS	Spirolactone	Aldactone	BAD?	www.drugs-porphyrina.org: Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Unsafe in animals Safe (Medicine (Balt) 1992;71:1, 1992). Induces CYP3A. Transactivates pregnane X receptor (Expert Opin Drug Metab Toxicol 4:895,2008)
HORMONES, HORMONE-LIKE	ANDROGENS	Stanozolol	Winstrol	BAD?	www.drugs-porphyrina.org: Not Porphyrinogenic
ANTI-INFECTIVES	ANTIRETROVIRALS	Stavudine	Zerit	NO INFO	www.drugs-porphyrina.org: Possibly Porphyrinogenic. Furanosyl pyrimidine derivative. No P450 metabolism
Cardiovascular agents	THROMBOLYTIC ENZYMES	Streptokinase	Many	OK!	www.drugs-porphyrina.org: Not Porphyrinogenic www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
ANTI-INFECTIVES	AMINOGLYCOSIDES	Streptomycin	Many	OK!	www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe www.porphyrinafoundation.com: Safe
ANTINEOPLASTICS (Cancer Therapies)	NITROSOUREAS	Streptozocin	Zanosar	NO INFO	
ANESTHETICS	MUSCLE RELAXANTS	Succinylcholine	Anectine	OK?	Patient report: Safe
ANTI-INFECTIVES	SULFONAMIDES	Sulfadiazine	Many	BAD!	www.porphyrina-europe.com: Unsafe www.uq.edu.au/porphyria/: Unsafe in patients www.porphyrinafoundation.com: Unsafe Medicine (Balt) 1992;71:1. Unsafe
Anti-infectives	SULFONAMIDES	Sulfamethoxazole/ Trimethoprim	Bactrim	BAD!	www.porphyrina-europe.com: Unsafe www.uq.edu.au/porphyria/: Unsafe in patients www.porphyrinafoundation.com: Unsafe Medicine (Balt) 1992;71:1. Unsafe. CYP2C9 substrate. Pregnane X receptor inducer.

Class	Type	Generic name	Brand name	Conclusion	References
ANTI-INFECTIVES	SULFONAMIDES	Sulfasalazine	Azulfidine	BAD!	www.porphyria-europe.com: Unsafe www.uq.edu.au/porphyria/: Unsafe in patients www.porphyriafoundation.com: Unsafe Medicine (Balt) 1992;71:1. Unsafe
Arthritis	n/a	Sulfinpyrazone	Many	BAD!	web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in cell culture Major metabolism by CYP3A4,2C9. Induces CYP3A4 via transactivation of pregnane X receptor (Drug Metab Disp 29:701,2001; Arch toxicol 82:667,2008; Cur Drug Metab 7:375,2006). Inhibits CYP2C9.
Central nervous system agents	NONSTEROIDAL ANTI-INFLAMMATORY AGENTS -NSAIDs (Pain, Arthritis Therapies, etc.)	Sulindac	Clinoril	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in animals Minimal CYP2D9 metab (Drug Metab Disp 33:1567,2005)
Central nervous system	MIGRAINE THERAPY	Sumatriptan	Imitrex	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution 2 patient reports: safe
Antineoplastics (Cancer Therapies)	ENZYME INHIBITORS	Sunitinib	Sutent	OK?	~30% metab by CYP3A4, ~40% not metab (PDR 63:2540,2009; Medical Letter 49:18,2007). Does not induce CYPs (Clin Therapeutics 30:1385,2008)
Immunologic agents	IMMUNOSUPPRESSIVE AGENTS	Tacrolimus	Prograf, Protopic	BAD?	www.drugs-porphyria.org: Possibly Porphyrinogenic J Clin Pharmacol 2001;41:113. Safe Major metab by CYP3A4, 3A5 (Pharmacogenetics & Genomics 19:458,2009)
Cardiovascular agents	IMPOTENCE AGENTS	Tadalafil	Cialis	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic www.premiumdrugs.com/globalcart/html/media/docs/cialis-pi-us.pdf: metabolized primarily by CYP3A4
Antineoplastics	ANTIESTROGENS	Tamoxifen	Nolvadex	BAD?	www.drugs-porphyria.org: Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Safe in patients Metab by CYP3A4,2B6,2C9,2D6. Minimally to modestly transactivates pregnane X receptor; inhibits CYP (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006; Clin Therapeutics 30:1385,2008; Cancer Chemother Pharmacol 64:35,2009; Curr Drug Metab 9:598,2008)
Urinary tract	PROSTATIC HYPERTROPHY	Tamsulosin	Flomax	BAD?	Extensively metab by CYP3A4,2D6 (Xenobiotica 28:909, 1998; PDR 63:848,2009).
Anti-infectives	antiretroviral	Telbivudine	Tyzeka	OK?	Not metabolized; no P450 interaction (Medical Letter 49:11, 2007; Micromedex)
Cardiovascular	ANGIOTENSIN RECEPTOR ANTAGONISTS	Telmisartan	Micardis	OK!	Only metabolite is glucuronide (J Clin Pharm 2000; 40 (12 pt 1), 1312.
Central nervous system	BENZODIAZEPINES	Temazepam	Restoril	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007) 2 Patient reports: Safe
Cardiovascular agents	THROMBOLYTIC ENZYMES	Tenecteplase	Tnkase	OK!	www.drugs-porphyria.org: Not Porphyrinogenic

