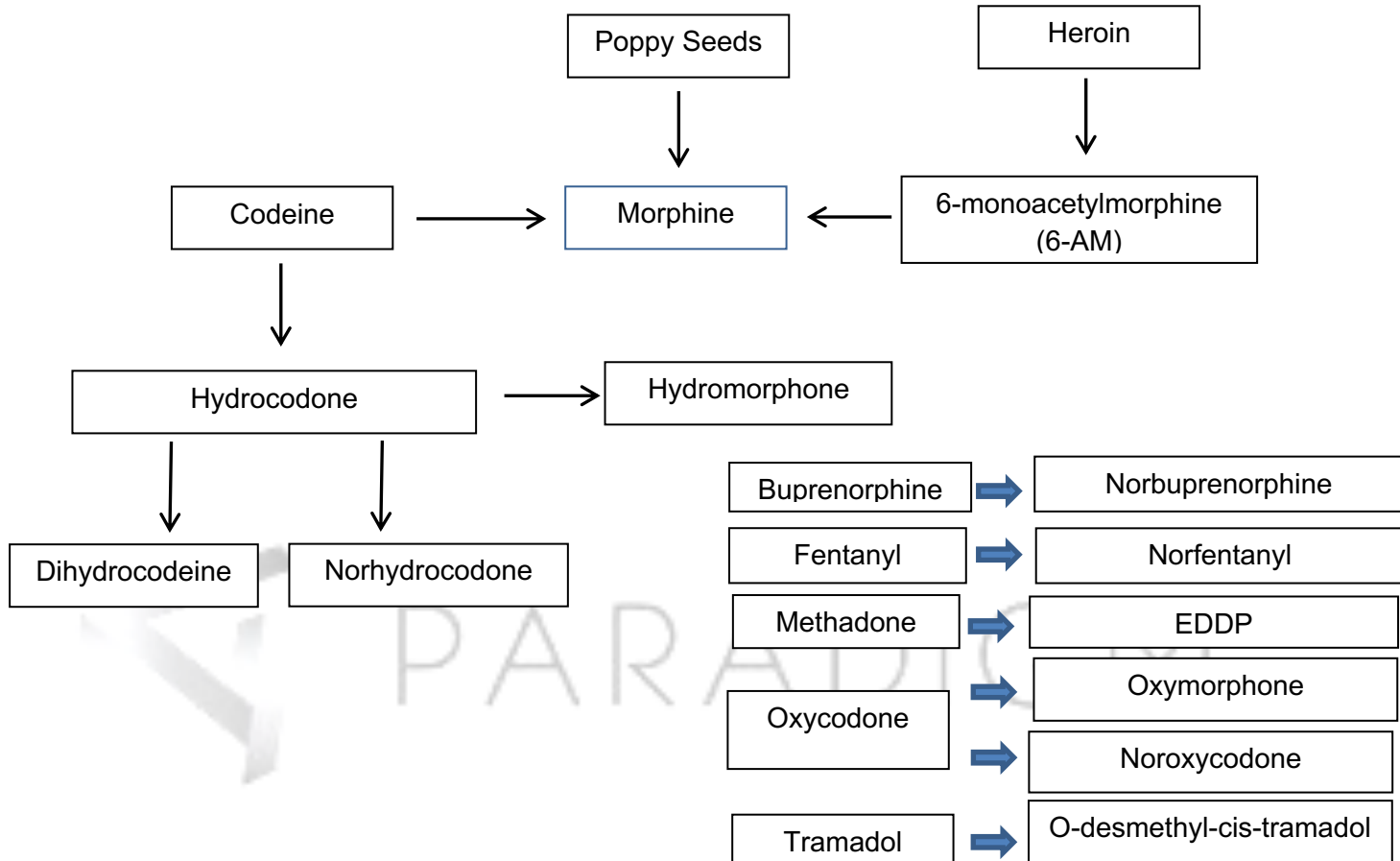


Simplified Schematic of the Metabolic Pathways of Opioids and Certain Closely-Related Drug Classes



BENCHMARK PRESUMPTIVE LC/MS/MS TEST OFFERINGS FOR OPIOIDS AND CLOSELY-RELATED DRUG CLASSES

AMA CPT® DEFINED DRUG CLASS	BENCHMARK UDT™ MENU AND CUTOFF LEVELS (ng/mL)		BENCHMARK OFT™ MENU AND CUTOFF LEVELS (ng/mL)	
	Menu Item	Cutoff Level (ng/mL)	Menu Item	Cutoff Level (ng/mL)
Buprenorphine	Buprenorphine	5	Buprenorphine	4
	Norbuprenorphine	10	Norbuprenorphine	2
Fentanyl	Fentanyl	2	Fentanyl, Norfentanyl	0.2
	Norfentanyl	10	NA	NA
Heroin	6-Acetylmorphine	5	6-Acetylmorphine	1
Methadone	Methadone, EDDP	100	Methadone, EDDP	2.5
Opiates	Codeine	50	Codeine	5
	Morphine	50	Morphine	2.5
	Hydrocodone, Norhydrocodone	50	Hydrocodone	2.5
	Hydromorphone	50	Hydromorphone	2.5
Oxycodone	Oxycodone, Noroxycodone	50	Oxycodone	2
	Oxymorphone	50	Oxymorphone	2
Opioids & Opiate Analogs	Dextromethorphan	50	NA	NA
	Meperidine, Normeperidine	100	Meperidine	2.5
	Naloxone	10	NA	NA
	Naltrexone	50	NA	NA
Propoxyphene	Not part of Benchmark UDT™	NA	Not part of Benchmark OFT™	NA
Tapentadol	Tapentadol	100	Tapentadol	2.5
Tramadol	Tramadol, O-desmethyl-cis-tramadol	100	Tramadol	2