# **CYP1A2** substrates

imipramine agomelatine duloxetine antipsychotics clozapine olanzapine haloperidol caffeine dietary flavonoids naringenin naringin quercetin rutin paracetamol propranolol ramelteon alosetron clopidogrel ropivacaine

theophylline

antidepressants

fluvoxamine

amitriptyline

clomipramine

- zolmitriptan
- melatonin
- tamoxifen
- erlotinib
- cyclobenzaprine
- estradiol
- mexiletine
- naproxen
- ondansetron
- phenacetin
- riluzole
- tacrine
- tasimelteon
- tizanidine
- verapamil
- warfarin
- zileuton

# **CYP1A2 Inducers**

**Strong**: decrease the AUC by  $\geq 80\%$ 

**Moderate**: decrease the AUC by ≥50 to <80%

# Moderate inducers

- tobacco
- phenytoin
- rifampin
- ritonavir
- teriflunomide

# Inducers of unspecified potency

- foods/herbs
  - brassica
  - broccoli
  - brussels sprouts
  - cauliflower
  - chargrilled meat
- insulin
- methylcholanthrene
- modafinil
- nafcillin
- beta-naphthoflavone
- proton pump inhibitors
  - omeprazole
  - lansoprazole

#### **CYP1A2 Inhibitors**

**Strong**: ≥5-fold increase in the plasma AUC values (>80% decrease in clearance)

**Moderate**: ≥2-fold increase in the plasma AUC values (50–80% decrease in clearance)

**Weak**: ≥1.25-fold and <2-fold increase in the plasma AUC values (20–50% decrease in clearance)

# Strong inhibitors

- fluvoxamine
- liquorice
- fluoroquinolones
  - enoxacin
  - ciprofloxacin
- verapamil

# Moderate inhibitors

- St. John's wort
- methoxsalen
- mexiletine
- oral contraceptives

# Weak inhibitors

- acyclovir
- allopurinol
- mexiletine
- cimetidine
- caffeine
- echinacea
- peginterferon alpha-2a
- theophylline

- piperine
- zileuton

# Inhibitors of unspecified potency

- interferon
- mibefradil
- grapefruit juice
- cumin
- turmeric
- isoniazid
- tetrahydropalmatine
- cannabidiol