Class	Type	Generic name	Brand name	Conclusion	References
Anti-infectives	ANTIRETROVIRALS	Tenofovir	Viread, Truvada	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic USP DI? Drug Info. for the Health Care Pro. - 26th Ed: 70-80% eliminated as unchanged drug http://redpoll.pharmacy.ualberta.ca/drugbank/: Not substrate of CYP3A4 or CYP2C9
Cardiovascular agents	ANTIADRENERGICS	Terazosin	Hytrin	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution No transactivation of pregnane X receptor (Curr Drug Metab 6:375,2009)
Anti-infectives	ANTIFUNGALS	Terbinafine	Lamisil	BAD?	www.drugs-porphyria.org: Oral -Probably Porphyrinogenic. Topical - ok. web.uct.ac.za/depts/porphyria/: Use with Extreme Caution. Vickers, Drug Metab Disp 1999; 27:1029: Main metab via CYP2C9, 1A2, 3A4. Sinz M. Cur Drug Metab 2006; 7:375: High activation of pregnane X receptor but low prediction of clinical induction. (This is given over a ca. 3 month period, so acute experimental data may not be relevant.)
RESPIRATORY AGENTS	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Terbutaline	Brethine	OK!	www.drugs-porphyria.org: Not Porphyrinogenic Eur. J. Clin. Pharmacol. 1993;45 :483. No metabolism in liver
Anti-infectives	ANTIFUNGALS	Terconazole	Terazol	No info	Induces pregnane X receptor.
ANTINEOPLASTICS (Cancer Therapies)	HORMONAL AGENTS	Testolactone	Teslac	NO INFO	
Hormones, hormone-like	ANDROGENS	Testosterone	Many	BAD!	www.drugs-porphyria.org: Porphyrinogenic Substrate of CYP3A4 & CYP2C9. Modestly transactivates pregnane X receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006)
IMMUNOLOGIC AGENTS	IMMUNE GLOBULINS	Tetanus	none	OK?	(web.uct.ac.za/depts/porphyria/: Use)
ANESTHETICS	LOCAL	Tetracaine	Many	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in animals
Anti-infectives	TETRACYCLINES	Tetracycline	Many	OK?	web.uct.ac.za/depts/porphyria/: Use with Extreme Caution. Induces CYP3A. 1 patient report: safe
IMMUNOLOGIC AGENTS	IMMUNOMODULATORS	Thalidomide	Thalomid	NO INFO	
Respiratory agents	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Theophylline	Many	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in patients Medicine (Balt) 1992;71:1. Safe Substrate of CYP3A4, but does not transactivate pregnane X receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Curr Drug Metab 7:375,2006)
Anesthetics	General	Thiamylal	Surital	BAD!	Barbiturate drug
Gastrointestinal therapies	ANTIEMETICS (Vomiting Therapies)	Thiethylperazine	Torecan	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic
ANTINEOPLASTICS (Cancer Therapies)	ANTIMETABOLITES	Thioguanine	Lanvis	OK!	S Afr Med J 1984;65:924. Safe in patients
Anesthetics	GENERAL	Thiopental	Pentothal	BAD!	www.drugs-porphyria.org: Porphyrinogenic www.porphyria-europe.com: Unsafe web.uct.ac.za/depts/porphyria/: Avoid See Phenobarbital

Class	Type	Generic name	Brand name	Conclusion	References
Psychiatric medications	PHENOTHIAZINES	Thioridazine	Mellaril	OK!	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Safe in patients Polish J Pharmacol 2001;53:615. Metabolized by CYP2D6;inhibits CYP1A2 and CYP3A2
ANTINEOPLASTICS (Cancer Therapies)	ALKYLATING AGENTS	Thiotepa	Thioplex	NO INFO	
Diagnostic drugs		Thyrotropin	THYROTROPIN ALFA inj pdr	OK!	
ANTI-INFECTIVES	PENICILLINS	Ticarcillin	Ticar	OK!	www.uq.edu.au/porphyria/: Safe in patients
Blood related therapy	ANTICOAGULANTS	Ticlopidine	Ticlid	OK?	www.drugs-porphyria.org: Probably Porphyrinogenic http://medicine.iupui.edu/flockhart/table.htm: Similar to (and see discussion of) clopidogrel
ANTI-INFECTIVES	MISCELLANEOUS	Tigecycline	Tygacil	NO INFO	
n/a	n/a	Timolol	Combigan, Timolide, Cosopt	OK!	
Cardiovascular agents	BETA BLOCKERS (includes some ophthalmic preparations)	Timolol	Blocadren	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in cell culture Medicine (Balt)1992;71:1. Safe
Anti-infectives	ANTIPARASITICS	Tinidazole	Tindamax	BAD?	~75% metab by CYP3A4. Porphyrinogenic in vitro (Eur J Clin Pharmacol 59:429,2003)
ANTI-INFECTIVES	AMINOGLYCOSIDES	Tobramycin	Many	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use S Afr Med J 1984;65:924. Safe in patients
Cardiovascular agents	ANTIARRHYTHMICS	Tocainide	Tonocard	No info	
Cardiovascular agents	MISC.	Tolazoline	Priscoline	OK!	www.uq.edu.au/porphyria/: Safe in patients http://www.emedicine.com/MED/topic1880.htm: Safe in porphyria
Urinary tract	ANTISPASMODICS	Tolterodine	Detrol	OK?	www.drugs-porphyria.org: Safe in one patient, but possibly porphyrinogenic. Metab by CYP2D6,3A4; CYP3A4 may be increased in CYP2D6 poor metabolizers (Drug Metab Disp 26:289,1998) Patient report to Peter Tishler, MD - safe
Central nervous system	ANTICONVULSANTS	Topiramate	Topomax	BAD?	www.drugs-porphyria.org: Probably porphyrinogenic. www.porphyria.uct.ac.za: Use only with extreme caution. 30-40% metabolized, some by CYP2C9; metab by CYP3A4 probably minimal, but induces CYP3A4 via transactivation of pregnane X receptor (Pharmacokinetics 45:1061,2006; Epilepsia 46:378,2005; Arch Toxicol 82:667,2008; Clin Therapeutics 30:1385,2008) 1 patient report: safe
Antineoplastics	TOPOISOMERASE I INHIBITORS	Topotecan	Hycamtin	BAD?	www.drugs-porphyria.org: Probably Porphyrinogenic. Does induce CYP3A4 and transactivate pregnane X receptor (Cancer Chemother Pharmacol 64:35,2009)
Cardiovascular	DIURETICS	Torsemide	Demadex, others	OK?	~75% metab, mostly by CYP2C9 (Br J Clin Pharm 50:573,2000; Clin Pharmacol Therap 76:557,2004). 2 Patient reports: safe
Central nervous system	NARCOTICS (Pain Therapies)	Tramadol	Ultram, Ultracet, Ryzolt, etc.	No info	Largely metab by CYP3A4,2D6 (Eur J Clin Pharm 62:513,2006). Patient report: safe
Cardiovascular agents	ACE INHIBITORS	Trandolapril	Mavik	OK!	
Blood related	Bleeding retardant	Tranexamic acid	Lystela, etc.	OK!	Mostly excreted unchanged

Class	Type	Generic name	Brand name	Conclusion	References
OPHTHALMIC AGENTS (intraocular)	n/a	Travoprost	Travatan	OK!	www.drugs-porphyria.org: Not Porphyrinogenic
Psychiatric	MISC.	Trazodone	Desyrel	BAD?	web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Unsafe in animals Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; http://medicine.iupui.edu/clinpharm/ddis/)
ANTINEOPLASTICS (Cancer Therapies)	RETINOIDS	Tretinoin	Retin-A	OK?	www.drugs-porphyria.org: Probably Not Porphyrinogenic Williams DA: Op. Cit.: Substrate of CYP3A4
HORMONES, HORMONE-LIKE	CORTICOSTEROIDS	Triamcinolone	Aristocort	OK!	www.drugs-porphyria.org: Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution
CARDIOVASCULAR AGENTS	DIURETICS	Triamterene	Dyrenium	OK!	www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
Central nervous system	BENZODIAZEPINES	Triazolam	Halcion	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in animals Medicine (Balt) 1992;71:1. Safe Substrate of CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007). 1 patientreport: safe.
OPHTHALMIC AGENTS (intraocular)	n/a	Trifluridine	Viroptic	OK!	
Central nervous system agents	ANTIPARKINSON AGENTS	Trihexyphenidyl	Artane	BAD?	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Avoid
Gastrointestinal therapies	ANTIEMETICS (Vomiting Therapies)	Trimethobenzamide	Tigan	No info	
OPHTHALMIC AGENTS (intraocular)	n/a	Tropicamide	Mydracyl	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic
Central nervous system	Antispasmodic	Trospium	Sanctura	OK!	Ester hydrolysis, with probably little/no P450 metabolism. 1 patient report: safe.
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Typhoid	none	OK?	www.drugs-porphyria.org: Not Porphyrinogenic
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Typhoid VI Polysaccharide	none	OK?	www.drugs-porphyria.org: Not Porphyrinogenic
HORMONES, HORMONE-LIKE	PITUITARY	Urofollitropin	Fertinorm	OK!	
Anti-infectives	ANTIVIRALS	Valacyclovir	Valtrex	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use patient report: safe
ANTI-INFECTIVES	CMV AGENTS	Valganciclovir	Valcyte	OK!	USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): Undergoes hydrolysis
Central nervous system	ANTICONSULSANTS	Valproic Acid	Depakene, Stavzor	OK?	www.drugs-porphyria.org: Porphyrinogenic web.uct.ac.za/depts/porphyria/: Avoid www.porphyriafoundation.com: Unsafe Largely not CYP metab; some metab by multiple CYP2C9 but not CYP3A4. Induces CYP3A. Does not transactivate pregnane X receptor. (Clin Therapeutics 30:1385,2008; Curr Drug Metab 7:375,2006)
Cardiovascular	ANGIOTENSIN II RECEPTOR ANTAGONISTS	Valsartan	Diovan	OK!	www.drugs-porphyria.org: Not Porphyrinogenic USP DI? Drug Info. for the Health Care Pro. - 26th Ed: Some metabolism by CYP2C9. Patient reports: Safe

Class	Type	Generic name	Brand name	Conclusion	References
Anti-infectives	MISCELLANEOUS	Vancomycin	Vancocin, Others	OK!	www.drugs-porphyria.org: Not Porphyrinogenic www.porphyria-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients Br J Clin Pharmacol 1990;29:273. Safe
Cardiovascular agents	IMPOTENCE AGENTS	Vardenafil	Levitra	No info	Major metab by CYP3A4, 3A5 (Drug Metab Disp 36:986,2008)
Antidotes	SMOKING CESSATION	Varenicline	Chantix	OK?	J Clin Pharmacol 2006; 46:991: not a human P450 substrate; mostly excreted unchanged in animals.
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Varicella	none	OK!	www.drugs-porphyria.org: Not Porphyrinogenic
HORMONES, HORMONE-LIKE	PITUITARY	Vasopressin	Pitressin	OK!	
ANESTHETICS	MUSCLE RELAXANTS	Vecuronium	Norcuron	OK!	www.drugs-porphyria.org: Probably Not Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Caution
Psychiatric	ANTI-DEPRESSANT	Venlafaxine	Effexor	OK?	www.drugs-porphyria.org: Possibly porphyrinogenic. www.porphyria.uct.ac.za: Use only with extreme caution. Fogelman SM: Neuropsychopharm 1999; 20:480: Major metabolism via CYP2D6 (90%), 2C19 (9%); or also CYP3A4 (CNS Drugs 2012; 26:39). Sinz M: Cur Drug Metab 2006; 7:375: No activation of pregnane X receptor.
Cardiovascular	CALCIUM CHANNEL BLOCKERS	Verapamil	Verapamil, Tarka	OK?	Metab by & inhibits induction of CYP3A4. (http://medicine.iupui.edu/clinpharm/ddis/; Amer J Therap 16:155, 2009; Curr Drug Metab 5:543,2004)
Antineoplastics (Cancer Therapies)	MITOTIC INHIBITORS	Vinblastine	Velban	BAD?	www.drugs-porphyria.org: Possibly Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Probably safe in cell culture Extensively metab by CYP3A4. Does not induce CYP3A4 or transactivate pregnane X receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Cancer Chemother Pharmacol 64:35,2009)
Antineoplastics (Cancer Therapies)	MITOTIC INHIBITORS	Vincristine	Oncovin	OK?	www.drugs-porphyria.org: Possibly Porphyrinogenic. Porphyrinogenic in vitro. Administered in low weekly dose, probably insignificant hepatic exposure. Some clinical reports of non-porphyrinogenicity. web.uct.ac.za/depts/porphyria/: Use with Caution www.uq.edu.au/porphyria/: Probably safe in cell culture S Afr Med J 1984;65:924. Safe in patients USP DI? Drug Info. for the Health Care Pro. - 26th Ed. (2006): Metabolized by CYP3A4. Does not induce CYP3A4 or transactivate pregnane X receptor (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Cancer Chemother Pharmacol 64:35,2009)
ANTINEOPLASTICS (Cancer Therapies)	MITOTIC INHIBITORS	Vinorelbine	Navelbine	BAD?	www.drugs-porphyria.org: Possibly Porphyrinogenic. Substrate for CYP 3A4. No reports of CYP-induction in humans. Other vinca alkaloids have shown to be porphyrinogenic in vitro. Drug Metab Dispos 2000;28:1121. Major interaction with CYP3A4
Anti-infectives	ANTIFUNGALS	Voriconazole	Vfend	BAD!	www.drugs-porphyria.org: Probably Porphyrinogenic Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of & inhibits CYP3A4 & 2C9.

Class	Type	Generic name	Brand name	Conclusion	References
BLOOD RELATED THERAPY	ANTICOAGULANTS	Warfarin	Coumadin	OK!	www.drugs-porphyrina.org: Probably Not Porphyrinogenic www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use www.uq.edu.au/porphyria/: Safe in patients Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007. Substrate of CYP3A4 & 2C9
IMMUNOLOGIC AGENTS	ANTIMICROBIAL VACCINES	Yellow Fever	none	OK?	www.drugs-porphyrina.org: Not Porphyrinogenic
Respiratory	ANTIASTHMATIC AND BRONCHODILATOR AGENTS	Zafirlukast	Accolate	BAD?	Substrate of CYP2C9. Induces pregnane X receptor. (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007)
ANTI-INFECTIVES	ANTIRETROVIRALS	Zalcitabine	Hivid	OK!	www.drugs-porphyrina.org: Probably Not Porphyrinogenic www.porphyrina-europe.com: Safe web.uct.ac.za/depts/porphyria/: Use
Central nervous system agents	HYPNOTICS (Sleeping Medications)	Zaleplon	Sonata	BAD!	www.drugs-porphyrina.org: Possibly Porphyrinogenic Metabolized by CYP3A4 (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Xenobiotica 2002;32:835) Patient reports: Safe
ANTI-INFECTIVES	ANTIVIRALS	Zanamivir	Relenza	OK!	www.drugs-porphyrina.org: Not Porphyrinogenic http://redpoll.pharmacy.ualberta.ca/drugbank/: Not metabolized
ANTI-INFECTIVES	ANTIRETROVIRALS	Zidovudine	Retrovir	BAD?	www.drugs-porphyrina.org: Probably Porphyrinogenic web.uct.ac.za/depts/porphyria/: Use with Extreme Caution www.uq.edu.au/porphyria/: Safe in patients
Psychiatric	MISC.	Ziprasidone	Geodon	BAD?	www.drugs-porphyrina.org: Possibly Porphyrinogenic 1/3 metabolized by CYP3A4 (www.rxlist.com; J Clin Psychopharm 23:229,2003)
BONES	BISPHOSPHONATES	Zoledronic Acid	Zometa	OK!	www.drugs-porphyrina.org: Not Porphyrinogenic USP DI? Drug Info. for the Health Care Pro. - 26th Ed: No P450 inhibition in vitro
Central nervous system agents	MIGRAINE THERAPY	Zolmitriptan	Zomig	OK?	www.drugs-porphyrina.org: Possibly Porphyrinogenic. Insufficient data on metabolism. One report (Swedish) of tolerance. Xenobiotica 1999;29:847. Metabolized almost entirely by CYP1A2. Sinz M: Curr Drug Metab 2006; 7:375. No activation of pregnane X receptor.
Central nervous system	HYPNOTICS (Sleeping Medications)	Zolpidem	Ambien, Edluar, Intermezzo, Zolpimist	OK!	www.drugs-porphyrina.org: Possibly Porphyrinogenic CYP3A substrate. Moderate transactivator of pregnane X receptor, but low prediction of CYP3A4 inducibility (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007;http://medicine.iupui.edu/flockhart/table.htm; Curr Drug Metab 7:375,2006) 6 Patient reports: safe
Central nervous system agents	ANTICONVULSANTS	Zonisamide	Zonegran	BAD?	Major metab by CYP3A4; also CYP2C19. (Williams DA. Drug metabolism. In: Foye's Principles of Medicinal Chemistry, ed. Lemke T and Williams DA. Baltimore, Williams & Wilkins, 6th ed., 2007; Clin Therapeutics 30:1385,2008)

Definitions:

OK! = very likely to be safe for prolonged use by individuals with an acute porphyria, based on consistent evidence

OK? = probably safe for prolonged use by individuals with an acute porphyria, based on evidence that is either inconsistent or insufficient to be conclusive

BAD? = probably unsafe for prolonged use by individuals with an acute porphyria, based on evidence that is either inconsistent or insufficient to be conclusive

BAD! = very likely to be unsafe for prolonged use by individuals with an acute porphyria, based on consistent evidence

NO INFO = evidence insufficient for deriving any conclusion

ABOUT APF

The APF is a 501(c)3 non-profit foundation dedicated to improving the health and well-being of all individuals and families impacted by Porphyria.

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The American Porphyria Foundation does not offer medical advice, diagnosis, or treatment. Individuals should seek medical advice *only* from qualified healthcare professionals. If you think you may have a medical emergency, call your doctor, go to the emergency department, or call 911 immediately.

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